SOUTH AFRICA
TRADE AND INVESTMENT POLICY SECRETARIAT
AND
U.S. AGENCY FOR INTERNATIONAL DEVELOPEMNT

EQUITY AND GROWTH THROUGH ECONOMIC RESEARCH

(PROJECT EAGER)

WORKSHOP

Glenburn Lodge
Muldersdrift, South Africa

February 4-6, 1998

PRELIMINARY AGENDA
(Version 10:00 p.m., Tues., 3 Feb. 1998)

TUESDAY, FEBRUARY 3

18:00-19:30 REGISTRATION
19:30-20:00 MEETING OF PARTICIPANTS

WEDNESDAY, FEBRUARY 4: PROJECT EAGER: RESEARCH AND POLICY WITH APPLICATION TO SOUTH AFRICA

08-30-09:00 **REGISTRATION**
09:00-10:00 **OPENING SESSION**
Chair: Prof. Rashad Cassim [Director, Trade and Industrial Policy Secretariat (TIPS)]
Rapporteur: Dr. Abdoul Barry [AIRD, USA]
Welcome and Opening Remarks: Prof. Rashad Cassim [TIPS]
Overview of EAGER:
Dr. Dirck Stryker [AIRD, USA, Chief of Party, EAGER/Trade] and
Dr. Clive Gray [HIID, USA, Chief of Party, EAGER/PSGE]
Ms. Rita Aggarwal [Economist, Africa Bureau, USAID/Washington]
USAID Welcome: Mr. Aaron Williams, Director, USAID/South Africa

10:00-10:30 Coffee Break

10:30-12:30 **SUMMARY OF EAGER RESEARCH**
Chair: Rashad Cassim [TIPS]
Rapporteur: Dr. Abdoul Barry [AIRD, USA]
Presenters: Dr. Dirck Stryker [AIRD, USA]
Dr. Clive Gray [HIID, USA]

12:30-14:00 Lunch

14:00-16:00 **POLICY MAKING, THE PRIVATE SECTOR, AND THE ROLE OF ECONOMIC RESEARCH**
Chair: Dr. Ashgar Adelzadeh [NIEP]
Rapporteur: Prof. William Masters [Purdue Universty, USA]
Panel: Mr. Hamet Ndour (REMIX, Senegal)
Mr. Neal Cohen (USAID/REDSO/East, Kenya)

16:00-16:30 Coffee Break

16:30-18:00 **CURRENT ISSUES IN THE SOUTH AFRICAN ECONOMY**
Chair: TBA
Rapporteur: Dr. Malcolm McPherson [Senior Advisor, EAGER/PSGE, HIID, USA]
Panel: Dr. Ashgar Adelzadeh [NIEP]
Dr. Neva Makgetla [Dept. of Public Service and Administration]
Dr. Rashad Cassim [TIPS – South Africa]

18:30- 19:30 **EAGER AND THE INTERNET:** Live Demonstration of the World Wide Web and the Use of E-Mail
Demonstrator: Dr. Djimé Adoum [BHM, USA]

THURSDAY, FEBRUARY 5: SESSIONS ON EAGER RESEARCH THEMES

09:00-10:30 *PLENARY SESSION*: **RESTARTING AND SUSTAINING GROWTH AND DEVELOPMENT IN AFRICA**

Chair: Dr. Daniel Ndlela [Zimconsult, Zimbabwe, Regional Coordinator for East and Southern Africa, EAGER/Trade]

Rapporteur: Prof. Donald Mead [Michigan State University, USA]

Presenters: Dr. Ngure Mwaniki [MA Consulting Group, Kenya]; Prof. Abdoulaye Diagne [CREA, Senegal]; Dr. J. C. Munene [MISR, Uganda]; Dr. Malcolm McPherson, Dr. Arthur Goldsmith, and Dr. Clive Gray [all HIID, USA]

Discussant: Dr. Diery Seck [IDRC, Senegal]

10:30-11:00 Coffee Break

PARALLEL SESSIONS:

11:00-12:30 **GLOBAL TRADE ANALYSIS FOR SOUTHERN AFRICA**

Chair: Dr. Temba Mhlongo [DTI]

Rapporteur: Dr. Daniel Ndlela [Zimconsult, Zimbabwe]

Presenters: Prof. William Masters [Purdue University, USA] Global Trade Analysis for Southern Africa

Prof. Inyambo Mwanawina [University of Zambia, Zambia], The Impact of Capital Flows to South Africa

Prof. Robert Davies [University of Zimbabwe, Zimbabwe], The Impact of SA-EU and SADC Free-Trade Agreements

Discussant: Prof. Dominique Njinkeu [AERC, Kenya]

11:00-12:30 **BARRIERS TO AGRICULTURAL TRADE**

Chair: Dr. Dunstan Spencer [Dunstan Spencer Associates, Sierra Leone, Regonal Coordinator for West and Central Africa, EAGER/Trade]

Rapporteur: Prof. Lucie Phillips [IBI, USA]

Presenter: Dr. Fred Opio [EPRC, Uganda], Comparative Advantage and Intra-Regional Trade for Uganda's Low Value Non-traditional Export Crops: the Case of Maize and Beans

Discussant: Mr. Neal Cohen (USAID/REDSO, Kenya]

Presenter: Dr. Abdoul Barry [AIRD, USA], Promotion of Mali's Rice Exports Towards the West African Regional Market

Dr. Abdoul Barry [AIRD, USA], Impact of Adjustment on Agricultural Competitiveness and Regional Trade in Sahelian West Africa

Discussant: Prof. Abdoulaye Diagne [CREA, Senegal]

11:00-12:30 **LEGAL-REGULATORY-JUDICIAL (LRJ) REFORMS AND GOVERNANCE**

Chair: TBA

Rapporteur: Dr. Arthur Goldsmith {HIID, USA]

Presenter: Prof. Patrick Meagher [IRIS, USA] and Dr. Haji Semboja [ESRF, Tanzania], Business Contracting Practices in Tanzania

12:30-14:00 Lunch

14:00-15:30	**TAX POLICY REFORM**
Chair:	Dr. Diery Seck {IDRC, Senegal]
Rapporteur:	Dr. Eric Nelson [DAI, USA]
Presenters:	Dr. Pepe Andrianomanana [CEE, Madagascar] and Dr. Clive Gray [HIID, USA], Enhancing Transparency in Tax Administration
Discussant:	Prof. Arthur Goldsmith [University of Massachusett/Boston, USA]
Presenters:	Dr. Pepe Andrianomanana [CEE, Madagascar] and Mr. Jean Razafindravonona [EPM, Madagascar], Tax Policy in Sub-Saharan Africa: The Role of Excise Taxes
Discussant:	Mr.Daniel Ramarokoto [Executive Secretary, Secretariat Technique de l'Ajustement (STA), Madagascar]
14:00-15:30	**PROMOTING AN ENVIRONMENT FOR PRIVATE SECTOR ACTIVITY**
Chair:	Dr. Ngure Mwaniki [M.A. Consulting Group, Kenya]
Rapporteur:	Prof. Patrick Meagher [IRIS, USA]
Presenters:	Dr. Polycarp Musinguzi [BOU, Uganda] and Dr. Marios B. Obwona [EPRC, Uganda], Monetary and Exchange Rate Policy in Uganda
Discussant:	Dr. Andrew Bvumbe [Reserve Bank of Zimbabwe, Zimbabwe]
Presenter:	Prof. Germina Ssemogerere [Makerere University], Industrial Competitiveness in Kenya and Uganda
Discussant:	Prof. Margaret McMillan [IBI, USA]
14:00-15:30	**LABOR MARKETS, EMPLOYMENT, AND PRODUCTIVITY IN SOUTH AFRICA**
Chair:	Prof. Rashad Cassim {TIPS]
Rapporteur:	Prof. Robert Davies [University of Zimbabwe]
Presenters:	Prof. Fuad Cassim [University of Witwatersrand, South Africa] and J. Dirck Stryker [AIRD, USA], Increasing Labour Demand and Productivity in South Africa
Discussant:	Prof. Donald Mead [Michigan State University, USA]
Presenter:	Ms. Lynn Salinger [AIRD, USA], Dr. Haroon Bhorat [UCT], and Mr. Malcom Keswell [University of Natal/Durban], South Africa: Potential, Constraints, and Comparative Advantage in the Textiles and Clothing Subsector
Discussant:	Ms. Keryn House [DTI}
15:30-16:00	Coffee Break
16:00-17:30	**CREATING A NETWORK OF POLICY RESEARCH IN AFRICA**
Chair:	Mr. Richard Harber, Economist, USAID/South Africa
Rapporteur:	Prof. Lynn Salinger [AIRD, USA]
Panel:	Dr. Diery Seck [IDRC, Senegal] Prof. Rashad Cassim [TIPS] Prof. Abdoulaye Diagne [CREA, Senegal] Dr. Fred Opio [EPRC, Uganda] Dr. Dirck Stryker [AIRD, USA] Dr. Clive Gray [HIID, USA]
18:00-21:00	**RECEPTION**

FRIDAY, FEBRUARY 6 AM: *PARALLEL SESSIONS ON RESEARCH THEMES:*

08:00-09:00 **GLOBAL TRADE ANALYSIS SOFTWARE DEMONSTRATION**
Demonstrator: Prof. William Masters [Purdue University, USA]

11:00-12:30 **CONTRIBUTION OF BUSINESS LINKAGES TO THE GROWTH OF PRODUCTIVE EMPLOYMENT AMONG MICRO AND SMALL ENTERPRISES IN SOUTH AFRICA**
Chair: Dr. John Munene [Makerere Institute for Social Research, Uganda]
Rapporteur: Dr. Dunstan Spencer [Dunstan Spencer Associates, Sierra Leone]
Presenters: Ed Bbenkele [Univ. of Natal/Pietermaritzburg, S. Africa], Owen Skae [Univ. of Natal/Durban, S. Africa], Francis Anim [Univ. of the North, S. Africa], and Donald Mead [Michigan State Univ., USA]
Discussant: Mr. Bala Rajaratnam [Ntsika, South Africa]

09:00-10:30 **REFORMING FINANCIAL MARKETS IN SUB-SAHARAN AFRICA**
Chair: Dr. Andrew Bvumbe [University of Zimbabwe]
Rapporteur: Dr. Polycarp Musinguzi [Bank of Uganda, Uganda]
Presenter: Prof. Samuel Ziorklui [Howard University, USA], The Impact of Finacial Sector Reform on Bank Efficiency and Financial Deepening for Savings Mobilization in Ghana
Presenter: Prof. Sam Ziorklui [Howard Univ., USA], The Development of Capital Markets and Growth in Sub-Saharan Africa
Discussant: Dr. Eric Nelson [DAI, USA]

09:00-10:30 **AFRICAN TRADE AND INVESTMENT IN RELATION TO THE GLOBAL ECONOMY**
Chair: Dr. Fred Opio [EPRC, Uganda]
Rapporteur: Dr. Abdoul Barry [AIRD, USA]
Presenter: Prof. Margaret McMillan [IBI, USA] and Dr. Marios Obwona [EPRC, Uganda], Foreign and Local Investment in Africa
Discussant: Prof. Germina Ssemogerere [University of Makerere, Uganda]
Presenter: Ms. Lynn Salinger [AIRD, USA], Transshipment of Textiles and Clothing Through Africa
Discussant: Dr. Daniel Ndlela [Zimconsult, Zimbabwe]

10:30-11:00 Coffee Break

09:00-10:30 **ELECTRICITY TRADE IN THE SOUTHERN AFRICA POWER POOL**
Chair: Dr. William Lyakurwa [AERC, Kenya]
Rapporteur: Prof.Dominique Njinkou [AERC, Kenya]
Presenters: Prof. William Masters [Purdue University, USA] and Mr. Ferdi Kruger [ESKOM, South Africa]
Discussants: Prof. Rob Davies [University of Zimbawe]
Prof. Inyambo Mwanawina [University of Zambia]

11:00-12:30	**FINANCIAL INTERMEDIATION FOR THE POOR**
Chair:	TBA
Rapporteur:	Prof. Margaret McMillan [IBI, USA]
Presenters:	Dr. Hamed Ndour [REMIX, Senegal], Dr. Mohammed Karaan [University of Stellenbosch] and Dr. Eric Nelson [DAI, USA] Financial Intermediation for the Poor in Senegal and South Africa
Discussant:	Dr. Fred Opio [EPRC, Uganda]
12:30-14:00	Lunch

FRIDAY, FEBRUARY 6, PM: ***SUMMARY AND CONCLUSIONS***

14:00-15:30	**SUMMARY OF PARALLEL SESSIONS AND CLOSURE OF WORKSHOP**
15:30-16:30	**GLOBAL TRADE ANALYSIS SOFTWARE DEMONSTRATION**
Demonstrator:	Prof. William Masters [Purdue University, USA]
16:00-19:00	**MEETING OF RESEARCH TEAMS WITH EAGER/TRADE TECHNICAL COMMITTEE**

SATURDAY, FEBRUARY 7: ***MEETING OF RESEARCH TEAMS WITH EAGER/TRADE TECHNICAL COMMITTEE***

Report Folder "A"

Papers and Reports from South Africa Workshop

EAGER WORKSHOP REPORTS, JOHANNESBURG, SOUTH AFRICA
February 4-6, 1998

1. Bringing Down Barriers to Trade: The Experience of Trade Policy Reform *by Jeffrey Metzel and Lucie C. Phillips*

2. Foreign and Local Investment in Africa: Case Study of Uganda *by Marios Obwona*

3. Foreign and Local Investment: Case Study of Mauritius *by Dr. Lucie Phillips, Marios Obwona and A. B. Ayako*

4. Gemstone and Gold Marketing for Small Scale Mining in Tanzania: Final Report for Phase1

5. Lessons from East Asia for Promoting Trade In Africa: Survey Paper *by Karen Engel*

6. Monetary Exchange Rate Policy in Uganda: An Interim Report *by Polycarp Musinguzi and Marios B. Obwona*

7. Modeling Electricity Trade in Southern Africa: Interim Progress Report *by F.T. Sparrow, W.A. Masters, Z.Yu, B.H. Bowen*

8. New Trade Opportunities For Africa *by Lynn Salinger, Anatoli Amvouna, Deirdre Murphy Savarese*

9. Pursuing The Africa Growth and Opportunity Act: Countering the Threat of Textile and Apparel Transshipment through Africa by, *B. Lynn Salinger, Abdoul Barry, Selina Pandolfi*

10. The Political Economy of Trade Policy Reform: Exploring An African Paradigm *by Dr. Lucie Colvin Phillips*

11. Regional Integration and Cooperation in Sub-Saharan Africa: Are Formal Trade Agreements the Right Strategy? *By Steven Radelet*

12. Sahelian West Africa: Impact of Structural Adjustment Programs on Agricultural Competitiveness and Regional Trade *by Abdoul Barry, B. Lynn Salinger, Selina Pandolfi*

13. Statistical Analysis of Foreign and Local Investment *by Margaret McMillan*

14. Trends in African Trade: Survey Paper *by Abdoul Barry and Ndaya Beltchika*

15. Trade and Development in Africa *by J. Dirck Stryker*

16. The Uruguay Round And Africa: A Global General Equilibrium Analysis *by Thomas W. Hertel, William A. Masters and Aziz Elbehri*

17. The WTO Agreement and Financial Services in African Countries: A Review of Policy and Research Issues *by Michael J. Isimbabi*

USAID

EQUITY AND GROWTH THROUGH ECONOMIC RESEARCH

TRADE REGIMES AND GROWTH

BRINGING DOWN BARRIERS TO TRADE: THE EXPERIENCE OF TRADE POLICY REFORM

Jeffrey Metzel with Lucie Colvin Phillips

Draft, January 30, 1998

INTRODUCTION

For most countries of Sub-Saharan Africa (SSA), self-sufficiency, nationalization, and centralization were priorities of policy for most of the seventies and eighties. By the early eighties, substantial empirical evidence had accumulated to demonstrate that in comparison to more outward-oriented and liberal economies, these "statist" economic policies had been at the expense of economic growth (Bhagwati, 1978; Krueger, 1978; Balassa , 1980; Dollar, 1992). This realization brought about a period of reforms, undertaken usually through World Bank sponsored "structural adjustment" programs, which stressed liberalizing internal markets and trade, promoting private initiative and investment, and decentralizing power. These programs were expected to bring about substantial improvement in trade performance as well as economic growth.

However, export trade from SSA continued to fall as a share of world trade between 1985 and 1990, and over the same period real export earnings were either stagnant or fell for 25 of 33 countries in the region (Svedberg, 1991). Between 1990 and 1994, annual export and import growth has been positive (1.9% and 2.1%, respectively), but substantially less than population growth for the SSA region and only eight countries out of 39 showed healthy export growth (> 5%) over the period (Barry and Beltchika, 1996). While this poor performance is blamed on a variety of internal and external factors, there is an increasing consensus that a large share of the blame must still be placed on the economic policy environment.

This survey examines the literature on trade policy reform in Africa in the past decade, and

seeks to explain why it has not yielded greater results. This paper does not revive the debate over the merits of trade liberalization, but takes as a point of departure the assumption that trade liberalization is the objective of policy reform efforts in Africa. This assumption is not a point of faith but rather a recognition of the common thrust of the recent policy reform effort. The paper is divided into four sections. The first briefly presents definitions of trade liberalization against which the experience of reform can be evaluated, and then summarizes important elements of typical trade reform programs of the past decade. A second section then examines the record of reform, first summarizing the extent of reform adoption, and then examining the evidence of the extent of implementation of these reforms. The third section reviews evidence of the immediate liberalizing effects of these reforms, the extent to which these liberalization events were credible in changing the economic environment for economic actors, and the impact which liberalization has had on the economies of SSA. Finally conclusions regarding the experience of trade reform are identified.

WHAT DOES TRADE POLICY REFORM MEAN?

Definitions of liberalization

What constitutes trade liberalization is ambiguous both because of different opinions of what liberalization means, and because the appropriate instruments to achieve this objective are subject to debate. Much of this survey is spent examining the latter issue. However, first it is useful to review characterizations of liberalization. Two criteria are often used to measure liberalization: trade neutrality and trade liberality. (Dean et al. 1994, Thomas Nash et al). 1991 Neutrality refers to a

reduction in biases caused by policy such that incentives are equalized between exporting and import-substituting sectors. Trade liberality refers to a reduction of the restrictiveness of controls or barriers to trade, regardless of the biases this may introduce or retain. In this vein, Krueger (1978) and Bhagwati (1978) focus on the movement to price/incentive based policies and away from quantitative restrictions or controls. In Africa, the distinction between liberality and neutrality is often ignored, because usually both are components of reform programs. Nearly all African countries have used non-tariff barriers (NTBs) as well as high tariffs to maintain a protective environment for importables and a high anti-export bias; therefore, any reforms that imply less intervention are also likely to cause a move towards greater neutrality. These two definitions are thus usually consistent in Africa and so both are retained as indicative of trade liberalization in the discussion below.

Elements Of Trade Policy Reform In Africa

Trade reform programs in Africa have shared many common strategies and similar prescriptions to achieve them, although the modalities and sequencing of their implementation have varied considerably. Borrowing from several recent accounts of trade policy reform efforts in Africa (Thomas and Nash, 1993, DeRosa, 1993, Nash 1993, Jones et al. 1994, Dean et al. 1994), reforms may be classified into four principal areas: reforming exchange rate regimes, removing non-tariff barriers, harmonizing and reducing import taxation, and removing export restrictions.

Reforming Exchange Rate Regimes Nearly all countries of SSA have struggled with overvalued exchange rates. Prior to refom in most countries, relatively rigid exchange controls were

implemented to offset chronic balance of payments problems resulting from increasing fiscal deficits. These controls were systematically linked to import restrictions through procedures which tied the rationing of foreign exchange to a system of import licensing.

Standard trade reforms such as elimination of QRs and reduction of import tariffs result in a reduction in import prices leading to an increased demand for imports relative to import substitutes; these can cause a deterioration in the current account of the balance of payments, unless either the supply of domestic money is restricted or demand in increased. Devaluation is one important tool to accomplish the latter, and therefore a typical component of trade policy reform. This combination of trade liberalization and devaluation is what Collier (1995) calls a trade liberalizing devaluation.

Approaches to reform of exchange rate regimes have included first, progressive devaluation or depreciation of the nominal exchange rate to eliminate rationing. Typically, however, these adjustments have been late, halting, and incomplete (Tanzania, Zambia, Zaire). Some counties introduced auctions to allow for market-based revisions of the rate (Nigeria, Ghana, Uganda). In some of these countries, private exchange operations (Ghana, Nigeria) have been authorized as well. However, these private operations continue to rely on the official rates to set their own margins. Their attraction is that they offer greater access to the foreign exchange market, particularly for the small user. Another strategy used to expand accessibility of foreign exchange has been to create a foreign exchange fund that is accessible to certain sectors and then to gradually expand commodities eligible for imports using the fund, and the size of the fund.

For countries of the CFA zone, which maintain fixed exchange rates and convertibility arrangements with France, the direct costs of rationing foreign exchange were largely avoided for the

first two decades after independence. The stability provided by this arrangement has been credited with the superior economic performance of these countries until the early 1980s. On the other hand, by the mid-1980s, overvaluation of the CFA forced these countries to introduce severe credit tightening as a strategy to reappreciate the CFA. These measures were undertaken at the expense of domestic investment demand and ultimately economic growth. Capital flight and lack of competitiveness in all productive sectors eventually forced a devaluation in January 1994. Another strategy to offset the effects of overvaluation was to tax imports and subsidizing exports. However, this type of system has proven difficult to manage, prone to corruption, and problematic to defend before political constituencies (Nash, 1993; Husain and Faruqee, 1994).

Removing Non-tariff Barriers Regulatory restrictions, most notably import licensing schemes, have typically been used to control balance of payments problems. These schemes have been justified as a means of protecting local import-substituting industries. This logic was often extended to agriculture for commodities that development programs sought to promote. However, the operation of import licensing has often been very discretionary. Reflecting this, non-tariff barriers (NTB) have tended to be highly specific, designed to protect individual firms or end uses. They have proven especially damaging not only because they create rampant opportunities for abuse, but because access to the goods is not assured to the most productive uses.

Regulatory restrictions also take several other forms. Monopoly/monopsony positions are often granted to certain domestic firms for the distribution of some commodities. These are typically "vital" (fuel, food staples) and parastatal industries. Other regulations may restrict products based on sanitary/health or quality characteristics. Thus, for example, Ghana restricted imports of subsidized low quality meat from Europe by imposing limits on the fat content in imported meat.

Progress in eliminating NTBs often entails a movement from requiring licenses for all goods to the creation of open general licensing schemes (OGL) in which certain goods are automatically granted approval for foreign exchange allocations. Eventually, this list becomes large enough that it leads to the creation of a "negative" list in which all goods are free except for those on a restricted list. (Dean et al. 1994, Nash, 1993) These schemes have not evolved to be as open nor general as planned, and they may have several adverse structural effects (Jones et al., 1994). Most importantly, domestic lobbies for local import substitutes fight to retain them on the "negative" list while freeing the inputs to their industries. In this way effective protection of import-substitutes is increased rather than reduced by these liberalising measures. Secondly, the exchange funds associated with these schemes are typically supported by donors and are not linked to the demand for goods eligible for funds. As a result, the funds are often rapidly depleted. Alternative mechanisms for gradually converting to tariff-based protection include auctioning quotas, converting them to tariff-equivalents, or using tariff-quotas (Dean et al., 1994) Import quota auctions appear prone to collusion among import-competing firms to bid up the auction price of quotas to protect domestic production. Tariff-equivalence approaches have difficulty in determining tariff equivalents for quotas. Tariff-quotas avoid this problem by applying a low tariff rate for items which enter within quota levels, but a prohibitive tariff for items entering above the quota. The high tariff rate can then be lowered toward the lower rate, ultimately making the quota nonbinding.

Direct state control of trading and of import prices has clearly been reduced over the last decade, although discretionary licensing of imports remains an important instrument in some countries. (Angola, Kenya, Mozambique and Tanzania are mentioned as continuing this practice in recent literature. (De Rosa, 1993; Jones et al, 1994; Dean et al., 1994). Import licensing liberalization

has not been sustained in all cases either; in Madagascar and Nigeria, for example, licensing requirements have been reimposed in conjunction with reversals of exchange rate liberalization. (Nash, 1993) Moreover, interests groups which had benefited from the rents created by these restrictions remain powerful in many countries, and in some cases there is evidence of reversals to seek a return to the same restrictions. This observation suggests the need for a better understanding of what happens to those whose rents are removed by reforms, and the political economy surrounding their removal and reinstatement (see section IV).

Harmonizing and Reducing Import Taxation: In addition to providing substantial protection to local import substituting industries, import tariff policies are designed to raise public revenue. Although unintended, they also have the strong effect of penalizing export commodities whose production is dependent on importable inputs. Prior to reform efforts of the mid-eighties, Dean estimates average nominal tariff levels in Africa at 37%; the dispersion of tariffs was also very large.

Tariff exemptions are also very important in the tariff structures of most African countries. Exemptions were typically granted for inputs to local import-competing industries and to agriculture. Their effect was therefore to raise effective protection, exacerbating high protection for industry but offsetting negative protection in agriculture. State-owned companies, donor-financed projects, and the diplomatic community account for the majority of the exemptions. The privileges of state-owned firms have been curtailed through most reform programs, but only Eritrea has refused to grant duty-free status to development projects. As its across-the-board import duty is only 5 percent, the decision has been accepted by NGOs and donors.

A typical phasing of tariff reforms undertaken by structural adjustment programs worldwide

has been first to simplify tariff schedules by reducing the number of rates, eliminating exemptions, and assigning rates according to systematic criteria (Nash 1993, Dean et al. 1994) These criteria usually categorize commodities as either a luxury, standard commodities, or basic necessities, with respective rates applied being progressively lower. An intermediate step in tariff reform may be to remove NTBs and raise tariffs in compensation in order to avoid a strong import shock to local import-substitute producing firms. A subsequent step is then to narrow the range between tariff categories, typically through a "concertina" approach whereby lowering maximum rates and raising minimum rates. Finally, a schedule for lowering all rates is followed.

Nearly all African countries are still in the midst of this process. While most have substantially reduced the complexity of their tariff structures, rates have not yet come down significantly. Moreover, there often remains substantial redundancy in the overall protection scheme such that formal tariff rates may be inconsequential given remaining NTBs or, on the other hand, the presence of particular exemptions. A consequence of this is that piecemeal removal of restrictive policies is often ineffective in lowering protection, since other policies often remain that sustain protection. Identifying these redundancies remains an important policy task in realizing the benefits of tariff liberalization.

Another obstacle to conversion to tariff schemes from NTB regimes is the persistence of rent seeking behavior that was promoted by rents created by non-tariff barriers. For example, M'Wega notes that in Kenya, tarification of QRs and reductions in tariffs were undermined by loopholes in the tariff law. The ability to avoid import duties through corruption, and illegal importation remain important problems.

One might expect that with completion of the Uruguay Round of GATT, tarification of QRs and reduction and harmonization of tarification would accelerate. Ironically, in some cases the new WTO guidelines have been used to argue for a slower pace of rate reduction than was envisioned under specific structural adjustment programs, since the guidelines provide a generous period of transition to reach compliance for certain developing countries. The implications of these and other multilateral agreements on reform schedules for tariff reform is therefore another important issue for which country specific research is required.

Liberalizing Export Policies As has been the pattern for most developing countries, exports from Africa have been penalized by trade policy and exchange rate overvaluation (Krueger, Schiff and Valdés, 1988; Krueger , 1992; De Rosa, 1993). Trade policies have typically taxed both the importable inputs to export industries, and the exported product itself. As a result, the record is clear that exporting industries have typically operated in a policy climate which penalized exports.

Export taxation has been high, in large measure because it has been a principal source of public revenue. Export licensing and controls have also been widespread. In fact, they have also been propagated by the self interest of those controlling these exports. This has been the case of public marketing boards as well as in private exporting markets, where export licensing schemes have been used to limit those who have rights to export. This type of policy is typically justified to "maintain order in the market", "assure quality" and increase bargaining power with respect to foreign buyers. In fact it often serves to increase opportunities for collusion among exporters to hold down domestic prices, and to under-invoice exports in order to reduce taxation. Bohman, Jarvis and Barichello (1994) also demonstrate that international commodity agreements for primary commodities have served to reinforce export controls in order to manage the export quotas provided to each country by these

agreements.

Reduction or abolition of export taxation and liberalization of producer prices has been a general trend for Africa's traditional agricultural exports, but reforms have been slow (for example, with cocoa in Cote d'Ivoire and Ghana; coffee in Uganda and Burundi; and vanilla in Madagascar). Often, although various measures have been taken to liberalize the domestic exporting markets, these measures are weakened by stipulations that tend to ensure that the market remains in the hands of entrenched interests. Thus for example in the Comoros, reform were introduced in the vanilla marketing sector to permit more exporters to operate, but in order to obtain licenses (patent) to operate as an exporter, individuals had to guarantee a certain volume of exports, which effectively limited export licenses to only a few individuals.

To offset negative effective protection, countries instituted direct export subsidies (Kenya, Tanzania, Senegal and Cote d'Ivoire), duty drawback schemes (Senegal, Malawi, Tanzania, Uganda, Zambia, Nigeria) and various investment incentives, including tax holidays or refunds, and depreciation allowances (Ghana, Mauritius, and Nigeria).(See Salinger , 1996.) These schemes are typically difficult to administer, costly, slow, and subject to abuse. Delays are often not procedural, however, but rather induced by shortages of funds facing these countries. Export processing zones or bonded production arrangements have also been established in a number of countries (Mauritius, Madagascar, Kenya, Nigeria, Togo and Zambia). Criticism of these zones relate to the difficulty of administering them, to their limited success in attracting investments, and to the relatively weak contribution which industries that are established in them make to the domestic economy.

Other Reforms Trade policy reform programs have tended to focus on external trade

regulations, although many of the obstacles to trade in fact begin with domestic trade and regulatory institutions. Liberalization of internal markets has been attempted, mainly through the elimination of parastatals' legal monopolies. Private monopolies have been more difficult to curtail, as they are usually the subject of legal contracts. It could do more harm to establish the precedent of breaking contracts than would be accomplished by the reform (e.g. Mauritius) Privatization of public enterprises would potentially contribute the most to trade growth, but very little progress has been made in this area in Africa. Reforms of financial institutions may also strongly influence trade performance. Most countries have opened up access to foreign exchange, leading to marked growth spurts in both formal and informal economies. Financial institutions designed for the old system are poorly equipped to play their new roles, so now institutional reform is also beginning to receive attention.

There are, moreover, official reform policies, and sometimes reversals, which are not components of the programs agreed to with the international financial institutions (IFI), and therefore which have escaped the scrutiny of evaluations of these programs. In internal parlance, IFI staff refer to the "credit" dilemma, i.e. whether countries that reform before or during loan negotiations, or entirely outside the loan/conditionality process should be credited with those reforms for disbursement and evaluation purposes. Some countries have liberalized bilateral accords between countries, for example, while others have closed down bilateral accords (e.g. South Africa with Zimbabwe). Both processes tend to occur outside the purview of the Bank.

ISSUES IN THE IMPLEMENTATION OF REFORMS

The Record Of Adoption Of Reforms

The World Bank took stock in 1994 of reform programs initiated in 1987 through 1993. Some 29 countries had undertaken structural adjustment reform programs which included an array of reforms that had to do with removing barriers to trade (Jones et al., 1994). The review of these reform efforts found that most countries in Africa have now moved from trade regimes characterized by rationing of imports and foreign exchange to environments dominated by non-tariff barriers or in the more advance cases, by regimes which rely on high tariff-based protection.[1] A few countries skirted the initial rationing phase by maintaining flexible exchange rates or convertible currencies. Only Mauritius is credited with having reached a fourth stage of full liberalization. Despite this progress, a number of countries, including at that time Kenya, showed almost no progress in trade reform beyond the non-tariff barrier stage. Others such as Madagascar, Zambia, Senegal, and Nigeria had achieved some conversion to tariff-based protection but then reversed their progress in the early 1990s, as the reforms began to have negative effects on those interests who benefited from the old policy structure.

Using a database of compliance with World Bank adjustment lending conditionality, Nash (1993) provides a more quantitative evaluation of the pace of policy reforms between 1980 and 1992.[2] He reports that over this period about 12 percent of conditionality in the region pertained to trade or exchange rate policy and that this emphasis has diminished since 1987. This same trend is borne out for data of programs outside of SSA, suggesting that trade reforms have been among the first to be

[1] Jones et al 1994). This typology of trade regimes is attributed to Krueger (1978).

[2] He refers to an Adjustment Lending and Conditionality database of the World Bank.

initiated globally. Interestingly, trade issues appear to have been comparatively less important overall within SSA, in comparison to non-SSA countries.

Examining the record of implementation in SSA, Nash finds that countries were in full or over-compliance with trade policy reform conditionality in 65% of the cases, substantial or partial compliance in 27% of cases, and non compliance or cancellation in only 8% of cases. This record is not markedly different from experience in other parts of the world, although it masks substantial variation. In particular, non-CFA African countries showed good performance for minor policies but substantially worse implementation that other countries on "critical" trade reform policies. Secondly, because of the initial redundancy of policies impeding trade, tariff policy reforms concentrated in early stages of the reform process often did not substantially improve the anti-trade bias in SSA countries.

Reform of exchange rates and controls was important, but there has been substantial backsliding in SSA. In other areas, reforms have not been eroded but there has not been much continued progress after final tranche release under the sponsoring adjustment packages. In both respects, this trend differs from other regions, where exchange controls have led more firmly, and where reforms initiated under these programs have continued. These observations suggest, on the one hand, that the exchange reforms have been more difficult to swallow in African countries, and that bureaucracies are less capable or committed to reforms initiated by these programs. Further evidence of this reluctance in SSA is that reforms that were proposed but not legally required by the programs had very poor records of implementation.

Aggregates and averages mask wide variation in the experience of implementing reform, such that the generalizations are not true for all countries. Critics of World Bank analyses of the record of

implementation have also noted this point, as well as the sensitivity of the results to the compliance criteria used to categorize countries. Nonetheless, there is little debate that African countries have officially taken most of the measures that have been contained in the structural adjustment programs.

Lessons In Sequencing And Timing Of Reforms

Despite the similarity of types of instruments used in trade policy reforms throughout Africa, important differences in reform programs exist when one examines the degree of emphasis which certain changes have received, the sequencing and timing of these changes, and the extent to which they have been enforced. Thus for example, whereas the CFA countries pursued trade liberalization in the context of continued overvaluation of the exchange rate, in many non-CFA countries, devaluation was a principal and often initial component of steps to reinvigorate the trading environment.

Various authors provide similar sequencing prescription for trade policy reform for countries facing severe foreign exchange constraints, such as is the case in most African countries (Thomas and Nash, 1991; Dean et al., 1994; Papageorgiou, Michaely and Choksi, , 1986). This sequence typically involves:

(1) removal of impediments to export through reduced export taxes and restrictions, and real depreciation of the domestic currency.

(2) substitution of price for quantitative controls (conversion of prohibitions to licensing; licensing to free imports; substitutions of tariffs for QRs on imports, focusing first on those not competing with domestic production, then broadening to others)

(3) reduction of protection differentials and levels.

Debates surrounding these perscriptions include, first, whether trade reform should accompany macroeconomic reform or succeed it. In particular, must the fiscal deficit and inflation be tackled before trade policy? Thomas and Nash note that trade policy reforms early on in the reform process can assist stabilization efforts, through improvements in revenue collection (for example through changes from QR to tariffication) and through reductions in inflation (via reduced deficit and real appreciation of the exchange rate due to improved trade). On the other hand, there appears to be consensus that when inflation is high, it must be brought down before trade reforms can be effective since inflation will continuously appreciate the real exchange rate and so undermine any attempted reductions in anti-export bias which occur through liberalization.

The pace of reforms is also a subject of debate. Some have argued the necessity of moving fast to gain credibility for the reformers and so as not to allow domestic opposition to build against reforms. For example, Jeffrey Sachs has argued the merits of introducing all reforms immediately and simultaneously. On the other hand, critics of this approach note that excessive speed in reform can reduce their likelihood of being effectively implemented, or internalized by the business community (Rodrik, 1991). The latter may view them simply as rubber stamping conditionalities imposed by international financial institutions, increasing the likelihood of subsequent reversal (see discussion of

reform credibility below).

Transitional costs associated with resource reallocation induced by liberalization may also be exacerbated if changes are too rapid. Thus, for example Musconde et al. note "hysteresis effects" of transition in Zambia forced by the inability of firms to deal with the immediate liquidity problems imposed by the reform program. These effects are the permanent costs of temporary phenomena. Thus, the permanent closing of a firm due to a temporary loss of competitiveness results not only in a temporary loss of profits but a permanent loss of income. Rodrik (1993), Thomas and Nash (1991), however, reiterate the preference for rapid reform implementation. Rodrik points out that rapid policy change does not imply that responses to reform need to be made rapidly. Rather economic actors will adjust the speed of their own responses to reforms to mitigate transitional costs, but these costs are minimized if the policy context is made as transparent as possible as rapidly as possible.

Problems In Implementation Of Trade Policy Reform

Critics of the record of trade policy implementation point to several shortcomings in the design of reforms (Thomas and Nash et al. 1991). A first set of arguments suggests that insufficient attention has been given to creating the capacity for African countries to undertake reform. This lack of capacity stems from two types of problems in implementing bureaucracies. On the one hand, insufficient human and material resources are available to devote to the implementation of reforms. Secondly, however, an administrative ethos characterized by "clientele politics" constrains the behavior of these implementing agencies. These constraints become evident when specific roles

necessary to make reforms operational are examined. These new roles include the design and implementation of reform agendas, mediation of conflicts in civil society, and operation of transparent and unbiased regulatory frameworks for markets. Inability to perform these crucial functions is attributed to a context in which bureaucracies have few resources and little autonomy to perform their functions, and where those in power maintain it by manipulating administrative powers to create rents for their supporters and buy off the opposition.

Two manifestations of the continuation of clientele politics are the continued prevalence of exemptions to policy and, ultimately, reversals of policy. Exemptions are often granted to parastatals, donors, and other strong interest groups who can make their case to policy makers. Ironically, these interest groups may be a principal target of the original reform. Nonetheless, it is extremely difficult for trade decision makers to resist exemption requests when interest groups are sufficiently powerful or when rents associated with these exemptions are large. Some reversals of government policy are to be expected with changes in government or unforeseen economic circumstances. However, governments may also reverse their positions as a matter of domestic political strategy. This is not surprising in the context of structural adjustment programs in which policies have been forced upon governments by IFIs as conditionality to obtain loans. The section below on reform credibility returns to this issue.

A related critique of reform programs has been that they are too similar from country to country despite differences in the economic, social, and political context across countries. As a result, the programs of reform have often been inappropriate to the local circumstances but have been imposed on these countries in an almost mechanical fashion, reflecting boiler-plate solutions by uninformed IFI bureaucracies. A related critique is that the accounts of reforms provided in the

literature are incomplete; in particular, there does not appear to be much consideration of the institutional capacity to implement reforms, nor the political will to do so in most cases.

In defense of the design of reform programs, World Bank staff note that apparent similarity are justified as reflecting common problems encountered in each country. Moreover, differences in the mix, sequencing, and timing of reforms can be found among countries, precisely reflecting differences in the economic, political or social context. Technical justifications for specific policy measures can be found in the memoranda and documentation of the various structural adjustment programs in which they have been included. These justifications do show consideration of local circumstances, although perhaps not a broad enough view of the context in which reform happens.

Another critique of reform programs notes that they have failed to ensure strong commitment to the reforms by the African policy-makers who are charged with their implementation. This, in turn, is termed a lack of "ownership", because they are unconvinced of the benefits of reform, or despite understanding the social benefits, are opposed to reforms because they may threaten their own best interests. In cases where parts of government harbor continuing ambivalence about a policy, they may be able to neutralize the policy by inaction or obfuscation.

To address problems of domestic political economy, some critics suggest that reforms should incorporate compensating mechanisms for losers in the process of reform. This strategy may serve several ends, and could be useful if done endogenously. It would, in that case, almost certainly concentrate on job loss, for reasons explained below.

Compensating losers may be an effective means of buying off the opposition. This strategy

may serve several ends. First, compensationg losers may be an effective means of buying off the oposition. Ultimately more important, however, may be equity reasons for compensating losers.

Equity, properly understood in the local political context, contributes to stability, which in turn is needed for growth. Lyakurwa notes in this regard that the more the institutional distribution of power, the greater the concern for equity in effects of policy. This implies that as regimes mature and democratization takes hold, successful reform will need to pay greater attention to distributive effects of reforms. In this regard, Lyakurwa proposes a direct approach of compensation to losers in reforms to offset the tendency of powerful losers to attempt to undercut reforms. However, this approach is only feasible where losers can be easily and narrowly defined. Moreover, such compensations should set clear limitations with respect to the period of compensation, maximum compensation per recipient, and criteria for receipt of compensation.

Another strategy to counteract opposition is to bundle reforms to allow for cross-compensation of winners and losers, thereby reducing opposition. A caveat to this suggestion is that reform efforts should not be cluttered with minor changes that may overburden bureaucracies administering the reform, while create unnecessary confusion and open new issues for raising opposition without producing substantial economic effect.

THE IMPACT OF TRADE POLICY REFORM

This section examines three questions concerning the experience with trade liberalization: first,

did liberalization occur, i.e. did the economic environment become more conducive to trade? secondly, were these episodes of liberalization credible, i.e. did economic actors recognize them as an opportunity to pursue trade opportunities, and lastly, what has been the impact of liberalization on the economies of reforming countries in Africa.

Did Liberalization Occur?

While trade policy reforms may have been adopted with relative success, given the difficulties in implementation noted above, a separate issue is whether the reforms actually resulted in liberalization of the trade environment. In identifying periods of liberalization, it is also difficult to separate the effects of trade policy reform from the effects of other reforms, as well as from exogenous factors. Finally, to the extent that many of these reforms are still being implemented, looking for effects may also be premature. Nonetheless, the continent-wide trend towards trade liberalization in Africa in the last decade has provided a considerable basis with which to examine the trade liberalization experience.

Methods of identifying liberalizing events. Recent research sponsored by the African Economic Research Council (AERC) has sought to evaluate the presence of trade liberalization events in Africa for specific countries studies (Ghana, Kenya, Tanzania, Zambia, Zimbabwe, South Africa, Uganda, Nigeria, and Côte d'Ivoire).[3] To identify liberalization events, each case study typically includes a descriptive account of policy changes and then a series of tests to determine the presence of liberalization episodes. The analysis of liberalization effects focuses on macro variables affected by

[3] C.D. Jebuni, D. Tutu and K.A. Oduro, and for Ghana, M'Wega for Kenya; Rajen Dabee and Chris Milner for Mauritius; D. Olu Ajakaiye and Adedoyin Soyibo for Nigeria; D. Fielding, D. and G. Ssemegorere for Uganda; Musonda, Flora, Christopher Adam, Per-Aake Andersson, for Zambia; and Ncube, Mthuli, Paul Collier, Jan W. Gunning and Kupukile Mlambo, for Zimbabwe.

trade liberalization - the balance of payments, the fiscal deficit and inflation. A much used test of liberalization is to examine changes in relative prices in the economy after trade reforms have occurred. One obvious comparison is the difference between domestic and world prices of tradeables at official exchange rates. This comparison is expected to capture the change in the wedge between world and domestic prices due to trade taxes and controls. With liberalization the wedge is expected to be reduced and therefore the two prices should converge.

Another price change comparison which may indicate a liberalization is with respect to relative prices of importables, exportables, and nontradeables. Given high initial protection of imports through tariffs and NTBs, trade liberalization should lower importable prices. Inversely. taxed exportables should see a rise in domestic prices due to elimination of these taxes. However, as has already been noted, devaluation often accompanies these reforms to prevent deterioration in the balance of payments. Devaluation alone should raise tradeable costs with respect to nontradeables. The combination of devaluation with trade policy reforms should unambiguously increase exportable prices relative to nontradeables and importables. However, isolating the relative price changes between importables and nontradeables is not obvious, since the direction of change with devaluation offsets the effects of border policy liberalization.

A final relative price change used to identify liberalization concerns divergences between official and parallel exchange rates. The expectation is that trade liberalization should reduce the gap between these rates devaluation and/or elimination of exchange controls accompany other trade reforms.

Aside from relative price changes, another type of test for liberalization is to evaluate changes

in trade openness using trade intensity ratios (share of import and/or export value with respect to GDP or some other measure of aggregate economic activity, see page 2). In general, the expectation is that these ratios should increase with trade liberalization, although this need not be the case.

A final approach to evaluating liberalization is to derive econometric estimates of import demand to predict demand and then compare these counterfactuals with actual demand. If actual import demand post-reform exceeds counterfactual estimates based upon pre-reform behavior, then liberalization is assumed to have occurred.

Evidence of liberalization. Over the period of adjustment, the liberalization of exchange controls is pointed to as an area of substantial success by the IMF and the World Bank. Nash estimates depreciation of the real effective exchange rate (REER) at 24% for all of SSA, and a reduction in black market premia of 56%. Yet while real devaluation was achieved in most countries, these improvements have often been only temporary (eg. Nigeria, Ghana, Madagascar). Moreover, liberalization of import regimes has often been supported by large inflows of external assistance, suggesting that dependence on assistance remains fundamental to exchange rate stability, which again implies that devaluation may be only temporary if assistance is not assured.

Evidence on movements in protection rates is contradictory. Nash (1993) finds that protection has declined substantially for SSA relative to very high levels prior to trade reforms. His estimates show that between 1980 and 1992 there has been a reduction in nominal protection of between 30 and 50 percentage points. Dean et al. show a much weaker reduction with post reform protection representing 94% of levels prior to reform. Nash claims, however, that recent reductions in protection appear to have been more significant. Various authors agree that in comparisons between SSA and East

Asia and Latin America, African protection rates remain very high in most cases for all countries studied (Nash, Dean, De Rosa). De Rosa (1993) finds that SSA countries enforced average tariff rates of about 30% and NTB frequency ratios[4] of about 80% during the late 1980s, while developing countries as a group enforced average tariff rates of about 20% and NTB frequency ratios of about 40%. Protection and NTB ratios in industrial countries were even lower (5% and 20%, respectively).

Continued high protection persists particularly in the lowest-income countries because foreign exchange allocation is still not market driven in most of these countries and so most countries still have import licensing requirements. The CFA zone countries represent a partial exception in that they have a convertible currency, but high non-tariff and tariff barriers have kept their overall protection levels high, too.

Nash also finds that changes in the openness of countries indicated by share of imports in consumption or in GDP are mixed, although if only intensive trade adjusters are examined, there is clear evidence of decreasing protectionism. However, because of simultaneous real depreciation of exchange rates, this has partially offset total incentives to import, such that measures of import penetration do not show much improvement. On the export side, Nash finds that producer prices are still not linked to export parity in most countries for traditional exports. For nontraditional exports, licensing requirements for foreign exchange repatriation remains a problem. Moreover there are still not efficient systems to give exporters access to imported inputs. (Again, see the survey of Trade Opportunities by Salinger, 1996).

Another observation is that import prices may not have changed significantly in many

[4] NTB frequency ratios measure the percentage of tariff-line items affected by a given NTB import regulation.

countries despite devaluation because prior to reform, prices were already determined by the parallel market. To the extent that this market was able to circumvent policy barriers, liberalization may not have substantially changed the availability of goods and therefore their prices.

Pritchett and Sethi (1993) point out a number of areas where the evaluation of protection is problematic and therefore the actual effects of tariff reform are difficult to evaluate. Irregularities in the application of taxes, the overwhelming importance of exemptions for some categories of commodities, and strategies to avoid taxes through such means as under-invoicing and illegal imports each result in a lowering of real protection rates from what statutory tax rates would suggest. Efforts to lower trade taxes and reduced exemptions as components of liberalization should decrease these distortions of protection, and therefore strengthen the effectiveness of protective measures which remain. Comparisons based upon changes in statutory rates alone would ignore this effect, and therefore overstate the loss of protection due to liberalization.

The Credibility Of Reforms

A separate issue from that of whether liberalization actually occurred is the extent to which it is deemed credible. "Credibility" in economic parlance refers to the extent to which announced policies are perceived to be real and likely to be sustained. The concept is used to explain the reaction of economic actors to policy changes. If anticipated behavioral changes by economic actors do not result from a policy change, the reason may be that the actors do not believe the policies will persist, either because the political will is not there, or because, despite political will, underlying economic

conditions will force a reversal. Various tests of credibility of trade have been devised which test for three principal conditions: macroeconomic compatibility, non-forcastability and time consistency.

Macroeconomic compatibility This criterion is based on the premise that reforms which are not sustainable given macroeconomic or fiscal conditions are not likely to be deemed credible by economic actors. It therefore contains two components - balance of payments and fiscal compatibility. Balance of payments compatibility means that trade reforms must be accompanied by measures to sustain payments balances, typically by tightening money supply. This is so because the expected effect of trade liberalization in countries which have formerly been heavily protected will be the deterioration of the balance of payments as imports rise with liberalization. The typical corrective measure is a devaluation, an increase in indirect taxes or contraction of fiscal and monetary policy to support liberalization.

Fiscal compatibility is another measure of credibility because trade liberalization typically implies a reduction in import tariffs and therefore a potential reduction in public revenues. The reforms may therefore be threatened if government is forced to reverse them to sustain revenue. Fiscal compatibility is linked to payments compatibility because a fiscal deficit increases the money supply and therefore weaken the balance of payments. Conversely, devaluation to counter payments incompatibility can also raise revenues in domestic currency units depending on the price elasticity of imports.

Non-forecastability A second measure of credibility is the degree of "systematic forecastability" of the balance of payments. This argument holds that in a liberal environment, government is no longer able to manipulate the balance of payments through policies such as the

application of quantitative restrictions on imports, or licensing foreign exchange. Trade is no longer policy determined therefore, but rather is a function of market forces. Thus if government continues to set trade or payments targets, and manipulate policy to achieve them, the trade reform is not credible to private actors because it remains an endogenous effect of policy decisions. Although this criteria is proposed by Collier and mentioned by various AERC case study authors, it does not appear to be used in their analyses as an argument in their assessments of credibility.

Time consistency A final criterion for credibility is time consistency; that is, the likelihood that reforms are permanent, given political considerations of the regime in power. The essential questions are to determine the impetus behind changes in trade policy (why were restrictions initially maintained, and why were they liberalized), then to determine whether there was ever a reversal in impetus, and finally to determine whether economic actors acted on the assumption that policy would be permanent, or alternatively that it would revert. Tests of consistency rely primarily on policy accounts to answer the first two questions, but focus on the behavior of private agents to respond to the final issue.

In the face of policy uncertainty it may be expected that economic actors will defer long term investments and maintain liquid investments, whereas belief in the consistency of policy should engender long run investments consistent with the environment that it creates. Time inconsistency may also occur when governments adopt liberalization temporarily to respond to conditions to receive program aid, and then revert to restrictions. Time consistency may also be jeopardized if the government has over-arching redistributive concerns that weigh against liberalization and doom it to be reversed. Also where the political process determines policies, where there is uncertainty about winners and losers from liberalization, the sustainability of policies is likely to be uncertain.

Critique Of The Extent Of Liberalization And Its Credibility

In most of the AERC case-study examinations of liberalization, at least two liberalization events have occurred in the last twenty years. In nearly all cases, the initial episodes where short lived and eventually reversed because of the lack of credibility of the attempts given other public policy decisions taken. Where efforts have failed, it has usually been because of a lack of macroeconomic incompatibility, particularly with respect to the balance of payments, and time inconsistency with respect to other policies. On the other hand, most of the more recent liberalization episodes in each country are deemed to have been largely credible, although in all cases the process continues and in some countries the possibility of policy reversals remain substantial.

In the concept of trade liberalization credibility, there is a cyclical causality between the macroeconomic compatibility of policy and its credibility. On the one hand, compatibility with fiscal and foreign currency balances is a measure of the credibility of trade reforms. On the other hand, reform credibility is also an explanation of macroeconomic performance. Thus, Rodrik notes that credibility problems can be self-fulfilling, that is policy reversals occur because of the belief that it will be aborted; Musconde et.al. found this to be the case for Zambia. To counter this problem, some have proposed slow but steady approaches to liberalization in order to build credibility (cf. cases of South Africa and Mauritius above) while others propose exaggerating reforms to send clear signals as to the governments intentions (Rodrik).

The use of both payments and fiscal compatibility to test liberalization credibility have been questioned both with theoretical logic and empirical data. The direction of effect of liberalization can be shown to be ambiguous for both variables, depending, in part, on the types of reforms pursued, and in part, on whether these effects are anticipated in the short run or longer run (Jebuni, 1993).

Another difficulty in evaluating the credibility of reforms as an explanation of the ultimate reaction to policy reforms is in the determination of what economic actors actually understand about the reforms. Without knowledge of their understanding of the reforms, it is difficult to then hypothesize about their reaction to reforms. Moreover, while some economic actors may correctly judge the credibility or not of reforms, those actors may have an important role in allocating resources in reaction to reforms. Thus, it may be possible that much of the economy reacts naively to reforms, despite their non-sustainability in the long run. These expectations may ultimately alter the impact of the reforms from what economists might predict.

The Impact Of Trade Liberalization

Promoting Economic Growth Although, there is now strong empirical evidence that outward oriented policies contribute to economic growth, proof of a positive growth impact of trade policy reforms undertaken in the last decade in Sub-Saharan Africa is not yet available. Balassa (1990) does provide evidence that market liberalization policies in Africa (including international and domestic trade) increases the value of trade. He demonstrates that market-oriented economies gained while interventionist economies lost export market share during the 1970s. While this evidence is not

specific to trade reforms, it does suggest the strong role of changing price incentives which these policies can create.[5] Using econometric estimations, he also demonstrates that African exports are strongly responsive to changes in prices, particularly for agricultural exports. African export price responsiveness is in fact higher than in the rest of the world. Not surprisingly, export growth has been higher in African countries which have devalued than in those which have not.[6] Based on econometric estimates of the contribution of outward-orientation (as reflected by real exchange rate distortions and variability) to growth for a world-wide sample, Dollar (1993) also shows a strong correlation between openness and growth. Due to the comparative lack of openness in African countries over the period of his analysis (1976-1985), African countries had the most to gain from liberalizing reforms.

Focusing on macroeconomic reforms which it has sponsored, the World Bank in Adjustment in Africa: Reform Results and the Road Ahead (Jones et al, 1994) provides an assessment of their impact over the period of the 1980s (1981-91). The study finds a relatively weak positive correlation between of policy stance and growth (an average 2% growth rate for GDP of large reformers as compared with 1% for small reformers, and -1.6% for countries with deteriorating policy conditions). However, this analysis has been criticized both because of the relatively arbitrary classification of countries among reform categories, the analysis does not carefully assess the status of countries at the beginning of the time interval over which policy stance and economic growth is assessed, and the results mask wide variation in performance within reform categories. Thus, if instead of looking at average rates of growth for each category, median growth rates are examined, the difference in growth

[5] See also Sanjay Kathuria, *Export Incentives, The Impact of Recent Policy Changes*, World Bank Policy Research Working Paper 1355, September 1994.

[6] See also, Cleaver, K.M. *The impact of price and exchange rate policies in agriculture in sub-Saharan Africa*, World Bank Staff Working Paper No. 728 (1985). and Gulhati, R. et al, *Exchange rate policies in Eastern and Southern Africa, 1965-1983* World Bank Staff Working Paper No. 720 (1985).

rates for small and large reformers is negligible.(Anonymous, Electric Library, 1996)

Another critique of this analysis is that it does not assess the contribution of other factors that might explain changes in growth performance in Africa, including the initial policy stance of countries prior to reform, and such factors as debt burdens, the status of human capital, infrastructure, and institutions all play a major role in growth performance. Tracing the impacts of "trade" reforms on economic performance is also complicated by the need to distinguish effects of trade reform from those of other reform efforts, and from other exogenous shocks to the economy. Thus, for example, efforts to link macroeconomic changes to trade liberalization in Nigeria are rejected by Ajakaiye and Soyibo because of the incredibility of these liberalization episodes. They note that indeed growth increased following Nigeria's last liberalization episode, but not from effects of improved trade policy. Changes in patterns of import composition, suggest that resource reallocation following the liberalization were actually opposite of what one would expect since a greater share of capital and raw materials were imported after the episode to the detriment of consumer goods, suggesting that import substituting firms actually gained during this period. The only area where a positive effect was found was in the realm of agricultural exports, for which the removal of export duties reversed the rapid decline in exports, and even resulted in some growth for palm kernel and rubber.

Most of the AERC studies of liberalization do not note a strong growth effect due to liberalizations events. This is in part due to the lack of credibility of many of these events, but even discarding events which are judged non-credible, assessments in Zambia, Uganda, and Ghana all point to disappointing growth effects. Only in Mauritius do Dabee and Milner find steady and rapid growth of GDP and exports associated with trade liberalization. They attribute sources of this growth first to a period increasing factor utilization associated with export industries, particularly through the

employment of labor in manufacturing; and secondly to the bringing into production of excess capacity of capital equipment. This progression is also implied in a sharp increase in savings during the initial period of liberalization, followed only after a lag by increased investments.

Seeking a reason for the lack of growth in Africa, one may ask what the expected sources of growth from these reforms are. Economic growth benefits of market liberalization are expected to come both from "static" effects of better resource allocation and the "dynamic" effects of a more flexible and open economic environment. The static resource allocation effects include a movement of resources away from import substituting industries and towards exporting industries or nontradeable products, a change in the composition of imports toward consumer commodities and away from raw materials and capital goods that furnish import substituting activities, and an increase in economic growth rates, due to greater efficiency in resource allocation. In addition to these static resource allocation effects, various other effects are also identified in the literature including dynamic benefits in the form of learning, technological change and economic growth; improved flexibility of the economy in the face of external shocks; and reduced rent-seeking behavior and associated directly unproductive (DUP) activities (Rodrik, 1993 and Edwards, 1991). The gains from static resource allocation are well founded in economic theory; however, various efforts to measure these benefits suggest that these gains are of relatively minor economic value in most cases.[7] It has been suggested that this is in large part because even before reforms are imposed, parallel markets emerge to alleviate the extent of distortions before conditions where large static efficiency gains from reform can develop (Roemer and Jones, 1991). The "dynamic" impacts of are not as well founded in economic theory or empirical research. Rather their existence is generally hypothesized because of the importance of growth effects

[7] Rodrik (1993) reviews the evidence of in this regard (pp.7-8).

of outward orientation, despite the small documented gains from allocative efficiency.[8] In this context, the lack of growth in response to policy reorientation in Africa suggests that these dynamic benefits have not emerged.

Inducing a Supply Response Even where liberalization has been judged to have been successful, various problems are often identified which have muted the anticipated impact of trade liberalization on the economy. This is typically the case where expected supply responses to reform are not forthcoming. Thus, Tutu and Oduro note that in Ghana, despite a recent liberalization which was deemed credible and compatible, export growth was weak. In addition, Ghana experienced no positive employment response to liberalization. In fact formal sector employment continued to fall and real wages have stagnated at half of levels in the early 1970s. Rapid population growth and downsizing in the public sector, contributed to continued high unemployment, however, lack of response in the export sector was also to blame. This non-responsiveness, they explain as being due in part to deteriorating terms of trade and a lack of diversification into more value-added commodities.

Ssemogerere (1990) provides an econometric analysis of export crop response to policy reforms in the case of coffee in Uganda. Coffee exports form Uganda were not found to respond as anticipated to changing border prices because these prices were not passed back to producers. An important contribution of the paper is to demonstrate the critical role of domestic markets in transmitting changing incentives provided by reforms (particularly devaluations) to farmers. Inefficient internal markets can delay these signals and thereby substantially mute intended supply effects. In the case of important exports like coffee, this can place the entire reform process in jeopardy.

[8] Rodrik (1993) reaches this conclusion based upon a review of firm-level, cross industry and cross country studies. See also Edwards (1991).

In Kenya, performance of the export sector has also been poor, growing more much more slowly than the economy as a whole (M'Wega, 1995). Moreover, with the exception of some growth of horticulture, diversification has not occurred, and in fact manufactured exports have declined. Much of this poor performance is attributed to continued foreign-exchange based restrictions on intermediate inputs, and to a continued anti-export bias in policy.

Musconda et al. note a number of other factors which help to explain the slowness of response in both manufacturing and nontraditional exportable sectors after liberalization in Zambia. In fact, a period of de-industrialization resulted, as firms moved out of import-substituting industries which lost trade protection. This is attributed to a reduction in competitiveness due to sudden exposure to foreign markets, high capital costs and temporarily overvalued real exchange rates in the wake of liberalization. Other transitional problems were associated with the lack of synchronization of Zambia's trade reforms with those of its major trade partners. In particular, Zimbabwe and South Africa already had export promotion policies in place which resulted in Zambia's importable sector being unable to profitably compete against imports from the region. Lastly, various market imperfections prohibited many firms from borrowing to finance transitions. These transitional costs were particularly high for national as opposed to multinational firms in Zambia; the latter were more easily able to move into trading with their international affiliates, and also had easier access to international capital markets, both of which facilitated their transition.

Increasing Economic Stability and Diversity The argument that trade liberalization increases the ability of the economy to accommodate external shocks requires a distinction between the immediate impact of external shocks, for which more highly protected countries are not surprisingly

better buffered, and the ability of the economy to adjust to the shocks effects, in the long run. For the later case, studies by Belassa and Saches have shown that outward-oriented economies are indeed better able to adjust. Rodrik concurs with this evidence but notes that the explanations for why economies with certain configurations of economic policy should be more resilient to external shocks are still not understood.

M'Wega also argues that export liberalization should contribute to a diversification of exports by making new products exportable, and by allowing penetration of new markets, which in turn lowers economic risks with respect to any specific world market (Mwega, 1995). On the other hand he does not find that this has happened to any significant extent in Kenya, suggesting that trade liberalization alone is insufficient to create such a response.

Impact on Public Revenues The impact of trade liberalization programs on public revenues is often expected to be negative due to the expected loss of import tariffs with tariff reduction. This is a particularly troubling prospect for African countries where trade taxes account for a particularly large component of public revenues. However, substantial experience suggests that liberalization measures may not threaten fiscal balance for several reasons. For tariffs which were initially prohibitive, rate reduction can increase revenues as trade volume increases. Moreover, avoidance of taxation and graft to reduce tax bills may decline with a reduction in statutory rates (Pritchet and Sethi, 1994). A recent example of these effects is Kenya where a halving of statutory tariffication has reportedly doubled customs revenues.[9] Finally, reforms which have pursued "concertina" strategies (in which the range of tariffs is reduce by raising low rates as well as lowering high tariffs) may well raise revenues from increases in rates for low tariff commodities.

[9] Conversation with Clive Gray, HIID.

Another mechanism by which liberalization can raise revenues is through tariffication of QRs, in which case rents of QRs are transferred from foreign exporters to the government treasury. Musconda et al. (1995) also found that changes in the basket of traded goods resulting from removal of QRs on foreign exchange had a positive effect on public revenues in Zambia. Prior to reforms. the administrative allocation of foreign exchange favored essential commodities, for which tariffs were low, such that the removal of foreign exchange licensing resulted in greater importation of higher tariff consumer commodities, thereby increasing revenues.

On the export side, the fiscal consequences of reform are more clearly negative to the extent that export taxes are reduced or eliminated. Moreover, in many cases weak supply responses of exporting sectors to these reductions have meant that the offsetting revenue effects of increasing export volumes has not been forthcoming in many countries.

Using the case of Kenya, Bevan (1995) also shows that although the immediate budgetary effects of trade liberalization may be negative if only an analysis of the foreign exchange budget is used, a more comprehensive analysis using a general equilibrium model can illustrate how liberalization may have strongly positive budgetary effects (Bevan, 1995). These effects occur in part due to shifts in resource allocation towards sectors which are more taxable.

Reducing Rent-seeking The assumption that opportunities for rent-seeking are reduced in countries with more liberal/outward oriented trade regimes appears to be based in part on the assertion that certain popular protectionist instruments (e.g. QRs) are more easily manipulated by rent-seekers than are others (e.g.. tariffs), and on the observation that liberal/outward oriented regimes

in East Asia have been less affected by rent-seeking problems. However, other authors have questioned this assumption both because of recent revelations that rent seeking in these economies is in fact more prevalent than previously perceived, and because there is no strong theoretical basis for assuming that rent-seeking

is any less attractive under these regimes (Chris Laincz, 1996; Rodrik, 1993). Analysis of changes in the behavior of rent-seekers after liberalization appears to be an important gap in the literature on the impact of reform (the next section addresses this issue in more depth).

CONCLUSIONS: The Current Status Of Trade Policy Reform

Research, particularly by the World Bank, suggests that the record of trade policy reform in Sub-Saharan Africa is following the same path as in other regions of the world in the past decade. Nonetheless, this record masks substantial variation among countries and a tendency in Sub-Saharan Africa for crucial trade reforms to be stalled or reversed subsequent to implementation. Particularly where reforms have not been forthcoming without outside pressure, there may be important differences between the prescriptions of reform found in the reform documentation, and their actual implementation. Particularly in cases where parts of government harbor continuing ambivalence about a policy, they can easily neutralize the policy by inaction or obfuscation. In other cases, policies have been implemented but their effects on the trade environment have not met expectations. Three reasons for this may be noted:

- redundancy: This occurs where a policy reform is made irrelevant by other policies which continue to counter its intended effects. This is often the case with respect to protective measures against world markets.

- exemption: Despite reforms, exemptions are often granted to strong interest groups who can make their case to policy makers. Ironically, these interest groups may be a principal target of the original reform.

- reversal: Some reversals of government policy are to be expected with changes in government or unforeseen economic circumstances. However, governments may also reverse their positions as a matter of domestic political strategy. This is not surprising in the context of structural adjustment programs in which policies have been forced upon governments by IFIs as conditionality to obtain loans. Trade liberalization events have also not been credible because of the incompatibility of these reforms with macroeconomic conditions in these countries.

Given these problems, despite a decade of intensive reform efforts, the trade environment in Africa remains constrained. Measures of the impact of reforms on the trading environment suggest that nominal protection remains high, many currencies remain overvalued, others are subject to hyperinflation/rapid devaluation and the procedures and regulations surrounding trade remain slow, burdensome and restrictive. Specific areas where recent studies have identified important failures of reform programs include:

t Import tariff rates remain high and variable relative to other developing countries.

- Quantitative restrictions remain on imports, particularly in many of the CFA countries. These restrictions create opportunities for illicit trade.

- Failure to privatize parastatals that have de jure or de facto monopolies of the most important sectors in the economy limits trade opportunities.

- Foreign exchange markets are narrow, weak and unpredictable. Foreign exchange controls remain in place and black market premia for foreign exchange remain important in many countries.

- Export crops continue to be taxed in many countries. This taxation is sometimes disguised in the margins charged for export by parastatal marketing boards. In other cases, rents, created by restrictive export policies, are collected by marketing boards or privileged private exporters as marketing margins.

- Trading is subject to lengthy regulatory burdens and delays, and administrative oversight of these policies is often arbitrary, and corrupt. There is reluctance to allow free trade in staple foods, for cultural reasons.

In addition, various complementary measures, which must accompany trade reforms in order to get the beneficial economic effects of trade reform, are also missing. These include physical infrastructure, human capital (especially in technical and managerial areas), and public institutions to regulate markets, assist transactions, and provide safety, quality and other standards for transactions.

Internal market policy constraints also remain for certain commodities which hamper the transmission to producers of incentives created by trade reforms. Finally, reforms of financial, labor and land markets also inhibit investments to take advantage of new opportunities created by trade reforms.

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USAID EQUITY AND GROWTH
THROUGH ECONOMIC RESEARCH PROJECT

TRADE POLICY COMPONENT

FOREIGN AND LOCAL INVESTMENT IN AFRICA

CASE STUDY OF UGANDA

by Marios Obwona

Economic Policy Research Centre
Kampala, Uganda

part of a larger study in collaboration with

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DRAFT–NOT FOR CITATION

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Relationship between local and foreign firms: Case study of Uganda

I Introduction

Governments of developing countries are now giving new attention to the potential for private foreign direct investment (FDI) in their economies. This is because many developing countries now desire to extend the market-price system and the private sector and to mitigate the external debt problem by attracting more private foreign investment.

When a country suffers a resource or savings gap, it will also confront a foreign exchange gap that will have to be filled with an inflow of foreign capital. In macroeconomic terms, when government expenditure plus private investment exceed government revenue and private savings (a resource gap), this internal imbalance will spill over into an external imbalance of imports greater than exports, and hence constitute foreign exchange gap. International financial intermediation is then required to fill the foreign exchange gap. This can be accomplished by foreign assistance (gifts and loans from bilateral donors, international financial institutions {IFIs} and commercial banks), or by private foreign investment. While the former sources of foreign capital are flat or declining, FDI has considerable potential.

It is understandable why there is now a desire by developing countries to increase the equity/debt ratio on foreign capital: There are some relative advantages of FDI over foreign loans from the standpoint of balance of payments adjustment. Equity investment requires payments only when it earns a profit, but debt requires payments irrespective of the state of the economy. The host country can also control payments whereas the terms of the servicing of debt are set in international markets. In contrast to the need to service debt (amortization and interest), earnings from private foreign investment are frequently reinvested and only a part repatriated. With private foreign direct investment, both commercial risk and the exchange rate risk are passed on to the investor rather than having to be borne by the host government.

Uganda, in its attempt to accelerate growth and development, has always encouraged foreign direct investment through the introduction of incentive packages. This is based on the perception that domestic resource gap can partly be filled through foreign private investment. In other words when Uganda receives foreign savings, domestic resources are supplemented. FDI makes available foreign exchange which should, all things being equal, increase the country's capacity to import. The other benefits of FDI are that it:

(a) transfers managerial knowledge and skills including organizational competence and access to foreign markets;
(b) enables the transfer of technology to occur from developed economies; and
(c) provides an array of goods and services to residents in the recipient country.

There is no doubt that it is useful to encourage FDIs because the increase in real income resulting from the act of investment exceeds the resultant increase in the income of the investor. Once the value added to output by foreign capital is greater than the amount appropriated by the investor,

social returns will exceed private returns. Given that foreign investment raises productivity and this increase is not completely appropriated by the investor, the greater product will be shared with others, and some other income groups will benefit directly. Domestic labour will benefit in the form of higher real wages; consumers by way of lower prices and government through higher tax revenue. These arguments do not suggest that there are no disadvantages to FDI. There are scholars who have argued that FDI leads to the domination of the domestic economy by foreigners; creates distortions in the domestic labour market by paying high wages, etc. Ake (1978).

Before the NRM government, the Uganda government theoretically encouraged FDI while in practice creating disincentives to FDI. For example, controlled interest rates, managed exchange rate regimes and restricted trade policy during the period provided wrong signals to potential investors.

The establishment of Uganda Investment Authority in 1991 with a series of packages and incentives was directed at wooing foreign investors to Uganda.

The rest of the paper is structured as follows. Section II will give an overview of FDI performance in Uganda since the post independence era. Section III discusses the relationship between foreign and local investments. The question of multinationals is addressed in Section IV. Section V contains some challenges and concluding remarks.

II An overview of FDI performance in Uganda

FDI in Uganda can be discussed under four regimes, namely, the post-independence period up to 1970, the seventies, the early eighties (1980 to 1985) and the last decade(1986 to 1996). The initial period saw an increase in FDI, the second and the third, the decline and near death of FDI and the fourth, a resurrection of FDI.

The post independence period upto 1970

Before independence, financing of development projects in Uganda came mainly from the British government, which was the colonial authority. When the country became independent in 1962, the government had to look to alternative sources of funding for its development programmes, including FDI and aid. Government attitude towards FDI was clearly demonstrated in the Uganda Industrial Act of 1963, which put emphasis on the promotion of both foreign and local investors.

Government strategy sought to promote industrialization at the expense of agriculture, viewing the former as having both backward and forward linkages, a potential to create markets for the other sectors and to generate more employment. Government role in industrialization process of the country was enhanced by the Uganda Development Corporation (UDC), formed by the British in 1952. The state and a few Asian private investors like the Madhvani and Mehta groups boosted the industrial growth of the country in the post independence era.

Legal protection for FDI against compulsory acquisition by the state and rights to repatriate capital, interest and dividends was provided under the Foreign Investment (Protection) Act 1964. However, this did not stop the government from slowly moving towards the nationalisation of foreign investment in subsequent years. Towards this end, the UDC which was meant to start investments with big capital outlays and then sell them to private investors, was given a legal right to control 51 percent in some of the businesses it had started. This included such projects as Tororo Industrial Chemicals and Fertilizers (TICAF), Uganda Cement Industries (UCI) and Nyanza Textiles Industries Limited (NYTIL).

The biggest step towards nationalisation, however, came under the 1968 Common Man's Charter (CMC) which was viewed as a socialist stand. The economy was predominantly controlled by a few British-Asians who owned the commercial and industrial sectors of the country, a situation which government saw as unsustainable and therefore requiring change. The CMC was followed by the 1970 Nakivubo Pronouncement (NP) which spelt out strategies to implement the CMC. The NP increased government controlling interest from 51 percent to 60 percent in major private companies and manufacturing firms. It also excluded private enterprises from external trade. Foreign investors were not happy with this development. The business situation became tense and all indicators pointed towards political change. Indeed, in January 1971, the civilian government was overthrown by the army led by Idi Amin.

The Amin era: 1971 to 1979

This period was marked by the `Economic War' of 1972, which resulted in the expulsion of the British-Asians, expropriation of the assets and businesses of foreign investors, mostly Asians, and eventual collapse of the industrial and commercial sectors.

Immediately after the coup, the military government under Idi Amin revoked the *Nakivubo Pronouncement,* which provided for 60 percent share-holding, and reverted to 49 percent in some industries. But this was followed by the *Economic War* which resulted in the nationalisation of industries and other businesses belonging to foreigners. Some businesses were given to Ugandans to manage while others were put under UDC and government ministries. That marked the beginning of more chaos.

The investment climate for foreigners in Uganda during this period was quite hostile. For instance the problems of political instability and insecurity, nationalization, the collapse of East African Community, were compounded by the requirement that a foreign investor be naturalised as a Ugandan to do business in the country!! Failure to meet the set rules was considered sabotage and was liable for severe punishment, ranging from deportation to execution. So in effect, FDI was outlawed! The Ugandans who took over lacked capital, expertise and connections to continue as had the foreign investors. The commercial and industrial sectors virtually collapsed.

There were shortages of almost everything. This led to price hikes. The country lacked foreign exchange and creditworthiness. Subsequently even the military government began to realize the

importance of FDI and tried to revive it through the 1977 Foreign Investment Decree which exempted a foreign investor from import duty, sales taxes on plant and machinery in investment in an approved enterprise. The exemptions were not retrospective and only applied if the investment exceeded US$ 571,000[1]. Investors were reluctant to risk their money at that time because Amin was always unpredictable, so FDI continued to elude the country. The legacy of the military junta during this period continued to haunt the country for a long time, driving away potential foreign investors.

There was also the problem of overvalued currency. An unrealistic exchange rate undermined investments by inflating the cost of imported inputs, equipment and spare parts. It had a negative impact on investors' capital structure, particularly the foreign hard-currency obligations. In the circumstances, access to foreign exchange at the official rate was strictly rationed. Delays and/or failures to obtain official foreign exchange in sufficient quantities had serious cost implications for companies. In an attempt to resolve this problem, many firms resorted to purchasing foreign exchange on the parallel markets. There they paid a premium over the rate that would be effective if a more liberalized official exchange rate regime were in place.

The period from 1980 to 1985

The military government was overthrown in 1979. Although an elected government came into power in 1980, FDI continued to elude the country, mostly on account of past expropriations of foreign investments. The ratio of FDI to gross fixed capital, which measures the importance of inward FDI to an economy, was negative 0.2 between 1981 and 1985. Other less developed countries in Africa, averaged 2.3 during the same period[2]. In order to correct this bad image, a bill was presented to and passed by the parliament to return the properties of the foreign investors. However, it was not implemented until1990, when the new government of the National Resistance Movement (NRM) was in power.

The period from 1986 to present

To reverse the downward trend in FDI inflows, the NRM government undertook steps to make Uganda attractive as an investment location. These efforts have included, at the macroeconomic level, wide ranging economic policy reforms. Foreign exchange rate reform was the first, and most important. Other measures have included liberalization of the existing legal framework, the simplification of administrative procedures applicable to foreign investors, the conclusion of bilateral investment protection and promotion treaties, and accession to various multilateral treaties facilitating FDI flows.

The Investment Code 1991 is the law governing investment in Uganda. It replaced earlier statutes relating to foreign investments, namely the Foreign Investment Decree 1977 and the Foreign

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[1] 1977 exchange rate was approximately US$ = 8 Ug. Shs.

[2] See World Financial and Statistical Tables, 1995.

Investment (Protection) Act 1964. However, privileges and property rights enjoyed under previous legislation by holders of licenses were to continue and were to be reviewed under the Code.

The Investment Code 1991 provided for the creation of the Uganda Investment Authority (UIA) to facilitate the procedures for those interested in investing in the economy. It is a one-stop-centre for investors.

The broad function of UIA is to promote, facilitate and supervise investments in Uganda. Specifically, the functions of UIA include:

(a) to initiate and support measures which shall enhance the investment climate in Uganda for both Ugandan and non-Ugandan investors;
(b) to promote investment in Uganda through effective promotional means;
(c) granting approvals for the commencement of new businesses;
(d) to provide and disseminate up-to-date information on incentives available to investors;
(e) to assist incoming and existing investors by providing support services; and
(f) to recommend to the government national policies and programmes designed to promote investment in Uganda.

In order to encourage foreign investors, a number of investment promotions have been organized abroad - the USA, Europe, India, Thailand, South Africa, etc. to explain the trade and investment opportunities available in Uganda, especially in agro-farming, fishing and forestry, minerals, power generation and tourism. Attractive incentives have been provided to prospective investors as well.

A survey of actual and potential foreign investors shows that reform of regulatory and incentive environment has made Uganda more attractive to investors than many African countries. The Heritage Foundation (a research centre) of Washington DC in its December 1996 Report, 'Index of Economic Freedom', published in the Wall Street Journal, ranked Uganda as number 64 out of 150 countries.[3] The ranking is based on the comparative analysis of economic freedom of a country in ten key areas, including: trade and taxation policy, wage and price controls, government consumption, monetary policy, capital flows and foreign investments, banking policy, property rights, regulations and the black markets.

Thus, although Africa's share of FDI flows to developing countries dropped from 11 percent in 1986-1990 to 6 percent in 1991-1993 and down to 4 percent in 1994, the upward trend of investment flow into Uganda is a promising indication of the newfound confidence in a greatly improved political economy.

Table 1, while failing to differentiate between local and foreign projects, exhibits the encouraging surge of investment emerging in Uganda. Between 1993/94 and 1994/95, private sector investment increased from 5.6 percent to 9.1 percent of GDP.

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[3]Kenya and Tanzania were ranked 75th and 89th places, respectively.

Table 1: Total investment (local and foreign) in Uganda, 1991-1995

	1991	1992	1993	1994	1995	Total
Licensed projects	12	232	351	571	554	1720
Planned investment (US$mil.)	66	505	628	563	750	2512
Actual investment (US$mil.)	25	192	239	214	285	955

Source: UIA database for July 1991-December 1995

Actual investment figures are taken as 38% of proposed investment. Various in-house UIA surveys taken in 1993, 1994 and 1995 all had proposed/actual conversion rates between 38 and 40%. Also, breaking down the investment into years is difficult as most of the inflow is incremental over years and hard to trace with the somewhat unsatisfactory techniques of the UIA surveys.

While the above trend is encouraging, it is essential to note the wide disparity between the licenses granted to proposed investments and the actual investment on ground. The UIA promotional literature and independent assessment of Uganda's investment climate only observe the planned investment figures without showing the reality of the situation on the ground. The average conversion rate of approximately 38% is very low in relation to other developing countries outside of the Sub-Saharan Africa.

Factors leading to this low conversion rate include the hesitancy of investors (value of waiting)[4], the difficulty in passing through the discouraging bureaucratic impediments before implementation can commerce, and the investors discovery of the difference in the rhetoric of the promotional agency and the reality of the business environment encountered after the initial license is obtained. Each perspective has validity.

The sources of inward foreign investment coming into Uganda do not reflect the traditional domination of large Western multinational corporations (MNCs). Among investors looking to invest in East Africa, a slim 15 percent are major MNCs.[5] Table 2 shows the sources of FDI into Uganda.

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[4]Foreign investors obtain licenses yet continue to wait for further proof of stability before actual implementation takes place. They want to secure the incentives and the right to invest but want to gain more assurance about policy consistency before beginning.

[5]Economist Associati 1994, Vol. I, p. 12.

Table 2: Sources of licensed inward FDI into Uganda (as of June 1995)

Sources	Number of FDI	Percent of Total
UK	293	27
Kenya	193	18
India	123	11
Canada	123	11
South Africa	9	8
Others	332	31
Total of African countries	277	26

Source: UIA, Operating Summary, June 1995

The FDI coming from UK, Canada and Kenya can be misleading. Many of these investors are in fact Asians forced to flee Uganda in 1972. The Uganda business sector before 1972 was dominated by about 70,000 Asians, most of them fled to UK, Canada and Kenya. The vast majority of FDI flowing into Uganda comes from firms with previous experience in Uganda or East Africa.

Investment serves one of the three general purposes: to extend vertical integration, to export to the region, or serve the domestic market. Typically, FDI exploits the raw materials and cheap labour of developing countries and exports abroad. Investment flowing into Uganda with little exception targets the domestic market. However, this trend is slowly changing.
///
The main sectors which attracted more investments in recent years are:

(a) **Manufacturing** (i) import substitution industries such as chemicals, cement, etc.; and (ii) agro processing, for example, food processing.

UIA Survey of 1995 shows that most of the post-1991 investment is reportedly going into the manufacturing sector, which is accounting for 70% of on-ground investment. Ugandan manufacturers are largely producing import substitutes. About 40% of manufacturing investment has been agro-based. Overall, during 1991-94, investment has not been directed at export oriented activities. Just about 8% of manufacturing output was exported to regional markets in 1995.

(b) **Agriculture, forestry and fishing** - dominated by coffee and rehabilitation of tea plantations; other nontraditional agricultural crop exports (in raw form or with minimal processing), fish products, floricultural and horticultural products, etc.

(c) **Construction and services** - construction and renovation of hotels mainly for tourism subsector grew by 18 percent per annum during 1995, earning about US$90 million from US$73 million in 1994. The banking and insurance industry also witnessed some

improvement but based mainly in Kampala.

Of the above three sectors, FDIs are concentrated mainly in manufacturing because of the problem with the agriculture. An obsolete, over protective law preventing foreign ownership of land and limited acreage of land to leased prevents FDI from large-scale investment in Uganda.

In addition to manufacturing, much of the foreign investment can be linked to donor-related projects. Unfortunately, there is not much information on the foreign projects linked to donor subsidies. Donor supported investment has been in projects in infrastructure such as road building, non-traditional exports, etc.

III Relationships between local and foreign investments

At the beginning local firms thought UIA was favouring foreign firms especially when they consider the threshold of $50,000 (for local firms) and $100,000 (foreign) before a firm can apply for the investment incentive certificates. The $50,000 is regarded as being too high by the locals since they are usually small family enterprises. Banks are unwilling to lend, even when they do so the interest rates are too high due to risks involved.

There were some elements of animosity and suspicion/uneasiness among the locals towards the foreign investors. Even politicians were expressing this feeling openly. For example, complaints that foreign investors employ unskilled `expatriates' instead of Ugandans were common. The successful returns of properties to former Ugandan Asians was at first viewed negatively.

For the past four or five years, there seems to be some change in the attitudes more so due to the President's utterances and campaigns. Foreign firms are seen as necessary and as a useful partner.

Local firms now see the role of foreign firms and now appreciate the importance of having them. They have brought elements of competitions among the local firms and opened up new markets for them (for example, in the fishing industry). Some have become good partners.

Since the establishment of UIA Uganda has licensed over 2000 firms amounting to about $3.7 bn planned investment (plants and machinery excluding working capital).

Of these	**%**
manufacturing	27
agriculture (including agro-processing)	24
tourism	11
Financial services	9
Others	29

and the composition is	%
wholly foreign	40
locally owned	38
joint ventures	22

Source: UIA

Is there an investment boom taking place in Uganda?

The consensus among the key informants is that there is a great potential, but the boom in investment is yet to come. For this to occur, major constraints need to be addressed. These constraints include inadequate and irregular power supply, transport costs (due to high fuel tax) and high telephone costs.

Currently firms are under distress and most firms are restructuring and taking strategic joint ventures that shift them from import substitution industries to export oriented industries while others are becoming big distributors of services and raw materials for big industries. One illustration is the beer industry where both Bell (Guiness International joint venture and Madhvani Nile Breweries (with a South African Breweries Company) have become big producers targeting the bigger Great Lakes market. CocaCola and Pepsi Cola have built plants (for example, in Mbarara and Mbale in Western and Eastern Uganda, respectively), targeted at the bigger regional markets.

Labour productivity and cost

Labour in Uganda is not cheap. The minimum wage being floated but not yet finalized is between Shs.65,000 and Shs. 75,000 per month.

Absenteeism and time taken for funerals/burials (often AIDS related death) are common.

When one is out of his/her area or country one tends to work much harder because of less detractions from family issues, etc. There is also a general feeling that when one mix up different tribes (or religions) there is usually some improvement in productivity.

Ugandans working outside are renown for hard work! So it is not in the blood or that Ugandans are generally not productive. It also depends on the employers. Workers in the battery and Mukwano industries (both owned by the locals) are known to be quite productive.

Linkages

Forms of firm linkages
- Subcontracting and outsourcing from TNCs
- Joint ventures
- Non-affiliate licensing of technology and know-how
- Franchises

Potential growth sectors
- Agro-processing
- Textiles and clothing
- Leather products
- Cement and building materials

- Chemicals
- Consumer-goods products
- Light electrical and mechanical equipment
- Tourism and services

No clear pattern of linkages between foreign/local firms because of the nature of existing structures of industries which tend to have limited backward linkages.

Most manufacturing firms are doing what can be described as
`finishing end' or just re-packaging, eg. toothpaste, powder soap, paints, etc. With this type of manufacturing there is no vertical integration or linkages with other firms. For example, plastics (plastic grundles are melted and molded into different shapes), colgate is brought in big containers and repackaged. These activities have low working capital requirement.

However, there are some few cases of linkages mainly in the construction industry where the builders source their inputs (nails, roofing sheets, paints, etc.) locally.

Cases outside construction industry may include the Roadmaster bicycle assembly plant at Nalukulongo which gets its leather (wet blue form) for seats from Jinja leather industry (ULATI).

In the cotton industry, Nytil Picfare Industries has invested more than US$4m in machinery. It produces a variety of textile products for local market. Cotton is obtained locally, from, for example, North Bukedi Ltd and Lonrho Cotton.

Hwan Sung Packaging Ltd. has established a modern plant for manufacturing styrofoam boxes and has created linkages between the fishing industry and packaging industry.

Otherwise, for some firms, there are in fact disincentives that discourage linkages among firms. When a firm sources its inputs locally it will have to pay taxes such as VAT, sales or excise duties on the inputs. On the other hand firms can source duty free such inputs if imported from abroad if it has incentive certificates. The tendency is for firms to import such inputs even in cases where they

could source locally.

For example, hotels import furniture from abroad. They argue that bulk purchasing is sometimes done by their parent company. Local furniture may not much upto the required standards leave alone inability to local firms to supply in bulk. Nevertheless, most hotels now buy their food locally especially fruits, vegetables, meat, etc.

Which takes the lead?

At the beginning there were small investors both local and foreign operating. The foreign firms do a good job on the side of public relations outside the country while the local firms are always trying to venture into new and more risky areas.

The presence of these small firms in Uganda has helped in attracting other Multinationals who are now thinking of setting up (or have already set up) their bases in Uganda.

Unlike small firms, multinationals or big firms spend time doing more research and analysis before deciding to invest.

IV Are multinationals investing?

Beer

Sometime in 1993, Bell Breweries (a Kenyan subsidiary) went into receivership but was bailed out by Guiness International and now operate as joint ventures. Bell which used to control less than 40 percent of the market share now has over 50 percent.

Nile Breweries (a Madhvani company) facing stiff competition is now teaming up with a South African Brewery (Castle - the Third largest brewery in the world). Previously had some resistance especially Ministry of Industry (Hon Kaijuka) lifted the beer ban and allowed the South Africans to import castle beer.

Soft drinks

Coco-Cola which bailed out Century Bottling, which had gone into receivership, is battling it up with the Pepsi-Cola. Coco-Cola has opened up another bottling line in Mbarara and intends to set up another one in Mbale too, both targeting regional markets.

Distribution chains

Metro Cash and Carry of South Africa is one of the multinationals planning to set up distribution store/chains all over the country for distributing locally made products all over the country.

Uniliver

The US conglomerate in manufactures of blue band, cooking oils, cosmetics etc. has opened up an independent autonomous centre in Uganda (Mr Hatega who is the Vice Chairman of Unilever is in charge of the Uganda chapter). They have downsized their Kenyan operations and has recognized Uganda as a regional market. Initially they had no interest in Uganda. The presence of other multinationals might have led to this change of strategy.

Dairy products

Nestle company intends to set up a dairy processing plant in Uganda.

Hotels

Some hotels in and around Kampala have been renovated but there is not much new investment in this area. Upcountry hotels which have been sold off went mainly to local investors. Again not much investment has been put in by the new owners.

The only International Hotel, Kampala Sheraton, is not even investing since they are only on management contract. Foreign International Hotel Chains are expected to lead the way.

Construction industry

In all towns in Uganda residential houses are being put up. In Kampala, the development is taking place mainly in the cosmopolitan areas like East of Kampala (that is, Naguru, Ntinda, Bugolobi and Luzira)

Developers now prefer one to two bed-room houses instead of five. More office blocks are being built to bring down the present exorbitant rates (of over $15 dollars per square meter) for offices that are of sub-standard.

Telecom

CelTel Cellular has led the way for private operators in the telecommunication ventures. It is expected that the biggest players in the privatization of UPTC will be the foreign big firms.

Push and pull factors leading attracting foreign investors to Uganda

- Impact of stable political and socio-economic environment and liberal investment policies.
- Effects of political changes in South Africa.
- Increased private sector initiative
- Political problem in Kenya and therefore Kenya is no longer regarded as a safe haven and a distribution point for the potential Regional market in the Great Lakes Region (Rwanda, DRC[6] and Southern Sudan). Museveni is regarded as better placed to negotiate terms for these countries.
- Small investors from Britain, Kenya, India and Canada are still leading sources of FDI because of historical attachment to Ugandan Asians who left the country in the early 1970s.

- American renewed interest in Africa and in particular the Great Lakes Region.
- Uganda is strategically located to become a major distribution point of the Great Lakes Region.

Push for the export processing Zones or free trade zones

The President is campaigning for instant coffee to be produced here for export rather than Uganda selling raw coffee beans. This campaign is timely, in the first place. The argument is that if Multinationals like Coca-Cola are already here why not Nascafe!

Opportunities

Uganda's existing comparative advantage is heavily concentrated on agriculture, forestry and mineral resources and their primary processing. This implies their is scope for further development and secondary processing of these resources. In general, Uganda's export activities are traditional, which suggests that there is scope for further development for modernization and diversification, in terms of new products, processes and markets. As Uganda enjoys good climatic conditions and fertile soils, it should diversify its agricultural production with introduction of new crops and farming technologies for high value products.

Uganda's main potential export markets may be grouped into: COMESA/PTA, Europe, USA, and

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[6]Do not forget the American interest in DRC and Uganda is being used as a stepping stone.

the Middle East. Uganda currently has a unbalanced trade relationship with the PTA markets. Its major trading partners are Kenya and Tanzania. In 1990, the value of total imports from PTA countries was US$101 million while exports to PTA member states were US$4 million. There is scope for expanding exports to PTA member states. The regional market for food also presents opportunities for agricultural production for exports.

Uganda's major export markets are Europe and USA. Uganda competes with Sub-Saharan Africa in its traditional commodity exports, particularly in tea, coffee, cotton, tobacco and cocoa.

Uganda's exports have penetrated the Middle East, mainly through the Gulf entreports, for example, Dubai. The region offers good opportunities for a wide range of agricultural produce. Market entry regulations, health and quality standards are less demanding and the region is closer than Europe and the US.

V Challenges and concluding remarks

The war in the North and western Uganda creates an image problem for the country. Now with internet communication, information access is no longer a problem. Some investors would take a `wait and see' strategy.

Defense expenditure (about 20 percent of the total recurrent expenditure) is worrying and is a drain to already narrow resource base. This implies that less and less is spent on the most needed investment in infrastructure such as roads, power, etc. and social sector (education, health, etc.) for human development.

In order to strengthen the competitiveness of Uganda enterprises, it will be necessary to promote linkages between Ugandan enterprises., both internally within the country and with enterprises in other African countries, and enterprises in industrialized countries and those in more-industrialized developing countries, particularly in South and South-East Asia.

Internal linkages will principally take the from of supply of raw materials or distribution and sales of final products or service functions such as construction, transport, etc. These linkages which may often take place with micro enterprises from semi-urban and less developed districts in Uganda, will be vital for growth of micro and feeder industrial units to supply SMEs in Uganda.

External linkages will be primarily necessary to promote increased efficiency and competitiveness of enterprises in local, regional and international markets. Such linkages can take various forms, including investment linkages, involving foreign participation as in joint ventures, or technological linkages through licensing agreements of franchises, or marketing linkages such as buyback agreements, export sales agreements or external marketing contracts. External linkages can take place in various combinations, particularly joint ventures with technological licensing agreements.

The promotion of linkages constitutes a vital requirement for growth of efficiency and technology upgrading for local firms. During 1991-96, several such instances have taken place as in the case of assembly of computers/TV sets, telecommunications and in the production of bicycles and other manufactured goods.

EQUITY AND GROWTH THROUGH ECONOMIC RESEARCH

TRADE REGIMES AND GROWTH COMPONENT

FOREIGN AND LOCAL INVESTMENT

CASE STUDY OF MAURITIUS

By Drs. Lucie C. Phillips, Marios Obwona and A.B. Ayako

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RELATIONSHIP BETWEEN FOREIGN AND LOCAL INVESTMENT CASE STUDY OF MAURITIUS

By Drs. Lucie Colvin Phillips, A.B. Ayako and Marios Obwona

1. INTRODUCTION

This study was designed to provide guidance on investment policy in countries with low levels of both domestic and foreign investment. It is part of a series of demand-driven policy studies aimed at maximizing growth and socioeconomic equity, funded under the USAID Equity and Growth through Economic Research/Trade Policy Component (EAGER/Trade). The complete study will involve analysis of historical international financial statistics for 110 countries, both developing and developed. This is complemented by three in-depth case studies, in Kenya, Uganda and Mauritius. The main research question to be addressed is: Does Foreign Direct Investment (FDI) act as a catalyst for local private investment, is it vice-versa, or do both respond to similar investment climates?

Investment is one of the primary determinants of growth. This is irrespective of whether the investment is made by foreigners or by locals. Yet, FDI tends to be more expensive than local private investment because governments often make major concessions in order to compete for foreign investment. If FDI and local private investment are both engines of growth, and if stimulating local investment is less expensive, then poor economies in Sub-Saharan Africa with limited resources may be better off following a strategy that places primary importance on the role of the local business community.

Some African policy makers have at times regarded foreign investment with suspicion, as depriving locals of business opportunities. Therefore we also ask, in countries that have experienced investment booms, do foreign and local investment compete or are they complementary? In which areas? How do different elements of the local business community feel about foreign investors? What is the role of local investors from ethnic minorities often considered resident-aliens, namely Asians and Greeks in East Africa, Chinese in Mauritius? What role do ex-colonials play?

2.REVIEW OF THE LITERATURE

Several studies indicate the importance of a stable macroeconomic environment for investment. An update of the Adjustment in Africa Study by the World Bank (1995) shows that two thirds of the countries that improved their macro policies (fiscal, monetary and exchange rate policies) also experienced an improvement in domestic investment performance. On the other hand, in the

An area which has been under-researched is the relationship between FDI and local private investment in Africa. Are FDI and local private investment close substitutes or are there significant differences between the two types of investment? This is an important question since African governments tend to be more enthusiastic and attentive to foreign investors than local investors. In part, this is because domestic savings and investment through the formal financial sectors tend to be very low. Another consideration is that foreign investment is expected to bring transfer of technology and higher paying jobs. Moreover, Benin, Chad, Ethiopia, Gabon, The Gambia, Ghana, Madagascar, Mauritius, Mozambique, Nigeria, Tanzania, Uganda, and Zimbabwe all experienced substantial increases in FDI between 1980 and 1993. These countries provide a natural starting point for investigation.

In his paper, "Saving in sub-Saharan Africa: A Comparative Analysis," F.M. Mwega documents the decline of savings and investment in sub-Saharan Africa from 1982-1992 compared to other less developed countries (LDCs). Mwega investigates the factors that influence private, savings rates in LDCs and analyzes whether the average saving behavior in Africa is different than other LDCs. Using an econometric model, Mwega isolates factors that have a statistically significant effect on private savings in Africa, which will contribute to this investigation.

Literature on Mauritius' Investment Climate.

Meade

Mauritius at the Crossroads

Govt documents

3. METHODOLOGY

The methods used in this study are a combination of documentary review, statistical analysis and in-depth interviews. The most useful documents used are described above in the review of the literature.

Existing firm-level panel data has been collected in Mauritius and Kenya. In Uganda, where panel data is not available, existing firm-level data will be complemented by a survey of firms conducted under the present study. Econometric analysis of this data will be used to test whether FDI acts as a catalyst for local private investment. The basic estimating equation is as follows:

$$LOCAL_{it} = {}_{0} + LOCAL_{it-1} + FDI_{it-1} + {}_{k}D_{k} + {}_{it}$$

LOCAL is local private investment, FDI is foreign direct investment, I stands for the sector and t the time period. The idea behind this equation is that if FDI does indeed act as a catalyst for local private investment, then the coefficient on lagged FDI should be positive and statistically significant. D_k will allow us to control for other factors that may be important for determining investment including: domestic savings, whether or not the sector produces traded goods and the political and legal environment.

Data for the analysis is organised by the research team on the project in the following way. In all three countries, firm level data bases exist in which firms are categorised as foreign owned local or joint investments. Firms are classed by sector, but data is computerised in Mauritius only for the last 2 years. In 1998 it may be possible to have a full set of firm level data going back to the early years of independence. This is a period of critical interest, as the desire of sugar plantations to diversity their economic interests shortly after independence in 1968 seems to be an important factor in subsequent investment booms. It is not clear from the published data how early that diversification started. In Mauritius the best data set pertains only to the Export Processing Zone (EPZ) firms, created after passage of the EPZ Act in 1970. For those firms there is yearly ownership information, employment, turnover, wages and other balance sheet categories. For agriculture, nearly all of which is devoted to exporting cane sugar, flowers or horticulture, similarly complete data is available. For commercial, service, and local manufacturing firms, more limited data is available through the Registrar of Companies. Data on other, factors important for determining investment will be taken from the World DebtTables and from the Barro and Lee database.

Econometric analysis will also be used to test in what areas and to what extent does investment of both kinds (private and FDI) stimulate growth in trade, in GDP, and whether the effects are sector-specific. The basic estimating equations will be as follows:

(1) $$GDP_{it} = \beta_0 + \beta_1 LOCAL_{it-1} + \beta_2 FDI_{it-1} + \Sigma\gamma_k D_k + e_{it}$$

(2) $$TRADE_{it} = \beta_0 + \beta_1 LOCAL_{it-1} + \beta_2 FDI_{it-1} + \Sigma\gamma_k D_k + e_{it}$$

Specification (1) will allow us to test whether, controlling for other factors, there is any difference between local and foreign investment on their impact on GDP growth. Specification (2) will allow us to test the same hypothesis for growth in trade.

We realise that meaningful results depend on sufficient data, which may be a problem. Where the data available are inadequate for meaningful regression analysis, we will organise available data in the most informative manner possible.

Our analysis will be different from previous studies, which tend to focus only on the aggregate impact of FDI. Specifically, our statistical analysis will be supported by case studies that highlight particular aspects of our findings, in order to better understand at an industry specific level why it is that FDI has the impact it does on local private investment. For example, we may find that lagged FDI is a statistically significant predictor of local private investment. However, without asking more questions, we will not be able to identify the source of the effect. The case study approach will better enable us to differentiate among the competing hypotheses such as: FDI provides a signal to local investors, FDI has technological spillovers and/or FDI raises wages and therefore peoples' ability to invest. In preparing case studies, interviews will be conducted with relevant Ministries, Chambers of Commerce, government and NGO institutions involved in business development and investment, financial institutions, organisations of foreign

and local investors, managers of foreign owned firms, and members of the local business community.

An advantage to the selection of the three countries under study, Kenya, Uganda and Mauritius, is that they are characterised by different stages of development, with Mauritius being the most developed. It will therefore be possible to compare and contrast the relationship between the foreign direct investment and the local investors, to determine the successes and failures of this interrelationship and the lessons learned from attempts to develop the local business community and to encourage foreign direct investment.

RAPID INDUSTRIAL APPRAISAL

The team adapted rapid appraisal techniques in the first phase of the case studies to assess investment climate issues in each of the three countries, and to get an initial overview of the experience of business and government leaders. We believe that this approach adds an invaluable qualitative dimension that could not be gleaned through data analysis or survey questionnaires. Qualitative assessments reveal historical elements, attitudes, values and beliefs that facilitate or hamper working relationships between different types of investors. The survey questionnaire approach is less appropriate for many reasons. First, firms are increasingly hesitant to participate. Secondly, surveys are costly and generally take a year or two to produce results. Third, although a survey can cover a larger sample of investors, the participants in the interviews, both questioner and firm-representative, are generally junior, or at most mid-level staff with limited business experience. Moreover, the aggregated data tends to reflect a least-common-denominator, and considerable depth of insight is forgone.

In designing the rapid appraisal, the team reviewed the methodological literature on participatory rapid appraisal, to determine which principles and approaches previously used in rural agricultural and health research would be most useful in a business context. We retained as key elements the following:

- a multidisciplinary team (multinational as well, in this case),
- key informant interviews,
- semi-structured interviews with a wide range of firm leaders,
- the principle of triangulation (three independent sources to corroborate a point of information),
- daily feedback sessions for the team,
- drafting a common report on the spot, and
- offering it to participants for their comments and follow-up.

As a business community is more structured than rural communities, it was possible to construct a stratified sample of firms and interview a scientifically selected random sample within each stratum. The team all felt that this enhanced the results, as without this process, the sample would have been biased towards successful firms. There was some cultural resistance to our interviewing less successful firms, but we managed to do so. We also followed up with some

foreign investors who had withdrawn, failed or sold out. This was necessary to compensate for the natural tendency in a one-off study to hear the good news from the survivors and miss a sense of historical processes.

From three databases, one on Export Processing Zone firms, one on Pioneer Zone firms, and another on hotels, we sorted firms by size, and interviewed a random sample in each size category. The sampling pattern used a combination of probability considerations, balancing the number of firms against the total amount of employment generated by the category. EPZ firms wore stratified by number of employees, as follows:

- <50 employees
- 51-100 employees
- 101-200 employees
- 201-500 employees
- 500-4000 employees

The EPZ firms were listed by size and then numbered. Fifty-nine EPZ firms were selected by random numbers generated by our spreadsheet program, and six hotels were similarly selected. Sectoral and foreign/local/joint status were not part of the stratification process, although they probably should be in the future for Uganda and Kenya. It happened that an appropriate number of foreign, local and joint firms of each size appeared in the sample, and all sectors except watchmaking and model boat building were also well represented. We added one of two of each of the latter type firms to correct the omission.

A similar sampling was done on "Pioneer" status firms. This is a legal status created in 1995 that allows firms to both benefit from EPZ provisions on their exports, serve other EPZ firms locally, and serve the local market. Of the 150 firms having this status, we were able to interview ten. All total fifty semi-structured interviews were held over the course of three weeks.
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Interviewing was done in two teams, with rotating membership of two researchers per team. Feedback sessions every evening served to processed the information, and record it in categories. Every researcher took notes during the interviews. During the feedback sessions a single researcher at a time noted key points on 5" x 7" note cards. Cards were topical and headers included the name of the firm, the speaker, the date, the subject and a sequential number. The feedback session cards thus became our data combined bank.

The report was written in the field, which allowed us to debrief and get feedback from key officials and participants before leaving. This is a very important component of the methodology. It tells the participants that the research is part of a two-way communications process. We continue to communicate drafts throughout the research process and follow-up, to exchange views and results with the participants.

Mauritius served as a methodological testing ground. There were several reasons for this: (1) Mauritius has experienced an investment boom, while the other two countries are still trying to encourage one; (2) It is important while mastering the methodology that the team be on an equal footing in terms of knowledge of local languages and investors. This would not be the case if we did the first test of the methodology in Kenya or Uganda. (3) The Kenyan and Ugandan research teams are much better informed and more persuasive in presenting their findings after their direct experience of the Mauritian model.

The research sought to develop profiles of foreign and local investors, their attitudes and strategies in relation to each other. It tried to identify successful and unsuccessful initiatives and analyse the reasons for their success or failure. It explored linkages between foreign and local investments, including access to new business opportunities, outsourcing of supplies and services, provision of inputs, training, hiring of one another's trained personnel, lobbying, and other links. The goal was to better understand the statistical results so as to inform policy. In particular, we will try to determine how government policy can enhance linkages between local and foreign investors.

The results of the individual case studies include lessons learned for investment policy generally, as well as policy findings specific to each country. The three combined case studies will be compiled in a comparative policy analysis to be used by policy makers interested in promoting FDI and local private investment

4. COUNTRY BACKGROUND

4.1 Geography

Mauritius is a small island in the Indian Ocean off the southeast coast of Africa covering 772 square miles (1,365 square kilometres). It is located 23° south of the Equator, 500 miles from Madagascar; 2,000 from Colombo, Sri Lanka; 2,300 miles from Capetown, South Africa, 2,300 miles from Aden and 3,200 miles from Ferment. The island is thus isolated from potential markets for its products as well as supplies of inputs, which has implications for high freight charges. The high cost of freight raises production costs, offsetting the advantage it enjoyed in the 1970s and 80s in relatively cheap labor.

The island, although small in size, has varied topography. It has arid regions to the North and West. The island has bare black volcanic peaks with lush vegetation at their bases, fast flowing rivers and tropical forests and plants scattered throughout its lowlands. The Central Plateau rises to about 1,850 feet (400m) above sea level.

It is volcanic island, with no mineral deposits of commercial value. Its soils are shallow and poor in phosphates after decades of use almost exclusively for cane sugar production. The nature of the soils requires heavy use of fertilisers to increase its productivity. Thus, the country is not only small but has a very narrow natural resource base.

The island has sub-tropical climate with average temperatures ranging between 22°C and 27°C. The climate has two seasons regime namely, summer (November-April) and winter (June - October) with transitional periods during April to June and September to November. South West winds blowing during the summer bring heavy rainfall ranging between 35 inches (South West) and 200 inches (Central Plateau). The island is vulnerable to devastating cyclones during summer, particularly during the months of January and February.

The nature of the country's natural resource base limits its economic activities to irrigation-based sugar production with almost 100 per cent of its food requirements being imported. Some tea is grown in the Central Plateau while tobacco is grown to the North.

The warm sub-tropical climate experienced by the country throughout the year coupled with its more than 150 kilometres of white sand beaches and transparent lagoons protected from the open sea by the world's third largest coral reef (which almost surrounds it) makes it a tourist mecca.

4.2 History

Island was discovered by Arabs in the 15th century. Although the Portuguese navigators were the first Westerners to visit Mauritius, they did not colonise it but merely used it to provision their ships. Thereafter, however, Mauritius experienced three waves of colonisation. The Dutch came first (1598 - 1710), and named the island 'Mauritius' after Stadtholder, Prince Maurice Nassau. France came next (1715-1810), but Britain took over during the Napoleonic wars and ruled from 1810-1968. Under British colonial rule, French settlers retained their lands and civil institutions while only a few Britons settled. During the British phase slavery was abolished. To replace their labour on the sugar plantations, indentured labourers were brought in mainly from India. The country became independent on 12 March 1968 and a Republic on 12 March 1992.

4.3 Demography

The current population of Mauritius is estimated at 1.1 million. A rapid population growth rate, estimated at about 3 per cent per annum, prevailed prior to independence due to natural factors accruing from the eradication of malaria. In the context of a narrow resource base, this led to Malthusian predictions for the country's independence (Meade, 19--). The population growth rate has, however, been successfully reduced to about 1.2 percent per annum using several instruments including effective family planning campaigns, disincentives for large families and increased education of women and participation of women in the labour force.

Mauritius is a plural (multi-racial, multi-cultural and multi-religious) society comprising Hindu and Muslim Indians (70 per cent) Franco Mauritians( ) Creoles of mixed African or Indian descent ( ), Chinese ( ) and Britons.( ) None of these are indigenous inhabitants of Mauritius all Mauritians are descendants of (voluntary or involuntary) immigrants from India, France, Africa, China and the United Kingdom.

More than 90 per cent of the Mauritian population is literate. The Government has made education a priority, and even at the secondary and tertiary levels it is free. The country's education is being constantly reviewed and necessary improvements implemented, including introduction of industrial and vocational training to service the industrial sector. The country boast of a large pool of well educated young people, versatile and easily trainable to serve the country's development process. The country has adequate pool of graduates and qualified professionals including lawyers, accountants and chartered secretaries, trained both locally and overseas. Development of healthcare facilities and services is a priority and healthcare is provided freely.

The country's unique colonial history produced widespread multilingualism. The universal spoken language is a form of French creole. Schooling, business and government are conducted primarily in English, but French is the language of cultural discourse. Hindi, Gujerati and Urdu are still widely spoken, and the Chinese population speaks several Chinese dialects. This multilingual feature of the population enhances harmonious co-existence of its diverse groups, and also facilitates the conduct of international business. Europeans feel at home here, as do Indians and Chinese.

4.4 Governance

The country's political system is a presidential democracy modelled on the British of parliamentary system. The system guarantees the separation of legislative, executive and judicial powers. The President is the Head of State and Commander in Chief, while the Prime Minister has full executive power and is the Head of the Government.

The sixty members of the National Assembly are elected every five years by universal adult suffrage. All major political parties and ethnic groups are represented. This is facilitated by reserving eight seats for "next-best" candidates, whose appointment would allow otherwise underrepresented groups to have a voice in parliament.

Tensions ran high at independence, and some analysts gave Mauritius little chance of becoming a viable political economy. (Meade, 1968) The new majority of voters at that time comprised Hindu field labourers, while the bulk of the island's land and wealth was in the hands of a few families of Franco-Mauritian sugar estate owners. They arrived at a coalition government, however, setting the course for the first phase of economic growth in the 1970s. There is a general consensus today that a depth of democracy prevails in Mauritius.

The country has a hybrid legal system, deriving from both French and English sources. Under British colonial rule, the prevailing French Napoleonic Code was largely retained with a few amendments in civil and criminal procedural, laws and company law. Thus, the Mauritian legal system combines both the civil and common law practices.

The country's regular general elections have been characterised by high turnover of leaders and party coalitions. However, the country has enjoyed rare political stability especially after 1983. This has been attributed to absence of significant philosophical differences among the parties on

the country's development strategy, retention of a core of policy makers and influential private sector that ensures continuity in the implementation of the country's development strategy. The government has not only promoted private sector institutions but has institutionalised the culture of dialogue and consultation with it on matters of development. There appears to be a consensus among Mauritian leaders that the welfare of a society is paramount, especially given the country's narrow natural resource base, isolation and heterogeneous population.

4.5 Infrastructure

Mauritius' government policy has been to maintain a well developed infrastructure. Its telecommunications network is advanced and provides the range of international communications facilities including IDD to 239 countries, automatic telex transfer links world-wide and high speed facsimile services with overseas destinations on a 24-hour basis.

The wide range of digital services operated by the Mauritius Telecom (MT) facilitates use of higher transmission and reception of voice and maintenance free systems, extra security, higher capacity reduced interference and ISDN.

The latter facilitates multi-media information exchange through simultaneous transmission and reception of voice data, and images over a single line. The country's efficient and reliable international communications infrastructure facilitates access to the Internet and to major global financial and business databases as well as video facilities. This brings savings on cost and travelling time without which its businesses would have trouble being competitive. The local communication facilities are also well developed, efficient and reliable.

The country's port facilities based at Port Louis are efficient and constantly being modernised. The facilities at the harbour comprise a container terminal and terminals for the manipulation of bulk sugar, bulk oil, bulk wheat and bulk cement. It also provides cargo handling as well as trans-shipment facilities. Numerous international shipping lines call at Port Louis regularly.

Under the Mauritius Freeport Authority (MFA), Port Louis harbour is being developed into a Freeport, that is a customs free zone for the trans-shipment, bulk breaking and re-export of goods. More than 400 Freeport licenses have been issued to both local and foreign operators with a turnover of more than Rs 2.34 billion (US$ 106 million).

Mauritius is well linked internationally for both passenger and cargo traffic. The Sir Seewoosagur Ramgoolam International Airport has about 30 international flights weekly. The national airline (Air Mauritius) has non stop services to major cities like London, Paris, Geneva, New Delhi, Singapore, Hong Kong, Jakarta, Johannesburg and Perth among others. Air Mauritius has monopoly in handling cargo, which it is in the process of exchanging for monopsony. Other carriers are to be allowed in, but only a selected few. Already high freight rates are expected to increase. Landing rights have already been extended to other airlines on a similar basis (including Air France, British Airways, Singapore Airlines, Malaysia Airline System, South African Airways, Air India, Cathay Pacific and Lufthansa) for passenger traffic.

Inland transport depends on a fully paved road network, providing for relatively efficient movement of both passengers and goods. However, with growing traffic congestion, especially to and from suburban areas, a project of developing a light Railway Transport System is currently being envisaged.

The country's postal and courier services are also efficient. In the main towns there is continuous delivery of mail based on Private post office services. International courier services to Western European, North America and Far Eastern countries are made daily DHL World Service, TNT Skypak and Federal Express, among others.

4.7 Economic Performance and Structure

At independence, the country adopted a mixed-economy model of development. A partnership relationship exists between the public and private sectors, with the former increasingly taking a facilitatory role in the country's development process. The Mauritian economy has two performance phases. The first phase (1968-1982) was characterised by macroeconomic crisis, reflected in balance of payments disequilibrium, soaring unemployment, rapid inflation, acute foreign exchange shortages, low reserves, public finance in shambles, high and rising debt services, low savings and low investment.

//Ayako, How did you decide on these two phases? I thought that there was some growth in the 70s, followed by the crisis you describe in 1980-82. Then rapid growth 1983-93, followed by leveling off in 1993-97. That would make at least four periods//

The second phase (1983-1997), on the other hand has been characterised by significant macroeconomic recovery based on sustained implementation of a stabilisation and structural adjustment programme since 1979. During this phase economic growth averaged about 6 per cent annually. Foreign trade peaked //in what year// at Rs 13.6 billion (US$___)//, net foreign exchange earnings from manufactured exports from Export Processing Zones rose from Rs 0.8 billion in 1985 to Rs 7.4 billion in 1995 and is expected to reach Rs 20.5 billion in 199?//. The overall balance of payments position has generally been favourable. Foreign exchange reserves of the Bank of Mauritius rose from Rs 440 million in September 1985 to Rs 17.1 billion in May 1997. During the period the savings rates *rose* from 15.4 percent in 1982 to over 20 percent while investment rates rose from 18 percent to over 26 percent Per capita income at current prices doubled from Rs. 11,864 in 1992 [sic 1982?] to Rs. 30,070 in 1989. In real terms the rise was // // Annual growth rate in the GDP per capita has averaged about 14 percent, placing Mauritius among the middle income countries.//verify this—14 percent over which years? What if adjusted for inflation? When did the population growth rate slow down?// The country's performance however, compares unfavourably to those of even smaller island economies like Singapore. //What point are we making here? That Africa is falling behind? That Asia is growing faster? Given the Asian economic crisis that has intervened since we drafted this, would you consider deleting this sentence//

Inflation for the calendar year 1997 is estimated at a single digit rate of 7 per cent. The economy continued to shed jobs throughout the period. //what period? A transition is needed. We were

talking of growth and job creation, now suddenly "continued to shed jobs"// During the phase the unemployment was drastically reduced to about 3 per cent wiping out the country cheap labour attraction for investors. The unemployment rate is mostly of unskilled persons who are unable to take up unfilled vacancies that exist.

Finally, the economy has undergone major structural adjustment in terms of sectoral composition. Mauritius has since the 1970s steadily shifted from a basically agrarian monocrop economy based on sugar cane to a relatively well diversified economy comprising four sectors, namely: manufacturing, sugar, tourism and financial services. The evolution, structure and performance of each of these sectors is presented under the following sub-headings:

I) Manufacturing

The manufacturing sector which prior to 1970 only accounted for only 8 % of GDP and 6 % employment is now the locomotive development engine of the Mauritian economy. The sector now accounts for about 30 per cent of GDP, 40 percent of the workforce and 42 percent of gross of gross export earning.

Although manufacturing activities have always existed in Mauritius their serious development was given impetus by the Meade Mission Report of 1960 (Benedict, 1965). Based on the Meade Report, the Government initiated a set of policies and programmes aimed at a concerted drive towards the development of secondary manufacturing industries. Indeed during 1965-70 the government actively pursued import substitution industrialisation (ISI) strategy based on provision of a set of incentives as well as institutional support. Both local and foreign investors under the ISI had to be issued with Development Certificates (DCs). In addition to the award of a DC status to facilitate access to the incentives and institutional support of the industrialisation strategy, foreign firms were provided guarantees against nationalisation and facilitation in the transfer of dividends and repatriation of capital. There was slow take off in the ISI due to several constraining factors including the small domestic market, local prejudices, the lack of raw materials, know-how and skills as well as acute shortage of capital.

By the late 1960s import substitution manufacturing activities had been established in such sectors as food processing, beverages and confectionery, cosmetics, fertilisers, footwear, furniture, metal and wine products, micro jewels, paints and chemicals. However, the overall performance of the ISI strategy was generally weak with sectoral contribution to GDP of 6.5 %, prevailing unemployment rate about 30 %, balance of payments deficits with attendant chronic shortages of foreign exchange' The performance record of ISI made it imperative for the Government to adjust its industrialisation strategy. During 1970-1984 the government adopted a mixed industrialisation strategy, simultaneously promoting import-substitution and export oriented manufacturing enterprises. The promotion of the latter type of manufacturing industries based on Export Processing Zone (EPZ) was launched in 1971 following publication of the EPZ Act in 1970.

The package of incentives for these was formalised in the 1974 Development Incentives Act. Prior to 1983, the EPZ manufacturing experienced very slow growth with only 100 firms operational. However, after 1983 with the establishment of MEDIA, the EPZ manufacturing experienced phenomenal growth with number of operational firms peaking 600. Attendant to the rapid growth of the sub-sector was the significant increase in the share of manufacturing in GDP (from 6.5 per cent to 30 per cent), employment (1 per cent to 40 per cent) and exports (from 2 per cent to 38 per cent). Manufacturing activities in the import-substituting (DC) sub-sector slowed down during the 1980s. The share of this sub-sector in total manufacturing activity continuously fell from 30 per cent in 1980 to less than 18 per cent on 1989 due to hostile international and domestic factors. In addition, recognition and convergence of opinion on the contradictions of mixed industrialisation strategy led to import-substitution manufacturing progressively being discouraged while the export-oriented firms were encouraged.

Since 1995 a new incentive scheme has been offered to firms that choose to produce for both the export and local markets, and/or provide goods and services for exporting firms. These new Pioneer Status Enterprises (PSE) have relatively similar package of incentives as the EPZ firms. By December 1996 there were 132 such firms producing for both export and domestic market in such diverse range of manufacturing activities. The total workforce in this sector was 1,981 (1,193 males and 788 females) during 1996.

Since 1993, the EPZ manufacturing sub-sector has experienced a slow down with large number of close-downs and delocalisation. The phenomenon has been attributed to rising costs of labour as unemployment disappeared, cancelling the initial savings in cheap labour. With the locational disadvantages of Mauritius still keeping transportation costs high, textile firms cannot compete effectively in the World market for basic products like T-shirts. To compete, the firms are now allowed to import labour and are actively being encouraged and supported to modernise their factories, improve productivity, to delocate to Madagascar and Mozambique, among others.

The country's industrial structure is dominated by sugar manufacturing and textile industries. The textile industries are mainly knitwear (cotton and woollen), but include two woven cloth factories. The larger garment industry is complemented by firms specialising in accessories and packaging (i.e. hosiery, thread, sacks, labels, laces, ribbons, etc) industries. The EPZ sub sector is dominated by textile and garment industries accounting for 66 per cent of EPZ firms, 82 per cent of total EPZ exports and 57% of total exports.

Over 90 percent of the country's textiles exports are destined to preferential markets in Europe. Mauritius' membership in the Lome conventions has shielded the country from competition and attracted investors from countries which had topped their quotas, notably Hong Kong and Taiwan. Implementation of the WTO Agreement by the year 2005 will take away this market advantage, exposing Mauritius' export products to severe competition from cheaper producers in India, Eastern Europe and the Far East . Both the Government and the industry is aware of the challenges that lie ahead and are positioning themselves to meet these through investments in increased training and technology for increased productivity and quality, shifting into value added production (e.g. embroidered knitwear). Many firms, with government encouragement, are

delocalising their basic products production, which depend upon cheap labor, to other SADC countries, most often Madagascar.

Agriculture

The country's geography is mainly suitable for sugar cane production. With diversifications into export-oriented manufacturing the average area under sugar cane has constantly declined //since what year, and from what level?// bringing total area harvested to about 71,825 hectares and production of sugar to about 5,260,138 tons. Until the early 1960's, sugar and sugar by products accounted for well over 30 percent of GDP and 99 per cent of total exports. Although sugar remains the leading net foreign exchange earner, its share in total exports, GDP, and employment has fallen to second place. Other limited agricultural activities in the island include production of tea (1,109 hectares and 13,209 tons of green leaves), tobacco (649 hectares and 878 tons in tobacco leaves), food crops (6,504 hectares), livestock and poultry (beef : 2,296 tons goat and mutton : 140 tons ; pork : 1,112 tons ; poultry : 20,550 tons and milk 6.6 million litres) and fish (11,010). The country is a net importer of all agricultural commodities except sugar.

Tourism

Although the country's geography offered excellent potential for the development of tourism, this did not happen until recently, maybe due to opportunities for diversification offered by the textile industry. The tourist industry is now one of the most dynamic sectors of the Mauritian economy. It accounts for about 5 per cent of GDP, 9 per cent of employment and 16 per cent of gross earnings. Total tourist arrivals, coming mainly from France, Reunion Island, South Africa, Germany and the United Kingdom, are expected to peak at 500,00 during 1997. Given the size of the island and then the need to preserve the local culture and environment, the country has only promoted upscale tourism.

Service sector

The country boasts of a dynamic financial sector. The sector comprising banking, insurance, capital market, offshore and other financial sector institutions, accounts for more than 10 % per cent of GDP and has been growing at about 9 percent per annum. In 1997, the banking sub-sector itself is expected to generate value added of Rs 4.7 billion (US$213 million). The country is fast becoming a financial centre of the world with offshore activities expected to account for about 2 per cent of GDP and generates direct employment of 500 people. The growth in offshore activities in the country has been attributed to several factors, among which are:

- political stability,
- sound banking law and practice,
- a transparent legal framework,
- double taxation treaties with many European and Asian countries,
- existence of several public accounting and consultancy firms, (many of which are members of major international firms), and

- the efficiency and reliability of the existing telecommunications network..

5. FACTORS IN INVESTOR'S DECISIONS

5.1 NEGATIVES

Three main factors initially tended to detract from Mauritius as an investment location: its size, isolation and lack of natural resources. Mauritius is an isolated speck in the Indian Ocean. The nearest country, Madagascar, is some 500 miles to the West. Sri Lanka is 2000 miles in the East. The great distances from potential markets for its products tend to add to its transport costs whether by sea or air.

The island is of purely volcanic origin and has no mineral deposits of any commercial value. The soils are shallow and poor in phosphates and farming without fertilisers is impossible. The one, natural resource Mauritius has been able to develop is its beaches. It has over 95 tourist hotels.

With independence in 1968, Mauritius inherited a fierce problem of unemployment and a population which knew mainly sugar plantation work. Moreover, a population of barely 700,000 constitutes a very small domestic market which cannot make import substitution strategy survive.

Furthermore, the economy was overly dependent on sugar, which accounted for over 90% of its exports. That meant the economy was extremely vulnerable to fluctuations in world sugar prices and natural disasters like cyclone, drought and diseases

With such an investment hostile beginning, what factors then led to the choice of Mauritius as an investment location to foreign investors? How did local investors start get started? What were the catalysts behind the investment boom in Mauritius?

5.2 POSITIVES

Foreign investment was not a factor in the early years of independence. Local investment grew strongly from 1972 through 1978. It thus clearly led the investment boom. Foreign investment only began to be recorded as a separate phenomenon in 1976. Oral interviews suggest that it was negligible before that year. There was a brief three years of foreign investment from 1975 through 1977, a period when local investment also continued to grow.

In the late 1970s and early 1980s came a series of economic, political and climatic crises that caused an abrupt falling off in new investment, both foreign and local. Sugar prices were down on the world market, the country was experiencing political tensions, and a major hurricane destroyed both the sugar crop and much of the island's infrastructure. The crisis of 1979-81 proved a turning point for Mauritius' economy, a time of rethinking that led to a renewed national consensus and common economic strategy.

The turn around came with the announcement of an appropriate structural adjustment strategy by the government. Unlike structural adjustment programs imposed elsewhere on unwilling and/or uncomprehending governments, Mauritians seem to have devised their own strategy and united behind it. One can perceive behind the new policy stance a dynamic civic leadership on the part of local investors, labour and government. Tripartite labour negotiations, held annually, seem to be the main forum in which all parties come to understand the economic dynamics affecting them all and to reach a consensus on development strategy.

In the early 1980s, after more than a decade of misguided attempts at industrialisation, it became clear that the limited size of the domestic market meant that an import substitution strategy could not be viable. The government had no alternative but to opt for an outward-oriented strategy leading to export-led growth. Ironically, the EPZ legislation had been in effect from 1970, but only became a factor in Mauritius' development from 1983 on, when all parties agreed to try to make it work.. The three successive pillars that were targeted to contribute to investment were the Export Processing Zone (EPZ), tourism and financial services. The EPZ was the main focus from 1983 through 1993, tourism from 1990 to the present, and financial services only in the past two years.

Once the new policies were clear and a peaceful national consensus established, foreign investment came in a new spurt from 1983 to 1990. Investors from Hong Kong and Taiwan brought know how essential for the development of the textile/garment industry. Local investors, mainly Franco-Mauritian and Chinese, welcomed them and openly sought to learn from them. Within a few years, they ended up buying out most of the purely foreign investments.

5.2 FOREIGN INVESTORS

The 'pull factors'

The success of Mauritius in attracting foreign investment rested first and foremost on creating the right economic and social climate by emphasising the following factors:

(a) Political stability and policy consistency

Governments in Mauritius have been changing since independence but the long term strategy, the overall vision and economic policies have continued to remain stable and consistent. Investment incentives have gone from favourable to even more favourable.

(b) Availability of a cheap and trainable labour force

In the early years, that is, before the investment boom, there was massive unemployment. Labour was therefore cheap compared to places like Hong Kong and Taiwan where the 1980s wave of investors in Mauritius came from. The adaptation was not simple, as Mauritians were initially slow in assembly line work and unreliable in their attendance. Factory owners used many combinations of carrot and stick to enhance their productivity. They interspersed

throughout the assembly line experienced Chinese workers, whose output was often three times the Mauritian average. They brought in Indian workers with multiple task skills, to fill in for absentees in different spots each day. After a few years, production was brought up to an acceptable level of both productivity and quality in most factories. Several succumbed, however, during the early years.

With a literacy rate of over 90% and most of the labour force having at least attended primary school, Mauritian workers could be trained relatively easily especially as most of the techniques of production in sectors being targeted (textiles) were simple and labour-intensive. The firms benefitted greatly from sales and office staff who were fluent in both Asian and European languages. Much credit goes to the free education system offered by the government.

(c) Good economic management

After 1980 the government created a sound macroeconomic environment through judicious blending of policies. Inflation was kept at a low level and monetary policy was geared towards promoting a savings culture. The Rupee is convertible and exchange rate against other currencies was kept steady.

(d) Infrastructure

The Mauritius Government invested heavily in infrastructure. This involved the overhauling of the road network, the airport, extension of the telecommunications, electricity and water network. Fully operational industrial estates provided sites and services for renting, to minimise investors' start-up costs. A wide range of supporting services like banks, insurance companies, accounting firms, existed initially in embryonic form and grew with the level of economic activity. In addition to this, there is an efficient legal framework which people have trust in especially in the course of justice.

(e) Preferential market access

Mauritius has preferential access to the European market through the Lome Convention and Sugar Protocol. It also has a sugar quota with the United States. During the 1980 and early 1990s it joined the so-called "frontline states" surrounding South Africa in ignoring sanctions, for the sake of its own economic survival. This proved a boon, as South Africa became a major trading partner and source of tourists. Membership in regional economic cooperation groupings such as SADC, and to a lesser extent, is an advantage on which Mauritius is counting for the next phase of development.

(f) Investment incentives and promotions.

The government provided institutional support for marketing and investment promotion overseas. The following organisations lead investors through the multitude of permits and licenses still required to set up in business:

Mauritius Export Development and Investment Authority (MEDIA)
Mauritius Government Tourist Office;
Export Processing Zone Development Authority; and
Mauritius Freeport Authority.

On the investment front, an attractive package of incentives is provided to potential investors under the following schemes:

Export Processing Zones (EPZ);
Development Certificate; and
Export Services Zone.

The range of incentives began with a ten-year tax holiday for EPZ firms, after which they paid a corporate tax rate of only 15%. Dividends were tax-free up to a maximum of 20 years, free repatriation of profits and dividends and reduction in duties on the import of raw materials and equipment.

The incentive schemes have moreover not remained static. Continuous efforts are carried out to promote industrial consolidation, diversification and modernization. When investment began to fall off in the early 1990s, the government responded with the Industrial Expansion Act 1993. This extended the tax holiday for exporters in perpetuity, consolidated most of the existing schemes and also introduced new ones as well, for example,

Pioneer Status Enterprises
Small and medium enterprises; and
Industrial Building enterprises.

(g) The people

The multi-ethnic, bilingual nature of Mauritian society has been an asset in providing a welcoming and friendly investment environment to foreigners. In particular, the Mauritians of Indian and Chinese origin have provided an environment which is 'homely' to investors especially from India, Hong Kong, China and Taiwan. They feel safe, accepted and can trust the people around them while in Mauritius.

(h) Strategic use of its location

It is often said that Mauritius is located at the 'centre of nowhere yet a gateway to everywhere' - Africa, Asia and Europe (American Ambassador in Mauritius).

Mauritius is a gateway to Africa with enormous market potential. Because of the historical linkage and the bilingual society (French and English), the British, the French and the Asian feel at home in Mauritius. Mauritius can therefore be a stepping stone to investors from Europe and Asia alike, especially for the cautious ones who are hesitant to make the big leap into the dark - Africa!

The 'Push factors'

(a) The 1985 Sino-British agreement over Hong Kong

Many investors in Hong Kong wanted to relocate their investment following the signing of the Sino-British agreement by the then Prime Minister Margaret Thatcher. There was an atmosphere of uncertainty over what would befall Hong Kong after its handover to China. Business communities in Hong Kong were looking for alternative investment locations.

(b) The Multifibre Agreement and quota imposition by US on Hong Kong textiles and garments

In the early 1980s, the multifibre agreement was signed and US further tightened its quota of textiles from Hong Kong. The Hong Kong textile barons then wanted to take advantage of the Mauritius unfulfilled US quota and the preferential textile market access to European market.

Hong Kong and Indian investors reported studying alternative investment locations, such as Madagascar and Sri Lanka which were also providing EPZ facilities. Madagascar had inadequate infrastructure and a poorly educated population, while Sri Lanka was riddled with insecurity due to the Tamil Tigers rebellion. Madagascar was considered unsafe and had unfavourable government policies towards investment. Mauritius offered a safe enclave with the people of the same cultures and way of life.

(c) High labour cost in Hong Kong

Investors in Hong Kong wanted to relocate because of the rising labour costs in their country. Mauritius, on the other hand, offered cheap labour.

5.3 LOCAL INVESTORS

The factors that attracted foreign investors were equally import to local investors. However, local investors had local conditions that could be regarded as having played a catalyst role to encourage local investment by Mauritians. Of these, were the following:

- Need to diversify

A number of sugar barons saw the importance of not putting all of their eggs in one basket. In any case, new sugar investment was precluded by lack of land. They started reinvesting the sugar profits in textiles, and later tourism and other types of light industry. There was a general boom in textile industry and Mauritians got attracted to sector as well.

- EPZ scheme and government incentives

Local investors wanted to take advantage of incentives provided by the government especially the EPZ scheme. //Documents provide accurate dates and specific incentive packages. Specify and footnote.// Inputs are tax free, dividends and capital gains are not taxed, and investors were initially given a ten year tax holiday from corporate tax. Later, when corporations simply reorganised after ten years, the policy was switched to grant an unlimited corporate tax reduction to 15 percent. Now ... no corporate tax? //verify and correct//

- Local bank lending

Banks played an important role in bringing up local investors by providing loans to them at attractive rates. The Bank of Mauritius, founded in 1828, was the mainstay of investment banking in Mauritius, although in recent years a half-dozen new banks have entered the scene. Local investors could finance up to 80 percent of their investment. Foreign investors could finance 50 to 60 percent locally.

- Local population linkages with Europe, India and China

Local investors could access the required technology, entrepreneurial skills and start-up capital from through linkages with Europe (France and Britain) and Asia.

- The potential in tourist industry

The Mauritians either working in hotel industry previously owned by foreign firms or wanting to break away from the monocrop culture identified tourism has a potential sector with growth prospects. Because of the land laws, they had an edge over foreigners in acquiring plots along the beaches. The sugar barons in the drive to diversify started investing in the hotel industry.

- Historical factors

Immigrants in general develop a strong instinct to survive and have a spirit of adventure. Most Mauritians are immigrants or descendants of immigrants from India or China mainly.They were looking for a better life. An immigrant leaves his/her motherland with the hope and determination of a better life. Therefore the spirit of excelling in whatever one does is inherent in their lives. The Mauritians have shown just that. They have come up and have invested in a big way. Today almost 60% of investment in Mauritius is owned and managed by Mauritians themselves.

These internal and external factors put together made Mauritius and attractive choice for investment despite its size, location and lack of natural resources. The government obviously

played a key role in providing an enabling environment for both local and foreign investment in the country. Its location makes it an ideal entry point to Africa with a normous market potential. ///

6. LINKAGES BETWEEN FOREIGN AND LOCAL INVESTMENT

6.1 LINKAGES BETWEEN FOREIGN AND LOCAL PARTNERS

Local and foreign investors have been present from the still in both main sectors of economic diversification in Mauritius, industrialisation and tourism. In most areas of both industrialisation and tourism, local investors preceded foreign in the first efforts, but the real boom began when foreigners took the lead. Foreign investors had the technical manufacturing knowledge, factory management know-how and market contacts needed to succeed. Local investors were interested from the start, however. They brought land, management capability and capital to the table.

Similarly in tourism, there were some early locally owned hotels. The real growth spurt, however, came when Sun International, then a South African based chain, brought international standards of architecture, services and entertainment to the business. They were a minority partner, Mauritian sugar interests having provided the majority of the capital and access to the land, but Sun managed the first luxury hotels. Local hotels quickly began innovating themselves, raising the overall quality in the sector. Today the most recent and most luxurious hotels are Mauritian owned and managed.

The EPZ law was passed shortly after independence, but many of the first industries catered rather to import substitution for the local market. At the end of the first decade there were only 100 EPZ firms. The import substitution industries were a good industrial apprenticeship for local investors, as the mass-market products produced required relatively ,simple manufacturing techniques and quality was not at a premium in a protected market. Foreign investors were slow to decide on Mauritius in the first decade after independence, because its now renowned political and social stability was considered uncertain at the time. No one know whether the Hindu majority would nationalise land and industries or let the Franco-Mauritians and Sino-Mauritians continue to dominate the economy.

As exports industries began to expand in more complex and competitive industries from 1983 on, both local and foreign investors recognise that there was strong synergy between their enterprises. Kin and ethnic networks played an important role in forging viable partnerships. The EPZ idea itself originated in a holiday visit by a Sino-Mauritian professor to his Taiwanese brother-in-law, where they visited the bustling export processing zone of Kaoshiung. Both Chinese and Franco-Mauritian local investors had kinsmen and friends overseas well placed to launch industries and market their products. The Sino-Mauritians had ties to ethnic Chinese in textile industries in Taiwan, Hong Kong, Korea and other emerging Asian economics.

Hong Kong manufacturers came looking for a safe haven for capital and quota-free access to markets. They knew the machinery, the factory organisation, the worker training needs, and the customers tastes. In fact they arrived with orders in hand. The first big firms, however, lacked

sufficient confidence in Mauritius' social stability to transfer all of its operations here. Floreal Knitwear, one of the Island's current flagship firms, was established by Oriental Pacific Export (Hong Kong) in 1971 to do only manufacturing. Marketing was supposed to be handled by a Japanese firm. When that arrangement failed, Oriental Pacific sold out three years later rather than set up local marketing operations. Their successors believe that it was mainly because Mauritius was then experiencing a period of political tension, and that the investors feared for its future stability. In retrospect, they misjudged the political situation. The local firm created by the sugar interests which bought out Oriental Pacific has gone on to become a local and regional conglomerate.

Purely local investors welcomed the foreign investors instead of seeing them as competition. Many local garment firms got their start doing commission work (cut, make up and trim) on shirt orders too big for a foreign factory to handle. They hired away skilled labour and managers from the foreign companies when they could. Buyers who came to deal with the foreign-owned firms stopped by to see what other factories were producing. Thus local firms acquired new customers.

Joint ventures were one means of collaboration, particularly at first. Today they are not the most common. Less than half of current foreign firms are joint ventures. Joint ventures are voluntary on both sides, and joint venture local partners always bring capital to the table. This is a major difference between obligatory joint venture schemes that have been tried, with little success, elsewhere in Africa. Often, in the latter, the capital subscribed by the African partner was a fiction--either lent him by the foreign partner or exacted as a political favour. Mauritius seems to have largely avoided this type of joint venture.

In the hotel sector similar relationships apply, although Mauritian investors have a strong advantage in their access to prime land. The Restriction of Property Sales Act //check name// prohibits the sale of land to non-Mauritians. Foreigners can overcome this by creating a local firm, which then has the right to buy land. In practice, however, most of the prime land for both tourism and industry is held by Mauritians. In the hotel sector one finds several hotels owned 80 to 100 percent by Mauritians but managed by foreign firms. There are also 100 percent foreign owned hotels, but they are not many and they report difficulty buying land.

6.2 MAURITIANS BUY OUT FOREIGN FIRMS AND HOTELS

A number of the Mauritian firms we interviewed //insert % of sample, % of employment// had begun as joint ventures, or purely foreign firms, and been bought out by a local firm. Some foreign investors bad also bought existing foreign or joint-venture firms. We asked why the original investor sold, and how and why the new firm was ready to take over. The answers involved many individual circumstances, but some major trends could be discerned. First was that foreign firms tended to have higher costs, Their expatriate managers were entitled to housing, transportation, schooling and travel allowances that were not customary for Mauritian managers.

Second was that Mauritians had a sharp learning curve. While Mauritian workers were learning to accept industrial discipline and pacing, Mauritian managers quickly mastered both the manufacturing and the managerial techniques necessary to succeed.

Capital availability and capital transfers were another factor. Sometimes local investors got a bargain. When a foreign investor went bankrupt and had to sell out, a fully functioning factory and labour force could sometimes be acquired for substantially less than the initial investment, with few start-up costs. Several of the investors we interviewed //insert %//, both Mauritian and foreign, had worked their way up from the ranks. They appeared able to both save capital and inspire confidence in local financial institutions. While salaried they saved. When an industrial opportunity appeared, they were able to get bank credit to help them move into ownership positions.

Mauritians can now get commercial bank investment credits with 20% down and 80% financed, with interest rates about 9 -10 percent. We do not have a record of the proportions of investments that could be financed in the past, but there was general agreement that investment capital was available for both locals and foreigners from local banks. Foreign investors today can expect a borrowing ratio of 40:60, slightly less advantageous than Mauritians. Even this level, however, has occasionally be exploited by unscrupulous investors.

6.3 OUTSOURCING

Many local firms reported that they got their start jobbing for big foreign firms. When large firms have a rush order larger than they can handle, they commission smaller locally owned ones to cut, make and trim the pieces. The smaller firms reported that this is how they learned which models were selling and the quality of work that was required. The big firms would come work with them to ensure that the work was completed correctly. That way both they and their labour force got additional training.

6.4 SOURCING

The multiple ethnic linkages on the island created an instant international sourcing network. The MEDIA spokesperson considers that Mauritius' garment industry has a major advantage over South Africa's much large sector in this respect. South Africa's garment and textile industries are vertically integrated, which ties garment makers to high-cost mediocre quality fabrics in a limited range of styles.

In Mauritius, most of the local garment industry is knitwear rather than woven cloth, Knitwear involves several less steps than woven, as the fabric and garment am made in an integrated operation. Many knitting firms do their own spinning, getting their raw cotton mainly from India. Others source their yarn from India. Raw wool comes mainly from Australia and New Zealand, but specialty wools come from the UK. Dyes for both cotton and wool come mainly from Germany. Mauritian firms were able to compare global sources early on, and they quickly diversify whenever price/quality ratios change. In this area also, local firms reported being glad to be able to learn from the bigger foreign firms.

There is some vertical integration in Mauritian textiles and garments, but it is at the high quality end and clearly mutually beneficial. Two ultramodern Mauritian textile firms produce shirting for garment makers supplying Marks and Spencers (UK) and other upscale firms. Both were created by garment makers working with top-end retailers seeking to integrate their operations upstream to ensure quality and availability. All of the woven cloth is sold to local garment makers, and demand exceeds capacity.

6.5 TRAINING AND TECHNICAL ASSISTANCE

Firms are conscious of the fact that they benefit from one another's efforts to train the workforce and from shared technical assistance. Technical assistants sent by a buyer to work with a large firm will sometimes also work with their smaller outsourcers. And all firms compete to recruit qualified personnel. Initially the Hong Kong firms provided much of the workforce training. At first they brought in line managers and most of a line of workers from Hong Kong workers to show the Mauritians the needed skills.

In the hotel sector training has involved far less direct foreign technical assistance. The managers of Mauritian hotels, however, reported on-the-job experience working under foreign managers at local hotels.

6.6 LABOUR FORCE

In the early 1980s Mauritius was fifteen years into independence and still had 23-25 percent unemployment. Its one big advantage was that nearly 98 percent of adults were literate, and most secondary school graduates spoke both French and English. When the second wave of Hong Kong investors began to arrive in large numbers in 1984, they set up textile factories as they knew them, based on intense, rapid, accurate work at low wages,

Mauritius had a tripartite wage negotiation system, involving employers, unions and government. Government apparently weighed in on the side of cheap labour in the early years, as the alternative appeared to be economic stagnation or decline. The unions swallowed hard and accepted also. Alone in the middle of the Indian Ocean, they saw no alternative. A little over a decade later the general consensus seems to be that it was a good arrangement on all sides. Wages started at 2 Rs per day, and have risen gradually to over 100 Rs per day. There is now full employment, despite a downturn in the textile sector in the last two years.

The labour force, initially almost entirely male, is now nearly equal in gender distribution. Women from conservative Hindu and Muslim families were not believed likely to move into industrial labour. The family benefits of having three or four instead of one wage-earner quickly became apparent, however. Simultaneously, family planning took bold, and the population growth rate dropped from nearly 3 percent to just over 1 percent annually.

There is a wide consensus among employers and government officials interviewed that Mauritian workers learn manufacturing skills quickly enough, but that they do not have the necessary persistence and speed to make firms competitive with Asian norms. They tend to work more slowly, resist overtime, take all of their 21 days of annual sick leave, and like their weekends and holidays.

Foreign workers have played an essential role in raising productivity. Both foreign and Mauritian firms customarily bring in foreign workers to work alongside the Mauritians. In the chain they speed up the work of the whole group. Employers said a Chinese woman worker may work as three times as fast as a Mauritian, but she will prefer to work on a single task. Indian men work about twice as fast, and are also skilled at several tasks. This is very useful, as absenteeism is a problem in the Mauritian workforce. Multiskilled workers are needed to fill in wherever there is a gap. These "expatriate workers" as they are called, come on two or three year contracts. Employers must pay their round trip transport, lodging, food, cleaning services and work permits. Their total cost is double or more the wages paid a Mauritian worker, but a minority of such workers speeds up the whole line enough to more than compensate.

6.7 LINKAGES BETWEEN INDUSTRY, LOCAL COMMERCE, SERVICES AND TOURISM

The Mauritian economy grew rapidly within a few years of independence. In the early 1970s GDP growth accelerated from 4.9 percent in 1971 to an average of 11 percent over the next three years. Inflation immediately shot up, however, triggering a slowdown in 1975. By the late 1970s, when the EPZ began to flourish, it clearly led the next growth spurt. Its value added growth rate accelerated from 9.3 percent in 1977 to 25.8 percent in 1979. Again inflation rose rapidly, peaking at 42 percent in 1980 before dropping back the next year. For the last fifteen years it has fluctuated between 0.6 and 13.5 percent, with an average under 10 percent. The drop in inflation in 1980 is attributed to two combined external shocks: a world-wide recession and a very destructive cyclone in Mauritius.

At independence sugar generated 99 percent of Mauritius' exports. By the 1990s the EPZ surpassed sugar in export value, although sugar still generated more foreign exchange. The EPZ seems to have played several critical roles. One it gave sugar factory owners an alternative economic activity, which carried them through agricultural crises. Two it built confidence and increased wages in other sectors of the economy. As the population's average earnings increased there was a larger local market. Commerce and business services grew. Three it brought foreign investors, global business linkages, and new ideas that allowed Mauritians to modernise and helped build investor confidence in all sectors.

Since the late 1980s tourism has also experienced accelerated growth. Again there are clear linkages between the EPZ and tourism. Buyers enjoy coming to Mauritius because it is a beautiful, safe, harmonious country. They stay and look around, check out what other factories are making. Tourists search for bargains (and find them) at factory outlet shops throughout the island, combining sight seeing with shopping. They often leave with bundles of Anthurium flowers, for which they have become a major export outlet.

Tourism has created substantial growth in local construction and commerce. All hotel managers interviewed reported buying construction materials, food and other supplies and accessories entirely on the local market. There is, for example, a well developing sector manufacturing and selling plumbing fixtures, cabinetry, carpeting, etc. Much of the materials are initially imported, but they pay duty and are sold on the local market. This generates revenue for both local merchants and the government.

Transportation services have developed to meet the needs of both the industrial and tourism sectors. Air Mauritius has negotiated agreements with selective other carriers (Air France, Lufthansa, Singapore Airlines, etc.). All, however, maintain high passenger tariffs--cheap charter flights are not allowed.

Shipping rates, especially for air freight, are a controversial topic. Air Mauritius lost its position as the country's most profitable firm last year, with profits dropping to one tenth their 1995 level. Rising fuel costs were one reason, so it was just announced that freight rates would be "liberalised" and would rise. In a hegemonic market it is not clear what liberalisation means. Air France announced the same rise in rates. Manufacturers argue that government must keep air freight rates reasonable as a geo-economic strategy. Mauritius still suffers from the negative incentives of isolation and distance that make it difficult to remain competitive.

Mauritius opted for a full island EPZ rather than a segregated zone for good reasons. It allowed manufacturers to locate wherever there were workers available. The time and cost of worker transportation that would have had to be absorbed by the industries, was thus minimised. Many workers do, nevertheless, travel across the island every day to work A network of paved roads covers the island. Buses carry working class commuters to work. The elite have become accustomed to sitting in their cars through daily rush-hour traffic jams, shortly before 9 am and at 4 pm.

Communications are quite good both within Mauritius and between Mauritius and the rest of the world. Mauritius Telecom, which has a monopoly, has modernised at a reasonable rate. Costs are still quite high, and MT alternates with Air Mauritius as the country's most profitable firm. If Mauritius seriously wants to enter the informatics field that is one of the new focus areas, it may have to pay more attention to cost cutting than to profits from telecommunications.

6.3 REGIONAL NETWORKS

Mauritian investors in textiles, sugar and hotels are currently "delocalising" their investments to neighbouring countries, chiefly the "Big Island" of Madagascar. Labour costs have risen continuously, and Mauritius is no longer a cheap labour country. Textile and garment makers cannot compete with Bangladesh, China, Viet Nam and other cheap labour countries in producing basic mass market T-shirts and moderate quality garments. Madagascar, Mozambique, and other SADC countries, however, still offer this possibility. Some firms are therefore transferring their "basic" garment production to low-wage countries and keeping their higher quality manufacturing here. One firm even has its production line in Madagascar on a computer

network so that the progress of each order can be checked in real time. Marketing, design and financial management functions remain in Mauritius.

Mauritius started offering off-shore banking, trading and financial services in 1992. Since then 6000 firms have taken advantage of this opportunity. Most have no more than a post office box and a bank account in Mauritius, but demand for financial management and auditing services has certainly increased.

Mauritius added freeport facilities as an option at about the same time. The idea is that firms slipping from India or China to relatively small African markets would use Mauritius as a gateway and transhipment point. Ships can break down container-loads here and repackage them with assortments of different goods from several origins. 450 firms have registered for these facilities, although only 150 licenses are operational in mid-1997.
Coopers and Lybrand, after announcing its merger with Price Waterhouse in September 1997, also announced that it would transfer its southern African regional headquarters to Mauritius. This gave a fillip to the gateway theory, that has many doubters among the local economic leaders.

7. PROBLEMS AND OPPORTUNITIES INVESTORS FACE TODAY

7.1 SHARED PROBLEMS

A couple of years ago Mauritians began to realise that their first phase of industrialisation was over. It was no longer a cheap labour country. For the same reason both traditional and non-traditional agricultural exports were in trouble. The sugar cane, tea and flower export industries all had depended on cheap labour. Textile workers, whose daily wage in 1970s was 2 Rs, were earning about 140 Rs per day in 1994. Per capita income was $500 a year in 1970, but has reached $3500 today.

Moreover, Mauritius' original geographic handicap in being located far from both suppliers and marketS, was accentuated by rising freight costs. Local industries and their customers were shifting from traditional production and stocking patterns to production on order, with just in time delivery. Processing time for orders has shrunk in the last few years. Garment makers used to have several months between the time they received an order and the delivery date. Now they have six to eight weeks, sometimes less. The result was increasing demand for air freight. Not only was it costly, it was unavailable at critical peak periods. This seems to be the main factor behind the failure of fruit and vegetable export efforts, and has seriously hampered flower exporters. Only the most long lasting flowers are viable for export, and then only the lightest of those. The result is that a single variety (Anthurium) is exported, chrysanthemums, roses, and birds of paradise having failed.

There is considered to be full employment. No rate is given, but officials explain that the unemployed are either: (1) unemployable due to health or personality traits or (2) temporarily between jobs. Economists call the former structural unemployment and the latter frictional unemployment to distinguish them from unemployment related to economic cycles.

When businesses began to fail in larger numbers than usual, a national rethinking took place. Private sector leaders seem to have provided the initiative, but government has taken a prominent role.

Exporters report that they no longer feel that they have strong and imaginative backing from government, as was the case in several previous boom periods. Efforts to streamline the bureaucracy have born remarkably little fruit. Fifty odd permits are required to set up in business. Some permits, notably work permits for expatriate workers, take several months (62 days on average, according to a productivity report). MEDIA claims to help investors through this process, but the basic ministerial housecleaning necessary to establish transparency, reliability and accountability clearly has not been done. Corruption enters the picture, mainly to speed up the process, not to deny government revenues due it. But the delays create substantial transaction costs for businesses. Computerisation of Customs has been underway for eight years, and is not operational yet.

The Minister of Industry is creating a joint public/private commission to determine what procedures need streamlining. The approach he envisaged was for his ministry to centralise permit requests, giving other ministries and agencies no more than two weeks in which to raise an objection. This has been tried elsewhere with little success. Agencies that are thus by-passed become less co-operative rather than more. On the other hand, several countries have succeeded in creating real streamlining by doing internal government information needs analysis. When bureaucrats determine what information is really needed for what purpose and by whom, they can often agree on simpler ways of obtaining it.

Government and the private sector both say that they are moving into the "second phase" of industrialisation. One industry leader admitted frankly that they do not know what this second phase is, only what it is not. Several themes have emerged, however. One is restructuring of both industry and agriculture to modernise equipment and become more capital intensive. The agreed targets are greater productivity and improved quality. One finds quality and productivity campaign posters in every factory. The best ones have gone to fully integrated production lines with mechanical movers, reduced factors returns to well below international norms, and begun producing exclusively for upscale clients.

Many smaller locally owned and managed textile and garment firms, however, are unable to make the transition. The failure rate has been high in the last few years, and is likely to continue increasing.

7.2 OPPORTUNTTIES

Both local and foreign investors speak of tourism as the most profitable and promising sector. Arrivals topped 500,000 in 1995 and are expected to surpass 1 million by the turn of the century. Occupancy rates are over 90 percent for luxury hotels, and close to 80 percent for mid-level hotels.

Foreign investors in industry today are mainly European, and are interested in higher tech areas such as watch-making, model boats, jewelry, electronics and information technology. These are typically smaller firms with less than thirty employees, compared to textile firms that range up to 4000 employees. Local investors are also going into the same light industrial areas, and doing well.

Textile and garment manufacturers are reaching a divide. Some have modernised, increased productivity and upgraded their product line. A few of these still want to make basic T-shirts, but they are doing it or plan to do it in SADC countries where labour is still cheap.

Financial services, offshore and freeport activities are new growth areas, but it is not yet clear what macro economic impact they will have. Financial services, including banking, insurance, investment consulting and accounting, provide employment for a rapidly growing cadre of Mauritian professionals.

8. CONCLUSIONS AND POLICY IMPLICATIONS

8.1 CONCLUSIONS

Mauritius still has many of its initial disadvantages, namely small size, narrow natural resource base and locational isolation from potential international markets. Added to these is the now rising cost of labour and the overall implication of these is that Mauritius faces formidable challenges to sustain its rate of development.

Ironically, the country's geographical disadvantages, which are evident to all, may have turned to an advantage, in that it provided a shared incentive to strive for development and minimize social conflict. The fact that all Mauritians are immigrants may have also been a factor in the prevailing peace, social harmony and political stability. There seems to be a national consensus on the necessity for development under the prevailing geographical constraints

The country's implementation of a stabilisation and structural adjustment programme since 1979 seems to have paid dividends. The country which experienced deep macro-economic crisis during the 1970s made a significant recovery. From the mid-1980s to the mid-1990s the country experienced a healthy macro-economic performance, changing its status from a low to middle income country; a complete opposite of the Meade's Malthusian theory prediction. Since the 1970s the country has experienced significant adjustment in its sectoral structure. The country which had a monocrop sugar economy prior to the 1970s now boasts a thriving manufacturing sector. Manufacturing is now the locomotive of development in the Mauritian economy, accounting for 30% of GDP, 40% of the workforce and 42% of gross export earnings.

The textiles and garments sector, which dominates the country's manufacturing sector in terms of number of EPZ firms (66%), EPZ exports (82%), total exports (57%) and employment is progressively adjusting to rising costs of labour and increased future competitions implied by the WTO Agreement. Its strategy involves increased productivity, modernisation, shift to value

added manufacturing, delocalisation, penetration of the COMESA and SADC regional markets and diversification into tourism sector and other emerging sectors.

Despite its geographical disadvantages Mauritius is becoming world centre of offshore activities, attributable to such factors like political stability, efficient and reliable infrastructure, developed and dynamic financial sector, transparent legal framework, existing double taxation arrangements and availability of public accounting and consultancy services.

8.2 POLICY IMPLICATIONS

Mauritians in the public and private sectors have done some extraordinarily creative thinking about their economic situation and the policies most apt to accelerate development. They enjoyed extraordinary success in the 1980s with export-led growth. Overall, they seem also to have found appropriate responses to the challenge of transition to a second phase of economic growth, although implementing them has not yet fulfilled its promise.

Two neglected areas of policy and practice continue to create obstacles to renewed growth. One is an artificially high cost of transport, and the other is bureaucracy--complex, time-consuming government procedures. Investors, both foreign and local, complained strongly about both. One wit suggested that the campaign to enhance productivity ought to be applied first and foremost to the government.

In the short scope of this study, there was no opportunity to study the transportation sector closely. In that sector, as in other infrastructure, government has kept monopoly or monopsony control, and delayed privatisation. Both air and surface freight rates are maintained higher than necessary by government policies. These include, for example, payment of royalties and exclusion of firms likely to undercut Air Mauritius. The privatisation measures being discussed under the BOT law would allow private construction of infrastructure and its future transfer to government. This may prove too potentially politicized a framework to attract the most economically beneficial investors.

Initially the team did not know how seriously one should take complaints about the bureaucracy. Business people worldwide complain. It seemed that a government so motivated and out front on policy reform must have speeded the issuance of permits and other such transactions. Not so. The official list of permits required to go into business goes on for several pages. The process of expediting air freight requires entrepreneurs to cross the island to the airport and spend most of a day there As elsewhere, there is talk of a one-stop shop in MEDIA and/or the Ministry of Commerce and Industry. In fact, MEDIA seems to be what investors elsewhere have come to refer to as a "one more stop shop." Neither it, nor the Ministry has the authority to issue the required permits. If they are not forthcoming, the investor must follow through personally. This is also the major stumbling block for potential foreign investors who abandon the process. We were told of several who had abandoned after more than a year, without finally investing. Others invested and sold out before they were able to earn a profit. We are still seeking to obtain a conversion rate of applications to actual investments, and analysing the Registry of Companies to see whether a profile can be developed of the investment and sellout process.

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PEOPLE Interviewed

Seebah	Manager	MEDIA	Government
A.A. Arca	Chairman	St. Georges Hotel	Tourism
Kon Kan King	Manager	Floritex Ltd.	Textiles
Mel Ferson	MD	Authentic Wear Ltd.	Textiles
W. Goyarts	Consultant	Cat Walk td.	Textiles
Cyril Lai	G. Manager	Olympic Knitting	Textiles
P. Leon Song	Director	Papyrus Information Systems Ltd.	Informatics
D. Wong	Engineer	CMT	Textiles
H. Capdevilla	Training	CMT	Textiles
Raymond Wee	Consultant	Mauritius Network Services	Informatics
V. Mulloo	Economist	Mauritius Employers VI. Federation	Government
S. Lallmahamood	Manager	Bourgeon Group	Textiles
R. Subbamah	G. Manager	Danieleti Ltd.	Electronics
A. Pinagapany	Manager	Villas Caroline Hotel	Tourism
V. Ah-Chuen	MD	ABC Group	Trade
A.A. Mamodaly	D. General	SOCOTA	Textiles
J. Poncini	Chairman	Poncini Ltd.	Jewellery
J.W.B. Lee	MD	TARA Knitwear Ltd.	Textiles
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ECONOMIC AND SOCIAL RESEARCH FOUNDATION
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TAN DISCOVERY
and
INTERNATIONAL BUSINESS INITIATIVES
(IBI)

GEMSTONE AND GOLD MARKETING FOR SMALL SCALE MINING IN TANZANIA

FINAL REPORT FOR PHASE I

Comments welcome.

December 5, 1997

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Executive Summary

The substantial economic potential of Tanzania's mining industry is gradually being appreciated since the country began liberalizing and privatizing the sector a decade ago. As mineral exports largely pass invisibly through what can mildly be called informal channels, official statistics seriously under estimate the current economic benefits from the sector. Officially, mining accounts for less than one percent of GDP. This study tested the value of GDP generated by mining using all three methods for calculating GDP. If the statistics were perfect, they should yield identical results. In fact the estimates for 1995 ranged as follows:

- 1.7%, using the final goods method based on official export statistics,
- 7.3% using the value-added method and our estimates of values in the mining marketing chain,
- 12.4% using the income method and our estimates of revenues in the artisanal mining communities.[1]

Artisanal mining is also the greatest single source of middle income employment in the country. It is estimated more than 550,000 people are employed in small-scale mining activities. The liberalization of artisanal mining has contributed more to income growth for poor rural populations than all development activities of the last thirty years combined.

Artisanal miners have been the first to become active in the field, but they will be competing with modern mining companies for the same resources over the next decade. Gold and diamond deposits are scattered from northeast to southwest along the western side of the Rift Valley. Coloured gem deposits are concentrated on the eastern side of the Rift Valley. All three commodities are currently experiencing artisanal mining rushes, but modern mining is just beginning to enter the production phase.

A number of recent studies have surveyed artisanal mining activity and explored its regulatory framework, policy issues, and environmental issues, but none has dealt adequately with marketing. Yet marketing is known to involve smuggling of most minerals out of the country through export markets in Kenya and occasionally other neighbouring countries. The policy implications of this situation have been unclear, and thus this study focuses primarily on that aspect.

Funded under the Africa-wide USAID Equity and Growth through Economic Research Program, (EAGER), the study aimed at exploring a sector with substantial economic growth, troubling policy issues, and major implications for future socio-economic equity. The study methodology began with a commitment to maximize policy impact by working from the start under a Policy Advisory Committee. The Committee, comprising public and private sector representatives, advised the team on policy and geographic priorities. As mineral marketing involves tax evasion, a direct survey using questionnaires was not feasible for the field work. The team therefore used rapid appraisal techniques and informal, semi-structured interviews to trace the activities at every level of the marketing chain. This allowed the team to estimate the proportions of commodities following

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[1]The variation should not be surprising, as recent studies of the parallel economy in Tanzania estimated that unrecorded activities comprise 40%-70% (Bagachwa and Naho, 1994) of total GDP or 60%-68% (Sarris and Brink, 1993).

different routes and to understand the logic of the participants. The price data provided was used to analyse the relative benefits gained by Tanzania and Kenya from the trade in the north. Only the northern half of the country could be covered with the one-year grant available. Thus the major gem rush area in the south, where 250,000 miners were active by 1995, remains for further study.

The results from the north were nonetheless important. They showed that 95% of the gold and at least 60% of the gemstones currently go overland, mainly through Kenya, for export. Because most of the value added is in the mining and the early stages of the marketing, Tanzania nevertheless gains the most economic benefit. An estimated 77% of value-added from gold and 71% of value-added from gemstones stays in Tanzania. The total value of gold and gemstone exports is, by a low estimate, US$69 million, and by a high estimate US$299 million per year over the last couple of years. Better estimates are expected to be made in subsequent phase of the study.

The employment and income effects of mineral liberalization have been striking. The numbers employed at least part-time in mining have increased from a few thousand in the 1980s to 330,000 in 1993 and 550,000 in 1995. Their earnings are at least six times the reservation wage in agriculture, and in many cases considerably higher. In a country with only 1.2 million salaried jobs, this has increased the number of people with middle incomes by 46% in just a few years.

Opportunities and constraints in this sector are numerous and complicated. The main opportunities for continued growth with equity are three.

(1) Preserving a balance between modern mining and artisanal mining, or, expressed another way, between capital intensive and labour-intensive mining.
(2) Attracting more of the trade to Tanzania from current market circuits in Kenya.
(3) Promoting upstream and downstream value-added activities in Tanzania.

Attempts to levy transaction taxes, too many and at too high rates, are primarily responsible for driving trade into Kenya. Other constraints among Tanzanian dealers include insecurity, under-capitalization, cumbersome and extremely bureaucratic procedures, and lack of information, skills, and infrastructure.

The study recommends that transaction taxes be eliminated except for royalties. Royalties are justified to finance proper stewardship of depleting resources, if they are actually used for that purpose. They must, however, be at a bearable rate. We estimate this to be 1.1% to 1.5 % for gold and 2%-3% for gemstones.

Also recommended is the zoning of reserved mining areas for artisanal mining, with artisanal miners having second choice of reef mining sites and first choice for alluvial mining.

1. INTRODUCTION

1.1. Background

The substantial economic potential of Tanzania's mining industry is increasingly being appreciated since the country began liberalizing and privatizing the sector a decade ago. The comprehensive economic reforms adopted in the mid 1980s have led to the liberalization of the mining sector, followed by a dramatic increase in private sector participation in mineral trade and production. According to the official statistics, it still contributes only about 1 percent of the GDP, and roughly 2% of the total export earnings. These figures, however, seriously underestimate the value of current mining and related activities, as artisanal mining of gold, coloured gems and diamonds and the related marketing mainly lies within the informal sector. Employment and income growth in the mining sector are also on the rise and a census in 1995 found that 550,000 people were employed in the sector (Tan Discovery, 1996). There are only 1.2 million total salaried jobs in Tanzania, which means that the mining sector has added another 46% of middle income jobs to the total employment, mostly in the last five years. No other sector has made a similar contribution to social well-being and income distribution. These jobs may be at risk, however, as more formal mining investments are developing rapidly.

Official statistics also do not reflect the potential that Tanzania has in the mining sector, as reserves have not been systematically evaluated. Recent studies show that the sector has an immediate potential for rapid growth in the next few years (Intra governmental Export Strategy Task Force, 1995).

1.1.1 Mineral Geology

Tanzania has a rich mineral resource base. Geological mapping, exploration and mining activities dating back to the early twentieth century culminated in the first comprehensive geological and minerals survey in 1958, which is still a classic (Harris, 1958). This was recently updated for the government (Ministry of Energy and Minerals, 1995). Artisanal miners and major companies, however, are both interested in gold, diamond, and coloured gems. The gold and diamond reserves have been well documented in UNDP-sponsored studies and studies sponsored by private mining companies. Commercially, viable deposits are scattered along the western side of the Rift Valley, gold in the greenstone belts of the Archean craton and diamonds in the hundreds of Kimberlite pipes throughout the same geographic area.

Gold mining activity is concentrated in three major areas, but activity often shifts as old deposits become less profitable and new ones are found. The main gold areas include the following:

- the Lake Zone gold fields, south and east of Lake Victoria, up to the Kenya border. The most active sites are Geita, Bulyanhulu near Kahama, Irambe, Sekenke, Kilima Fedha, Serengeti, Nyambegena, Buzroba, Matinje, Musoma and Tarime (north Mara).
- the Lupa area in Chunya District of Mbeya Region near the Zambia border. The most active mining sites are Saza, Makongolosi, Ntumbi, Chunya, Lupa-Sira, Sengambi, Mabadaga and Iyai.
- Mpanda, with six active mining areas: D-reef, Magamba, Kapanda, Kitisunga, Ibindi, and Sikitiko.

- new sites at Lukalasi in Mbinga district, Kitowero in Liwale district and Iluma in Manyoni district.

The major diamond mining areas are in northern Tanzania, around Shinyanga, Mwananga, Mabuki and Mwanza. Williamson Diamond Mine is the only formal mining operation, but diamonds worth an estimated $13 million to $16 million per year (Vethouse/USAID, 1995) are produced by artisanal miners and exported, mostly through informal channels.

Commercially exploitable deposits of coloured gems tend to be found on the eastern side of the Rift Valley. They also were originally discovered and exploited by individuals and small companies. They are now the subject of a mining rush comparable to that of Brazil in the 1980s. This geographic region hosts two gemstones unique in the world, Tanzanite and green garnet (called Tsavorite in Kenya, for the Tsavo area in which it was originally found). The only known deposit of Tanzanite in the world lies near Merelani, in northern Tanzania between Arusha and Moshi. This is a brilliant but slightly brittle gemstone ranging in colour from pale violet to deep blue-violet. It was popularized by Tiffany's in the late 1970s, and commanded a peak price of US$2500 per carat by 1983. More recently rare and precious Alexandrites, previously known only in Sri Lanka, have been found in southern Tanzania near Tunduru. There are extensive deposits of ruby (Morogoro and Umba River), sapphire, garnet, tourmaline (Umba River and Tunduru), emerald, chrysoberyl and other semi-precious gems (Tunduru).

1.2 Government Objectives for the Sector

The government has set the following objectives for the mining sector (Ministry of Energy and Minerals, 1997):

(1) to maximize fiscal and export earnings; and

(ii) to raise the contribution of the sector to total country GDP to at least 10% by the year 2025.[2]

To attain these objectives, the government has recently commissioned a number of studies of the mining sector, and sought support in the form of a US$12 million five-year World Bank technical assistance programme.

The government is also committed to make the mineral sector's development more regionally and globally competitive and more efficient. It seeks to attract more of the production to formal export channels. This is an attempt to make the sector more flexible and withstand both internal and external changes that might affect its progress.

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[2]This target is based on official statistics, which currently peg minerals exports at slightly under 2 percent of GDP. The current study estimates that minerals exports actually comprise ten percent or more of GDP already, hidden by the fact that they do not go through official channels. A higher target could therefore be set.

It is envisaged that the mineral sector will substantially contribute towards income generation, employment creation, social and economic infrastructural development -- particularly for the rural areas, and increase foreign exchange earnings and government revenue. In order to achieve the mineral sector objectives, increased private sector participation in the mineral sector's development and reduction of the government's direct involvement in mineral production activities are being emphasized. The government, however, shall continue to maintain the promotional and regulatory role in directing the activities of the mineral sector.

Factors that impede the effectiveness of the private sector in the country's mineral development, such as the lack of stable fiscal and non-fiscal incentive packages, the institutional and legal framework, and the relevant financial and technological arrangements are being addressed. New mineral policy and mineral development strategies have been prepared and are being reviewed with a view to issuing a new Mining Code in 1997.

1.3. Purpose of this Study

This study is funded by USAID's Equity and Growth through Economic Research program, Trade Policy Component (EAGER/Trade). This is an Africa-wide demand-driven policy research programme, designed to fund studies that facilitate policy reforms aimed at accelerating growth while preserving socio-economic equity. This study, like others in the program, focuses on a sector with high potential growth that is currently inhibited by policy uncertainties during a transition from a *statist* to a market-oriented economy. *It seeks to determine the policy framework most likely to enhance growth and socio-economic equity (in this case, mainly employment).* At the same time, it recognizes the need to maintain government revenues, so the fiscal implications of each policy recommendation are analyzed. As policies must be politically feasible, this study has not been conducted in isolation like many research projects. An Advisory Committee comprising stake-holders from the public and private sectors has worked with the research team from the start. Their input and that of a larger body of stake-holders to be consulted through subsequent workshops will be critical in shaping the final recommendations of the study.

Specifically however, the study aims at exploring the nature and characteristics of the existing mineral market in Tanzania since it has been singled out as the main cause of poor performance of the mining sector. Back in the 1960s after the Arusha Declaration of 1967, the state nationalized most mining. Private sector participation in minerals marketing was minimized and a parastatal monopoly for mining and minerals marketing was created.

That monopoly was ended in 1987, but since then, the macroeconomic policy framework has been cited as a source of mineral marketing problems. Miners and dealers say that the fiscal regime, interest rate and exchange rate policies, unstable investment policies have hampered new investment. The artisanal nature of the mining activities has also been responsible for poor performance of the mining sector in the country. Some artisanal claims and marketing operations are legal, but others shade into parallel markets. Production and trade of minerals has been shrouded in secrecy, making detailed assessment of both performance and prospects exceedingly difficult. Miners do not readily reveal the quantity they produce, and similarly mineral dealers are not prepared to give the actual figures on what they export.

Since the end of the monopoly, some steps have been taken to create a legal private marketing system. For gem and diamond dealers, a partially viable legal framework is in place, but small-scale gold miners currently have no legal buyers for their ore. From 1990 to 1995, the Bank of Tanzania operated a gold-buying scheme, but withdrew from purchasing gold after incurring substantial trading losses. Private gold dealers were allowed to register, but the conditions of registration have increasingly become less attractive. Those who registered the first year did not renew the second year. A new group registered, but they, too, did not renew the second year. Now (as of January 1997), there have been no legal gold exports for six months, although exports continue through parallel markets. Commercial banks, joint venture mining companies and licensed dealers are all interested in creating buying programmes, but current fiscal practice makes it temporarily unfeasible.

A substantial portion of the minerals produced in Tanzania is thus smuggled, mainly through Kenya, but also through Mozambique, Burundi, Rwanda, Uganda and other neighbouring countries. The result is that Tanzania's tax revenues from precious minerals are declining even as the mining activity grows. There is also concern, noted by Export Strategy Task Force, that the foreign exchange that is earned stays outside the formal banking system. The Task Force identified this as a major issue to be studied.

The Ministry of Energy, Minerals and Water has, with World Bank funding, funded a baseline study to survey small-scale miners and their activities in all major mining areas in the country. The study, conducted by Tan Discovery, was presented and discussed at a workshop in Dodoma involving representatives of the Ministry, the Tanzania Chamber of Mines, as well as gem and gold dealers and miners.

The present study was conceived and designed based on that workshop, where a consensus was reached on what areas needed further research. The preliminary report provided little quantitative data. In particular, there was no clear picture of gold and gem marketing systems. For the miners present at the workshop (as for dealers and government), marketing was a top priority.

The government wanted a better understanding of current market operations in this sector. It is concerned that the smuggling currently going on in the mineral sector adversely affects the overall country's economy especially with regard to the trade balance and the government budget performance. There was a large and visible channel through Kenya, but unofficial exports from Tanzania directly to Thailand and other Asian and Middle Eastern markets were also thought to be substantial.

To create a competitive marketing system, Tanzania has to know how markets operate in neighbouring countries in comparison to the workings of its own markets. Tanzania has attempted to levy royalties and export taxes on gold and gems, without realizing that neighbouring Kenya profited from this by offering dealers tax free exports. Mozambique has recently entered the picture with very low taxation on exported gems. Our hypothesis is that Tanzania has to compete for the trade, as it will naturally seek the most advantageous market. With such easily concealed merchandise and vast open borders, it is not cost-effective to suppress smuggling by force of law.

1.4 Methodology

1.4.1 The consultative process

An integral part of the study approach has been to work in consultation with an Advisory Committee comprising relevant policy makers from both the public and private sectors. The research team was mobilized at ESRF in August 1996 and a policy-makers' Advisory Committee was immediately constituted to guide the study. It comprises individuals who work in the Ministry of Energy and Minerals, the Tanzania Revenue Authority; the Tanzania Chamber of Mines; the Tanzania Mineral Dealers' Association (TAMIDA) and the Federation of Miners Associations of Tanzania (FEMATA), all of whom serve in their individual, not official, capacities on the Advisory Committee. It met in August 1996 to inaugurate the study and advise on the first field work trip, which took place in the northern zone in August and September 1996. It met again in January 1997 before the second field work trip, to the Lake Zone gold producing area, and met a third time in connection with the EAGER workshop held in Dar es Salaam in August 1997.

1.4.2 Field interviews and data collection

The team used rapid rural appraisal methods to interview participants at every level of the marketing chain. The country was divided into four interior zones that include the main gold, diamond and colored gem producing areas. Dar es-Salaam and Zanzibar constitute a fifth zone, important for their role in marketing, not for mining itself. The first two zones were canvassed in August and November 1996. The remaining zones we hope to cover in a second phase of the research.

Key informant interviews were held with mining and other local officials throughout the zones covered, and at the national level. We interviewed and collected data from officials in the Ministry of Energy and Minerals, the World Bank Minerals Sector Project, and the Tanzania Revenue Authority. We spoke with five representatives of international mining companies interested in Tanzania. At the local level we interviewed leaders of the mining community, mining associations, minerals zonal officers, police, migration officers, and leaders of national professional associations involved in mining and marketing. Semi-structured interviews were conducted with miners and traders at all levels of the chain, extensively in Tanzania and more lightly in Kenya. This proved the most useful form of information collection, as participants nearly always refused to answer formal questionnaires on their marketing practices. The team agreed upon a set of topics to be covered with each type of actor in the chain, and held semi-structured individual and small-group interviews, following a specific set of topics, but without a formal questionnaire. In most cases the team took notes during the interviews. Whenever the team believed that this made the interviewees less forthcoming, note taking was deferred. During evening feedback sessions the team compared notes and highlighted the key ideas coming from each interviewee. Focus groups were held when possible, for example with the mine claim-holders of Tanga Region and with the brokers of Arusha Region.This allowed us to estimate the proportions of commodities following different routes and to understand the logic of the participants. The price data provided was used to analyse relative benefits to Tanzania and Kenya from the trade.

- **The sample interviewed**

The sampling pattern involved both geographic and socio professional stratification. In the two initial field trips, the team interviewed over 300 people in two of the five zones into which we divided the

country, including 20 master dealers, 123 mine owners, 50 brokers and 64 officials and mining community leaders. Wholesale dealers, goldsmiths and jewelers in Dar es Salaam were also interviewed, as were, for comparative purposes, dealers and officials in Kenya and Ghana.

In Tanga Region, all leaders of the Regional Miners Association (REMA) were interviewed. In the Umba River area, in addition to brokers of various types, six mining village leaders were interviewed. In Arusha, the major gem marketing town, we covered all types of participants in the mineral market. We interviewed the top six dealers, who together dominate the market, and other licensed dealers for a total of 18 of the 62 master dealers in Arusha. Leaders of Tanzania Mineral Dealers Association were interviewed, the chairman and other members. In addition, all leaders of Regional Mines Association in Arusha were interviewed, and 40 out of the 3,000 brokers active in Arusha. Out of several operators in the area, fifteen medium scale traders and operators in other economic activities than mining were interviewed. The zonal mines officer of Arusha, Arusha Regional Police commander and officers of Tanzania Revenue Authority. Officers of the former Tanzania Gemstones Industries (TGI) in Moshi were interviewed. In Dodoma several claim holders and mine workers in gold mines at Nzunguni were interviewed, as were several mineral claim holders, brokers, master dealers operators in mineral marketing. In Shinyanga we interviewed two major diamond dealers, and a regional mines officer.

Generally, the topics covered included marketing problems, followed by a history of the participants' role in the market. This included:

- the prices they paid and received at each point for each type and quality of goods;
- their estimate of how many goods were going to which markets from their operating base;
- the estimate of their price margins from one point to another, of monthly income or income from each buying trip, and their operating costs;
- how the person got started in the mining sector, how much initial capital they had and from where, how they built their capital, what risks and losses they had experienced, and whether/where they had invested any gains;
- their proposals for improving minerals marketing;
- relationships with relevant government departments.

The team also interviewed persons involved in auxiliary activities, such as retail shops, restaurants, bars, hotels, transport and other services, to determine the variety of activities that existed and in some case to study the monthly net incomes. It was not possible to conduct a proper quantitative survey, nor to create account balance sheets. We therefore present this information in case-study format and do not attempt to quantify its global economic impact.

Since mining activities are spread throughout the interior zones of the country, a problem of geographic coverage presented itself from the start. Time and funding were important limitations. Time considerations included the fact that the government is considering a new Mining Law in 1997, the first major revision since 1979, and the input from this study would be most useful the faster it was available. Another factor was the one-year time limit and modest funding cap on USAID EAGER/Trade research grants, which obliged the team to produce a report based on the first two zones rather than completing the field work before drafting a report. The Advisory Committee recommended that the study team begin with the most important mining areas, but try to cover all of the major producing and marketing sites. The country was divided into five zones, to be covered in successive fieldwork trips:

(I) the northern zone, including the gem-bearing and trading areas of Tanga, Umba River, Korogwe, Kilimanjaro, Moshi, Merelani and Arusha;

(ii) the lake zone, including the gold, diamond and gem mining areas of Mwanza, Tarime, Singida and Shinyanga;

(iii) the central zone, including Morogoro, Songea and Chunya;

(iv) the southern zone, including Tunduru and the surrounding Ruvumu River gem rush area, plus the market towns of Mbeya and Mtwara; and

(v) Dar es-Salaam and Zanzibar Island.

Only the first two zones could be covered with the funds available for the first phase of the project. A second phase EAGER/Trade grant will be proposed to enable the fieldwork to extend to the remaining three zones, to allow the economic analysis to explore fiscal and foreign-exchange implications of the trade and to fund workshops on the results.

Three sets of economic analyses were conducted during the study, as described in Chapter 4 and detailed in Annex 3. The first analyses the impact of the mineral trade on the actual macro-economic situation of Tanzania, including the impact of the liberalization of minerals trading on employment, income distribution and economic growth (GDP). It also examines the effects of smuggling on GDP and foreign exchange. Two main macro economic calculations are undertaken. First is the impact of undeclared mineral exports on under valuation of the GDP, and on the undervaluation of the portion of GDP generated by mining. As precious minerals are almost entirely exported, the balance of trade indicated in the official statistics is also substantially understated, as most of these exports are undeclared. It is known in mineral trade circles that these exports generate foreign exchange used to finance imports. This helps to explain how Tanzania has managed to record an increasingly large negative trade balance for many years, without a corresponding devaluation of its currency (which floats freely). Consumption of imports is clearly higher than official exports could finance.

The second calculates the value-added from trade at each step in the marketing chain. This allowed us to estimate the distribution of economic benefits from northern Tanzanian mining between Kenya and Tanzania. Our results showed that an estimated 95% of gold and 60% of gems are smuggled out through Kenya. Most policy-makers in Tanzania tend to assume that an equivalent portion of economic benefit is lost to the Tanzanian economy. This turns out not to be true. When the reserve value of minerals and the value-added from mining and the portion of the trade that takes place in Tanzania are cumulated, the great majority of the economic benefit rebounds to the Tanzanian economy.

Finally, to analyse the competitiveness of Tanzania's business climate, a microeconomic model was built of the costs of doing business as a gem dealer. It shows how the tax structure and relative costs of capital favour the growth of business in Kenya rather than in Tanzania.

1.4.3. Review of available literature

An extensive review of the literature was conducted in the course of the study. Previous literature on artisanal mining includes a series of worldwide studies and workshops financed by the World Bank,

as well as surveys designed to attract mineral investment to Tanzania. Background geological mapping and information is the third type of literature, mentioned above (see the introduction).

There has been new interest in the mineral sector with the introduction of major changes in the socioeconomic policies of the country in the mid eighties. Several studies have reviewed the country's mineral resources and made recommendations to improve the sector's performance. A study was commissioned by the Ministry of Energy and Minerals in 1994 as preparatory work for the Mineral Sector Development Project funded by the World Bank.(Engineering Associates and Tan Discovery, 1994). The study examined at length the problems facing mineral sector development in Tanzania. It signalled small-scale mining, training, environmental issues as areas needing further study.

Another group of studies aimed to attract and guide large scale mining investors. Examples of these are: "Opportunities for Mineral Resource Development" (Hester, 1991 and 1996), and "The Mineral Sector in Tanzania" (Vethouse, 1996). These studies both provide summaries of the rich mineral resource base of Tanzania as well as the licensing procedures, the existing fiscal regime and other investment incentives. Hester's work provides details of specific mineral potential areas and government efforts to support mining investors. The Vethouse Associates study, funded by USAID, provides an independent assessment of those efforts and makes recommendations to improve the existing legal and regulatory framework.

From the mid-1980s to the present time, the activities of artisanal and small-scale miners have increased considerably from few thousand miners to a community of more than 550,000 people. This development was followed by a number of studies addressing various sub-sectoral issues. In 1994, UNDP financed studies of "Small-Scale Mining in Tanzania," the first part involved a Technical Assessment (Hollaway 1994) and the other part concentrated on the Institutional Framework (Lwakatare, 1994). There was another UNDP study, "Export Development and Promotion of Mineral Resources" (Twum & Kanza, 1992) which reviewed existing data on the country mineral resources and made some practical recommendations on the problems facing the mineral markets.

Comparative information has come largely through World Bank efforts, as academic and technical mining literature is remarkably silent on artisanal mining. In April, 1994, the World Bank organized a Round Table in Washington on Artisanal and Small Scale Mining with the aim of formulating a global "Comprehensive Strategy Towards Artisanal Mining."(World Bank, 1995,1996) Several papers where presented including a study on "Artisanal Mining in Tanzania" (Tan Discovery 1994) which mainly covered the organizational and socio-economic aspects. The round table deliberations also included the "Harare Guidelines for the Development of Small-Scale Mining," (UNDP 1992) and the past experiences in addressing the issues of the sub-sector. Roundtable speakers noted that several million people worldwide earn a living from artisanal mining. They produce an estimated 20 percent of the gold, 40 percent of the diamonds and nearly all of the gemstones mined in Africa. The phenomenon is also widespread in Latin America, although Brazil's famous small miners are gradually being squeezed out by international mining companies. They produce 50 percent of Brazilian gold today, against 70 percent some years ago.

In connection with the launch of its World Bank-funded mining sector reform, recently Tanzania's Ministry of Energy and Minerals commissioned a detailed study of the small-scale sub-sector in

Tanzania. "The Baseline Survey and Development Strategy for artisanal and small scale mining programme" (Tan Discovery 1996) provides basic data and strategies on institutional, organizational, mining and processing, marketing, environmental and socio-economic aspects. The study did not cover some important issues on mineral markets which could help to influence policy changes in legal and fiscal regimes to improve mineral markets.

Work by Kimambo (1984) gives a brief description of Tanzania mineral potential and various mining development activities from the late 1950s to the mid 1970s. Another study reviewing mining operations and socio-economic aspects from the late 1930s to early 1990s was done by Chachage (1994). It examined the mining industry and accumulation in Tanzania, and a critique of the relationship between artisanal miners and formal mining companies.

None of these studies directly addressed marketing operations and related policy issues. This is the reason for the focus of the current study.

2.0 MARKETING FOR SMALL SCALE MINING IN TANZANIA

2.1 Background of Mineral Marketing in Tanzania

Mineral marketing processes and structures can be traced back to the colonial era. In the 1930s, a gold rush in the Lupa area stimulated minerals exploration in many areas. Small reef miners with some capital and equipment obtained from other economic sectors emerged and joined in the production and marketing of gold.

Africans pressured the colonial government to grant them licenses because they were victims of low wages and poor conditions. They had experience working in mines which at that time were under the settlers and other European miners. A product sharing scheme allowed retired European civil servants, known as "verandah prospectors," to exploit artisanal mines in the late 1930s, contributing to the development of loose mineral marketing. The official market dominated mineral trading although there were some reported cases of smuggling. By the end of the colonial period mineral products were contributing over 10% to the total export earnings.

After independence, the government continued to issue prospecting licenses on individual bases, but encouraged small operators to form mining cooperatives. Some of these cooperatives, such as Lupa Gold Diggers Association, which was formed in 1963, played a key role in both the mining and marketing of gold from small scale miners. Later on, however, many mining properties were taken over by Greek nationals who also dominated the sisal industry.

Mineral trading was regulated by a 1965 mineral trading ordinance and a gold ordinance. Commercial banks supported mineral trading through the provision of credit facilities and mineral custody service. Smuggling was minimal and most of the exports were handled by the few well established companies. The main ones were Umba Ventures for Mining and Export of Coloured Stones and Williamson Diamond Mines.

After the Arusha Declaration in 1967, most of the mining companies were nationalized. The government formed Tanzania Gemstone Industries Company (TGI) in 1972, with a monopoly in mining purchasing, producing and exporting coloured gemstones. In 1973, the government formed the State Mining Corporation (STAMICO) which had the responsibility of overseeing the development of the mining sector, including new exploration and the operation of nationalized mines.

STAMICO also became the parent company of TGI. From 1970 to the mid-1980s, the mineral export performance was most unsatisfactory, as there was a drastic fall in gold exports and a gradual decline in diamond exports. The exportation of gold, for example, dropped from 500 kg in 1969 to 20 kg in 1971.

The comprehensive economic reforms introduced as part of economic recovery programmes of the mid-1980s led to liberalization of the minerals markets through the issuing of mineral dealers licenses to private operators in 1987. Soon after, mineral exports started to increase. The Bank of Tanzania established a gold buying system through the National Commercial Bank in 1990. Official exports of gold accelerated to a peak of US$40,380,000 in 1992, from to US$1,152,057 in 1989. The

buying system was bankrupted by a scam in 1994 however, and subsequently discontinued. Since 1995, there has been inadequate provision for the legal purchase of gold in the country, and most production has been marketed through the informal channels in Kenya.

By 1994 the currency was allowed to float freely and importers were allowed to use their own sources of foreign exchange. Minerals markets began to flourish in Tanzania, and the influx of capital spurred new exploration. Plots in the Merelani Tanzanite mines were allocated to small miners in two phases in 1995 and 1996, creating a surge in production there. Simultaneously in the far south, the Ruvuma River valley, which forms the border with Mozambique, was found to be extraordinarily rich in coloured and precious gemstones of many varieties. This set off a mine rush that has brought over 250,000 people into that isolated enclave, and created a regular traffic of chartered flights, ocean freighter service and overland trips.

2.2 Structure and Characteristics of the Market

2.2.1 Economic Geography of Mineral Markets

The surveys found four levels in most of the minerals markets, namely the mining area, the primary market, the secondary market and the export market. Each of these has its own features. Buyers at one level of the market are sellers at the next level. Price margins between one level and the next can be substantial, particularly when the volume of goods handled is low. The four levels are almost identical for coloured stones and gold but the diamond market skips the primary market and in most cases its secondary market is the export market. The more valuable the goods sold, the more likely sellers are to try to skip one or more links in the normal marketing chain and keep the mark up themselves.

2.2.2 The Marketing Chain

- **Market level one: The mining area**

The first sale of raw gems or gold ore often takes place immediately at the mining sites. At this market stage, mine workers and small brokers are the main participants. The organization of artisanal mining favours this arrangement. Tanzanian mine workers refuse to work on salary, preferring the prevailing system of production sharing between worker and the mine claim holder and/or pit owner. Mine workers can market their official shares openly in nearby mining towns, but they often secret valuable finds and market these stolen goods to mine brokers directly at the mine.

- **Market level two: The primary market**

In mining villages a short distance from the mines one finds primary markets where production enters quasi legal channels. Sales are legal, but, for reasons explained further on, most of the brokers at this level are not licensed. The degree of market activity in mining villages depends mainly on the quantity and quality of the recovered minerals. The main participants in this market level are brokers and small brokers. The latter frequently shuttle between the mining sites and the primary market.

On local market days mine workers are also active, selling small parcels of good quality stones. Master dealers and large-scale brokers from major towns and even outside the country frequently visit mining villages. The government banned foreigners from mining areas in 1996, but the

exclusion is difficult to enforce. Sometimes, participants in other economic activities living in the mining villages and towns, such as retail shop keepers, barbers, owners of guest houses, bars, and others also sometimes participate in this market stage. The market size varies considerably depending on the type of mineral production and the level of international demand. When production is high and dealers have received international orders, market volume swells quickly. In typical mining villages there can be 3 to 5 long-distance brokers and several small mine brokers. In areas where production is small and uncertain, there are few visible signs of the trade. This was noted during the survey at Mabuki diamond mining village, where currently brokers do not stay permanently in the village as they used to do. Trade is still taking place, but only through occasional visits by brokers. On the other hand, in thriving mining towns such as Merelani there were an estimated 3000 small brokers and 50 long-distance brokers.

- **Market level three: regional market towns**

Regional market towns are where most mineral dealers have established permanent offices. The main market for both gems and gold throughout the region is Nairobi, but several Tanzanian towns are trying to compete and other regional towns also have a role. The centre for the Tanzanian gem trade is Arusha, although Mtwara in the south and Dar es Salaam also serve as regional gem markets. Mwanza, and Tarime are major gold markets, and Shinyanga dominates the diamond trade. Dar es Salaam also handles some of the gold trade, although most of it continues to Zanzibar for export.

In such markets, the existing infrastructure and facilities allow for easy export and access to foreign buyers. These market towns need to have good road access, airports and telecommunications, which are essential for dealers to communicate with their international buyers. The major participants in these markets are master dealers, brokers, organized small-scale miners. Some illegal mineral traders that one could qualify as full time smugglers are based here. Legitimate dealers and brokers, those who usually try to abide by the law, also export through Kenya on some occasions, as it is sometimes the only way to do business. There is some specialization in the coloured gem market, particular dealers who buy mainly one type of stone. Most dealers, however, put out buy orders whenever they have an international buyer for a particular type of stone.

Arusha market is the major gem centre in the country handling high quality goods suitable for faceting. Products traded include Tanzanite from nearby Merelani, tourmaline from Tanga and Arusha, green garnet from Arusha and Kilimanjaro and rhodolite from Tanga, Morogoro and Arusha.

Dar es Salaam is also a secondary market of minerals in the country. This market handles the largest variety of products, minerals of various types and qualities from different mining areas of the country. Some of the major mineral types traded in the market are:

- ruby and sapphire from Morogoro, Tanga and the southern regions;
- alexandrite and chrysobel of all sizes and grades from Mtwara, Ruvuma, and Lindi;
- red garnet, rhodolites, tourmaline, amethyst, emerald and aquamarine;
- gold and diamonds, mainly from the central and southern zones.

Tanga was once **the** major gemstone centre, particularly in the early 1970s. Now the market is less active. It has two master dealers, neither of which is very active, and a number of informal brokers. Tanga now serves as a transit point for materials from other parts of the country that are smuggled into Kenya. Most of the minerals traded in Tanga originate from Umba valley mining area which is

situated in the same region. The important minerals traded in this market are sapphire, ruby and all types of garnet and tourmaline. During the survey, it was also observed that most of the medium grade ruby from Morogoro is either marketed here or smuggled via Tanga to Kenya. Sapphire bought in Tanga is later marketed in Dar es Salaam before it is exported, while tourmaline and garnet are marketed through Arusha for export. The interviews conducted during the survey revealed that some gold from Singida and Dodoma is marketed in Tanga.

Mwanza is the major secondary market for minerals from the central and lake zone mining areas. Gold is the main commodity traded there. It is collected from the Regions of Singida, Shinyanga, Dodoma, Tabora, Mwanza and Kagera. Participants estimated that 95% of the gold is traded on the parallel market in Mwanza and later smuggled to neighbouring countries. It is sold in Nairobi, Mombasa, Nakuru, and Isibani, all Kenyan towns. Another route for gold from Mwanza is through Dar es Salaam and then Zanzibar. Some diamonds from Mwabuki are sold in the Mwanza market and foreign diamond buyers occasionally visit the market.

Shinyanga town is famous in East Africa for the informal trading of gem diamonds. Most of the diamonds traded in this market are obtained from Maganzo mining village, including stolen materials from the Mwadui diamond mine, Nyanghwale in Kahama and Mabuki in Kwimba. With the exception of officials sales from Mwadui Williamson Diamond Mine, most of the goods are from artisanal miners and are marketed through informal channels. Field work interviews indicated that foreign buyers obtain diamonds straight from local traders in and around Shinyanga town. Goods from Shinyanga are then transported through Dar es Salaam or Mwanza and smuggled out.

Nairobi has been the main regional market for gems and gold since Tanzania attempted to nationalize mining in the 1960s. Its markets grew rapidly as mining activity increased in all countries in the region in the 1980s and 1990s. Foreign buyers like it because air access is easy, dealers stock all types of products in good quantities, comfortable accommodations are available at reasonable prices, and their business can be done in relative security. Local sellers cited similar factors for taking their produce there. Prices are sometimes, but not always better. Even when they are not better, there is the advantage that dealers will buy quickly all types and qualities of goods, so a broker can be in and out in a single day. Northern Tanzanian mining areas are geographically closer to Nairobi than to Dar es Salaam, and the road networks are considerably better. Security is reportedly a little better than in Tanzania, although it is clearly better for Kenyan brokers than for Tanzanians.

Nairobi alone was estimated by one of its dealers to have about 300 active dealers. A significant number of them are well organized, well capitalized and have family ties in the business that span generations and continents. This gives them an advantage in market knowledge and contacts, something that many Tanzanian dealers lack. Some 54 major gem dealers are listed in the Nairobi telephone directory, together with eight minerals dealers. Many have multiple lines, reflecting the fact that international gem dealing requires intensive telecommunications. The Kenyan mineral dealers association had some 85 members before it became inactive a few years back. Some of the major dealers interviewed in this study were not listed in the telephone directory, nor did they participate in the dealers' association, which rends more credible the verbal estimate of 300 active dealers.

In addition to a portion of Tanzania's precious minerals, Nairobi markets handle some artisanal diamonds and gold from Eastern Zaire, sapphires from Rwanda and smaller quantities of gems and gold from throughout the Rift Valley area. This area, extending from Tanzania to southern Ethiopia

increasingly constitutes a regional market. Dealers throughout the region compete to buy the production, which flows wherever the trade is well organized and relatively secure. Kenya has some gem and gold mining of its own, but its main advantage has come through creating a free market for regional production. Imports are welcomed and pass untaxed, although not always without harassment from officials. Export formalities in Nairobi are well organized, and, for established dealers, done on secure premises. Some Tanzanian production also goes through Mombasa, Kenya's main coastal port.

- **Market level four: Export markets**

The export market is the final stage of the four market levels and normally it depends on the location of transactions as well as the destinations of the purchased minerals. The export market can appear in several forms. The market can appear when a foreign buyer is purchasing from a dealer or during gemstone show. Destinations of most of the mineral products has been to the processing centres, mainly in Asia, or directly to the major end users in USA, Japan and Europe.

Tanzania is presently a major new actor in international coloured gem markets, and a very small actor in world diamond and gold markets. Tanzania's garnets, sapphires, rubies, emeralds, tourmalines mostly go to Thailand, Sri Lanka or mainland China for heat treatment and cutting. There, rubies from Burma and Thailand, sapphires from Sri Lanka, Thailand and Australia, and emerald from Brazil, Colombia, Zambia, Madagascar are co-mingled. While it is technically possible to determine the mine origin of such stones, in practice they may be listed as being of Thai-origin in USA, Japanese, Singaporean, Hong Kong, or European jewelry markets. Lower quality market cutting at the mass production level is increasingly being transferred from Thailand to mainland China, where labour costs are lower. Cutting operations also exist in India, mainly for emeralds and diamonds; in Belgium and Israel for diamonds; and on a smaller scale, in all developed countries.

Japan and Europe are the leading retail markets for top quality precious stones, including diamonds, Alexandrites and best grade Tanzanites. The US, however, is the largest market overall as mass production and mass marketing technologies have been combined to create fine jewelry that lies within the reach of middle and lower-income households.

2.3 Profiles of the Participants in the Minerals Markets

The main participants in the market are mine workers, miners, brokers, informal mineral traders and master dealers. While the patterns described above represent typical market operations, participants at any of the levels can and do come together and trade. Small brokers can play a role at any level. In addition to buying directly at the mines, there is a variety of small broker in most markets who accompanies the seller, helps him value his goods, and find a buyer. The roles and viewpoints of each type of participant in the market are described below.

2.3.1. Mine Workers

- **Classification and profile**

Mine workers are mainly young men from rural areas, although there are also older men, men from urban areas and some women engaged in the actual digging. Some operate seasonally, returning to their farms to sow and harvest their crops. Others work with targets, having in mind to get a certain

amount of income for a dowry or to go into business. Increasingly, however, mining is a year-round activity and one with an attractive career path. Successful mine workers become brokers, then dealers or mine claim holders. The may go into business in a mining related trade or service, while keeping a hand in mining. Pit and shaft mining is dirty, dangerous work. Most of the workers encountered in such sites were men 18 to 30 years old. In alluvial mining, however, where the work is less dangerous, one finds some women and older men participating in mining activities.

The reservation wage of these mine workers is difficult to calculate, as one would have to calculate a shadow wage based on the opportunity cost of their time and the shared costs of food a lodging provided by mine owners and/or more successful coworkers during the unproductive times. According to workers' testimony, however, the mine worker's position is a coveted one that a young man must work his way into. He will work at manual labour jobs in the mining community long enough to build the savings and friendships necessary to join a mine workers' group.

We therefore took the daily wage of a manual labourer in a mining area as a shadow reservation wage. This was found to average 2000 to 3000 TS per day.

Mining operations ignore the existing legal framework in matters pertaining to issues like earnings and working conditions, as is the case for artisanal mining throughout the world. The rate of accidents at work is alarming. In Merelani informants claimed that an average of one mine worker dies every week because of unsafe working conditions. Pit owners cannot properly supervise operations in shaft mines because it is not safe for them to go down themselves. The pit owners interviewed at Merelani for example admitted that they cannot control the number of workers who operate in their pits. They indicated that initially, before a pit starts to supply minerals, about 50 workers can be operating but as soon as it starts producing, the number of workers in one pit can even reach 150.

- **The role of mine workers in the gemstone and gold market**

Mine workers are among the main participants in the mineral market and are very active at the first stage of the market, as sellers at the mine sites or nearby villages. They are the primary source of illegally traded minerals. They have an interest in getting the materials that they steal, above and beyond their agreed shares, out of the area as quickly and quietly as possible. Mine workers were also found illegally mining claims which owners have left unattended for a long time. This was mainly observed in the Umba Valley, a sapphire mining area; Maganzo, a diamond mining area; and Sekenke and Matinje, gold mining areas.

Sometimes mine workers are forced to sell their legitimate product to the nearest broker because they are in need of immediate cash, for buying items like soaps, food and others. Most of the brokers are not licensed. Many are Kenyans and could not get a license. Others, Tanzanian citizens, find the licensing procedures too cumbersome and of little practical use. At Merelani, for example, researchers witnessed hundreds of brokers, many clearly from neighbouring Kenya, are actively buying minerals from mine workers and taking them overland to Nairobi.

- **Market power and size**

While gold markets in Tanzania are fairly stable, gem markets are quite volatile. The value of rough gems varies so widely that few participants in the market can have a clear idea of the international price a piece would bring. For all but the top gem quality material, demand for particular types of gems within Tanzania depends on periodic orders that the major dealers receive from their international buyers. Thus domestic demand is sporadic and only loosely related to international demand. Therefore, while the workings of supply and demand for commodities are understood in gold markets, participants think of gem markets in terms of variations in their personal bargaining power. Bargaining is involved in all sales, and is sometimes quite lengthy process. The market size and power of mine workers is influenced by both the type and quality of the recovered minerals, the flow of information, and the number of buyers and sellers in the mining area. In areas where there is a free flow of market information and where buyers are many, mine workers possess market power and also have a wide market for their products. In the Umba river mining area, for example, it was observed that buyers in the mining area are generally few and for certain types of minerals the market is very thin. Hence some of the miners, through middlemen or themselves, are forced to cross the border and look for markets outside the country. Mine workers in Umba valley mining area think of themselves as operating in a buyers' market with little market power.

This however, was not found to be the case in the Merelani mining area. There are thousands of both legal and illegal buyers at Merelani mining area. Even international buyers have ready access to this mining area and go there to buy stones. Unlike the Umba valley mining area, at Merelani there are several informal marketing centres within the mining area where both small and large brokers make direct contact with the mine workers. These are known as '*Vijiweni,*' which in Kiswahili designates a street corner meeting place. The market volume is substantial here, driven by a surge in supply. Prices are declining rapidly, which confuses many in the mining business. For most stones a surge in supply would be a bonanza, as international demand and therefore prices are little influenced by local production in Tanzania. For Tanzanite, however, this is the only source and the surge in production caused international prices to collapse. Therefore, despite the presence of many buyers, workers in Merelani are not experiencing what they would call a sellers' market. In contrast, the sudden gold production in Nyangotho village in Tarime has shifted the broker's market power to the mine workers, giving them a sense of market power.

- **Mine workers' preparation for the market**

Given the volatility of gem markets, participants try to adopt strategies to ensure better operation in the market. At every level participants seek knowledge about how to value stones, and a financial cushion sufficient to let them offer their stones to several buyers. This usually requires either time or travel. Mine workers lack market knowledge and equipment required to check the quality, weight and other characteristics and to assess the value of the stone. Moreover, they are usually short of cash and sometimes in debt. To a large extent, they depend on the service of the middlemen provided by other participants in the market as elaborated in other parts of this section.

Ignorance of the buyers is sometimes an important strategy for these mine workers. Neophyte buyers may be given less time to observe the stone and duped by quality and value claims. During the survey, it was noted that the majority of inexperienced diamond buyers in Maganzo and Mabuki have been the victims of such practice. The other strategy is to clean or oil their stones using various methods so as to improve the appearance of quality.

- **Mine workers' concerns**

The mine workers are not satisfied by current market arrangements. They feel that markets are located too far away. The fact that they cannot travel forces them to trade in the mining area market which offers them less profit. Some of the mine workers interviewed suggested that secondary markets must have networks near the mining areas, either by sending their agents or opening offices, so as to reduce the number of stages and corresponding middlemen through which mineral materials pass. These mine workers however recognize the role played by the brokers and small brokers, especially in the buyers' market like Umba Valley and Mabuki.

2.3.2 Claim holders

- **Classification and profile**

Claim holders are the other group of sellers at the first level of the marketing chain. Most claim holders are mature men with some capital and some standing in the community. A few earned their capital and gained experience through mining, but many come from other sectors. A few are women or young men. How actively involved they are in the operation of their mines varies greatly. Some claim holders are actively involved in the mining and marketing of their minerals while others sublet their titles to pit owners and financiers, who oversee the mining and marketing of the minerals produced and give commission to claim owners. It has been observed that instead of paying salaries to their workers, claim holders share what is produced with their workers at the end of production in such a way that they retain between 30% and 40% of the official production.

Claim holders would like to formalize their operations. Many said that the first thing they would do if they could afford it is put the workers on a salaried basis and increase security. A few claim holders with substantial working capital have been able to establish larger operations that use some modern equipment and mining methods. In international mining parlance these would be classified as small-scale mining, while the hand operated mining that is more widespread is classed as artisanal.

The general pattern of mines visited on the field trips involved the use of simple tools, and sometimes primitive techniques of mining. With shovels, picks and explosives miners dig in all directions, following hunches, indicative related mineral occurrences and actual veins. Often the resulting pits and shafts are unsafe. Multiple pits throughout an area scar the natural landscape and mercury used to refine gold compounds the environmental damage. This has especially been observed at Merelani and at the Maganzo and Mabuki diamond mining areas, and Misigiri and Nzuguni gold mining areas.

Only a few medium-sized formal mines are operating in Tanzania. All are under foreign management, although some are joint ventures with Tanzanian partners. Samax is mining graphite in Merelani, and presumably the Tanzanite that lies embedded in it, although its gem production is not known. Williamson Diamond Mine has returned to production as an Anglo American subsidiary. A few joint ventures in coloured gems also exist.

- **The role of claim holders in the marketing of mineral products**

Claim holders play an important role in the mineral market. They are the main sellers to master dealers. Some miners are also master dealers so they export their products directly without passing through brokers. These are the major suppliers to the official market. This, however, does not mean that all that is possessed by the miners is sold in the official market. The marketing route is sometimes determined by those who support their production. Claim holders who receive substantial financial assistance either from local master dealers or Kenyan or other foreign dealers are expected to sell their products to those who contribute in one way or another during production. This is the main reason that miners may sell outside the official market. When the claim holders receive financial assistance from smugglers or master dealers located outside the country, they are generally obliged to sell to the unofficial market.

In terms of market information, it was observed that these participants at least possess relevant information on the market situation, unlike the mine workers. Market information is a valuable asset which is normally exchanged at cost. Some miners assist their workers by providing them with information or a market for their stones. How closely mine owners are able to supervise their mines affects how much of the production they actually see and market. When they are lax and have no trustworthy supervisor in the mine itself, only a small amount of their real production remains for the official market.

- **Preparation for the market**

Claim holders' access to market information and ability to market their produce effectively varies widely. Miners need to cobble, clean and sort their stones by size, shape and quality. In the case of gold, they purify the ore to accepted market standards. The small-scale gem claim holders generally sell to local dealers, so their information needs and preparation of stones for market are limited. The few who are themselves dealers have to meet much stricter standards of sorting for the export market. Organized claim holders have facilities necessary for preparing their mineral products for marketing. Gold miners use mercury retorts, and gem miners gemological testing kits, and weighing tools.

- **Claim holders' costs**

The cost of claim holders can be divided into marketing and production costs. Marketing costs differ among the claim holders depending on how they handle their marketing. Claim holders who sell through brokers pay them a commission, normally 10 percent of the sale price. Those who do their own marketing have the same costs as brokers, mainly transportation and the opportunity cost of their own time. Those who commute between mining areas and market towns in any case, often maintain a home with telephone and/or office facilities in town for their mining or other businesses. They probably do better by doing their own marketing, but no one keeps adequate accounts to determine this. It may be mainly a psychological effect, as the unpredictable nature of precious minerals sales creates mistrust and a strong incentive to retain personal control.

Apart from the marketing costs, claim holders also face production costs. This again differs among the claim holders depending on the type of mining operation. Small-scale miners in alluvial areas

incur less costs than pit and shaft mining operations. Their main costs are labor, transportation and their own accommodations in mining areas, often a guest house. Again accounting systems are virtually unknown, so hard figures could be gleaned only through long, intensive survey research. The only figure commonly known is the amount of start-up capital one needs to go into a particular line of work in mining. For alluvial mine claim holders, start-up capital was estimated at about TSH.500,000. Small scale claim holders with semi-mechanized operations mining underground need substantially more. At Merelani, it was possible to get some estimates on the production costs. According to the interviews there it was noted that where the Tanzanite occurs fairly close to the surface, one could start production with a minimum of TSH10 million. In areas such as the recently opened block B where production requires a shaft mining down to about 200 m, between TSH50-100 million are required. These costs of production have implications in the marketing process. When such costs are high, they affect both the volume and price of the production. The air compressors and excavation equipment required are imported from abroad. Claim holders complain that no local dealer provides them, and no credit is available for their purchase. All informants agreed that it would be better to have shops selling mining equipment locally.

- **Claim holders' concerns**

High operating costs for mining, lack of a reliable market, and unpredictable prices are among the priority concerns of claim holders. Others are a lack of financial support from formal sources and an inappropriate tax regime, which they regard as offering little incentives for them to expand the production and marketing of their minerals.

2.3.3 Brokers

- **Classification and profile**

Many types of brokers participate in the minerals markets. Those who buy in mining areas or villages and sell in secondary market towns are considered dealers by the law. Sometimes they are using their own capital, but often they are collection agents for master dealers based in town, buying with the dealer's capital or not paying the seller until the stone is sold. They are granted a different type of license from master dealers, who are authorized to export. It is customary, however, to refer to them as brokers, and in fact the roles of one type of broker or dealer may vary from one transaction to another.

The other main type of small brokers are really commission agents, guiding sellers to buyers in exchange for a 10 percent commission from the seller. Sometimes they collect another 5-10% from the dealer, if they come by after the sale and the dealer agrees that it was a good deal. These brokers may transport the goods for the seller, but they do not actually buy the stones as they have insufficient capital. Such commission-agent brokers operate both in the mining areas and in the secondary market towns. None are licensed, as this type of work is not recognized by the law. The fact that the practice is so widespread, however, is evidence that their services are badly needed.

Licensing is very limited among dealers and brokers not involved in overseas exports, in part because current regulations were designed without taking into account how they operate. In Arusha alone, active brokers are estimated between 3,000 to 4,000, of which only 100 are licensed. The Government so far has not put into place regulations to formalize the activities of gold brokers.

Brokers can also be classified on the basis of nationality, i.e., Tanzanian and non-Tanzanian brokers. It was found during the interviews that there are many foreigners who are active in the mineral market, mainly acting as brokers. Most of these are acting for dealers who are based in their country of origin. Most of them are Kenyans. At Merelani, it is estimated that over 500 Kenyan brokers are based there. They can pass themselves off as Tanzanians, as they come from ethnic groups living on both sides of the border, namely Masai, Luo, Kamba, Taiga, and Kurya. Sometimes are known personally to be from Kenyan villages, others can be recognized by their accent. Since English is the national language in Kenya and is used in the schools, whereas in Tanzania Kiswahili plays that role, Kenyans are sometimes informally recognized by the fact that their English is better.

It is also possible to categorize brokers in terms of the size of their working capital as large, medium, and small.

(i) *Small-scale brokers*

These are small traders operating within the mining areas and mostly serving the middleman's role of linking various participants in the market. Sometimes they are hired by medium scale brokers from urban centres to act as informers or/and security personnel. Most of these have working capital ranging between TSH.10,000 and TSH. 50,000. There were about 3,000 total village brokers at Merelani trading markets. About 500 of these were foreigners, passing as Tanzanians, mostly Masai and Luo. The other important centre at which these small scale brokers are found is in town especially in areas where master dealers are found. In Arusha for example such brokers gather at the OTTU building, where many miners and dealers have offices.

There are fewer small brokers in gold compared to gemstones. In most of the gold mining areas visited, the number of small brokers ranged between 10-35 depending on the intensity of mining production. They work mainly as collection agents, buying for dealers.

(ii) *Medium and large-scale brokers*

These are typically urban based traders although some are based in the mining areas. Brokers with working capital ranging between TSH.1,000,000 and TSH.5,000,000 can be classed as medium-sized, whereas the largest brokers have over TSH.5,000,000 in working capital. During the interviews in Arusha it was noted that there are about 30 to 40 medium scale brokers at Merelani mining area. Some are foreigners, mostly Kenyans. In Shinyanga, there are about seven medium and three large scale diamond brokers while in Mwanza there are 15 large scale gold brokers.

Local brokers operate in mining areas and travel to cities (Arusha, Moshi, Tanga, Dar es Salaam, Nairobi and Mombasa) to sell their mineral collections. These medium scale brokers can control the production and supply of mineral product since some are also claim holders. They have access to the finance capital needed in the production as well as in the trade business. While some operate in the official and formal market, others concentrate on parallel market activities. These also are in a position to influence export channels of the purchased minerals as they can sell their products to official dealers or to smugglers. The decision to sell to either official master dealers or to smugglers is influenced by domestic net prices offered, financial credit facilities, the legal framework, government policy and behaviour. Legal local brokers have lower price offers compared to their counterparts, the illegal foreign brokers.

- **The role of brokers in the market**

The role of brokers in the market is mainly influenced by the categorization already given above. There are brokers who are acting as agents dealers, so they take the materials directly to the buyers who then give them money to purchase the stones or gold. In such a situation, the brokers typically provide middleman services. The other possible case is when brokers have been working for smugglers, both local and foreign. It is believed that most foreign brokers have been playing this role. They visit the mining areas, buy precious minerals at a higher price than the prevailing market price and go back to their countries with gemstones, diamonds and gold. Sellers are happy to get such brokers because in comparison to local brokers they offer better prices.

The other important role of the brokers is that they act as middlemen between the mine workers and brokers above or deal directly with master dealers. This role of middlemen is very crucial given the nature of the market. Like some other imperfect markets, the mineral market under observation is featured by middlemen who facilitate the workings of the market by helping to match the buyers and sellers. When brokers act as middlemen, they play an important role in providing the relevant information to buyers and/or sellers to execute whatever sales contracts are involved and to help guarantee that goods are of proper quality and that the buyer pays the seller promptly and fully. Normally, a seller or purchaser is expected to pay a commission to the middleman handling the transaction. During the interviews in Tanga an Arusha, it was observed that sometimes the middleman are paid 10% of the total sales, or the amount agreed upon through negotiations. The other possibility is that transaction costs in such an arrangement are taken care of through the setting of different prices at various market levels (the middleman pocket the difference). These transaction costs as well as price differences to some extent affect the final price and demand.

- **Brokers' costs**

Interviews indicated that brokers required substantial operating capital. The actual availability of capital differed depending on the brokers' collection networks and the efficiency of their commission collections. Small-scale brokers usually require between TSH.10,000-TSH.500,000 in operating funds. We found about 10 percent of the brokers interviewed operating at a middle level, with TSH.1,000,000 to TSH.5,000,000 in operating capital. A very few large scale brokers reach TSH.10,000,000 and above in operating capital. These large scale brokers are mostly those acting as agents of master dealers located in either Arusha or Nairobi.

Brokers try to minimize their expenses in order to devote nearly all of their funds to purchases. Very few have personal vehicles. They generally travel by bus for long distances and bicycle taxi or foot in and around the mining areas. When they go to Nairobi, unless they are based in Nairobi or the dealer pays their hotel room they will try to conduct their business in a single day and return. Brokers consider it a big advantage that they can sell all of their goods in Nairobi, be paid in cash and return to Tanzania in a single day. Tanzanian dealers, being themselves undercapitalized, will often ask brokers to wait for payment–anywhere from a few hours to several months. In Arusha, brokers tolerate this to a certain extent, because many have someone with whom they can stay. Many brokers will not trade in Dar es Salaam, however, because they encounter the same delays in both selling all of their material and getting paid for it. It is too costly to stay there, and too costly to go back and forth.

Transportation costs are a major marketing expense at every level, although they vary according to the means of transport chosen by the operator. Brokers who were interviewed in the Umbo mining area for example indicated that those who move to Kenya market were estimating the cost of hiring a bicycle which they normally use in the *"panya"* route, at between TSH.2,000- TSH.3,000. From Merelani, on the other hand, brokers spend about TSH.1,000 - TSH.1,500 to take a bus from Merelani to Arusha town. When the brokers reach Arusha they incur additional transportation costs by hiring a taxi to get around town. They explained this as a means to escape police harassment and extortion. They would walk if they could do so safely. In Tarime, it was revealed that it costs TSH.1,400 for a broker to cross the border to the Kenya market. To the market at Isibani in Tanzania, the same trip from Mwanza costs about TSH.20,000.

License fees are not an insurmountable cost in themselves, but the conditions imposed by the licenses make it impossible to do business profitably. Brokers, for example, are required to pay a minimum of TSH.10,000 per month as license fees. When they try to obtain the license, however, they are assessed arbitrarily estimated business taxes and obliged to meet other requirements, such as group inspections of their premises, that expose them to extortion. The licenses are good only in one region, whereas the work nearly always requires them to operate in more than one region. The license is valid only six months, which means time consuming travel and delays have to be confronted regularly. It has to be obtained in Dar es Salaam, far from the mining areas, where transport and accommodations are extraordinarily expensive.

- **Preparation for the market**

Valuation, cropping, cleaning and sorting are operations brokers perform in addition to their work buying and selling. Brokers are ill equipped to take a scientific approach to valuation. Many have small scales, but few have fibrelights that would let them detect inclusions and flaws in the gems. None of the brokers, and only a few of the master dealers, have had formal gemological training. They try to judge clarity and colour with the naked eye. The Masai brokers have at Merelani have a unique cooperative system of brokering, and 5 to 20 members of the cooperative buying group will each examine the stone before the group comes up with an agreed upon quality and price.

Some gem brokers clean their stones using water or other solvent materials which they think will improve the appearance of their products. They also sort the products by size and quality if they are able. Many Arusha dealers will buy only gem quality stones, so the second quality material has to go to Nairobi. But often the broker will get a better overall price by combining the 1st and 2nd quality goods in a single package. He has to know his buyer's requirements. grading them quality wise.

Preparation of gold for market involves purification. Large scale gold brokers seek the assistance of a gold smith in improving purity to above 95%. There are complaints however that dealers do come up with different standards in terms of weight and quality when they use their scientific equipment. The brokers interviewed feared that sometimes they got cheated by the dealers.

- **Brokers' concerns**

Brokers are faced with a number of problems which increase the transaction costs of doing business, and limit their ability to grow. Licensed brokers, for example, are not comfortable with the procedures for acquiring a license and the operating conditions imposed upon them. Brokers find it very difficult to make a license follow-up in Dar es Salaam while their operations are based far away. During the

process they waste a lot of money and time. They would thus like to have these licenses issued in their areas of operation or at least at regional headquarters. The other concern of licensed brokers is the condition that they should operate within a specified area. Mining production is highly variable, and they need the flexibility to move from an area where production is declining or the market is saturated to areas where production is good.

The other concern of brokers is security, and in particular government failure to protect their business. They see no value in having a business license, because unlicensed operators are not penalized by authorities. In fact, by trying to get a license they increase their exposure to arbitrariness and harassment by officials, sometimes to theft or extortion by the authorities.

Brokers are also faced with the problem of lack of credit facilities. According to most of the brokers interviewed, the lack of working capital seriously limits their operations. Tanzanian brokers complain that foreign brokers are well financed and they can offer higher prices to the sellers, and are hence in a better position to buy more good quality materials. Gold and diamond brokers have complaints that they fail to formalize their activities due to an inappropriate tax system and cumbersome licensing procedures.

2.3.4 Master Dealers

- **Classification and profile**

Master dealers can be categorized according to their mode of operation. Some operate individually, and among these, operating regulations distinguish between foreign nationals and Tanzanians. Others operate on a joint venture basis, usually involving local and foreign partners. Over 50% of the dealers are registered as joint ventures.

One can also classify dealers based on whether they participate in mineral production or not. There are some dealers who are also miners themselves so that they also participate in production. It is also possible to classify the dealers according to whether they finance mining activities or not. There are master dealers who actively finance miners so they have a direct link to certain production pits.

Lastly, master dealers can be categorized according to the size of their operations. There are six large master gem dealers who have been in business for a long time and are well known in both domestic and export markets. There are several dozen small-scale master dealers, who are sometimes newcomers in the mineral business. Some are only occasionally active.

- **The role of master dealers in the market**

Master dealers have a key role in the mineral market because they are the major formal buyers in the local market and sellers in the foreign market. They buy from different levels of the domestic market, usually from brokers or claim holders, but sometimes even from mine workers directly. Nearly all of the artisanal production that passes through the official channels is handled by these dealers. Another role played by master dealers in the market, therefore, is that they are the main source of revenue collected in this sector in the form of tax. Formal mines have negotiated tax exemptions, and goods that go directly to visiting international buyers or Kenyan dealers escape taxation.

As sellers, master dealers mainly sell to the export market, a market to which they gain access in various ways. They may sell through foreign buyers who visit their offices, or during gem shows, both local and international, or by sending a parcel directly to the export market. Sometimes they personally travel to these external markets.

Through the exportation of minerals, dealers connect the domestic mineral market to the world market. At this stage, dealers are faced with a different situation. Firstly, not all dealers can operate comfortably in this market. Many dealers lack sufficient market information to operate effectively. They may be taken advantage of by foreign buyers. Others have more experience and contacts, inspire more trust, have more business acumen, and invest in the necessary market information and skills development. These are generally doing well in the market, although everyone occasionally reported setbacks such as thefts, failure to collect payments, trading at a loss and or being unable to find a buyer for certain goods.

- **Master dealers' concerns**

Master dealers complain that almost all of the tax burden in the sector falls on them. While the sector seem to have a lot of people who are very active in various stages of production and marketing, the majority do not pay tax. The only option for the master dealers is to shift at least part of the burden by reducing the prices they pay when buying. This in turn has an effect on the overall market. It discourages those who sell to dealers and makes them look for better prices somewhere else, especially in the unofficial market. The master dealers interviewed in Arusha were complaining about this heavy burden of tax they carry on behalf of the other participants in the sector. They all see this burden as very detrimental to the mineral market, because those who smuggle get higher benefits compared to those who pass the official channels. The other problem is that neighboring countries have either lower tax rates or no tax, which creates a competitive disadvantage for those trading legally in Tanzania. Lack of financial services and cumbersome export procedures are also among the concerns of master dealers.

- **Master dealers' costs**

Master dealers incur substantial operating costs, unlike brokers. These are simulated in the economic analysis below. The main ones are the costs of maintaining vehicles, a staff, an office, and traveling and telephoning regularly overseas.

- **Market power and market size for the master dealers**

Price determination as far as these master dealers are concerned depends on whether a dealer is buying or selling. In the first case as a buyer, a dealer will be in a domestic market buying from brokers and miners. At this level, master dealers in Arusha, for example, possess power in the market vis-a-vis brokers. Their main advantages are market information, for they have a large stock of information on both local and foreign markets, in contrast to other participants in the market. They have more ability to judge the quality of stones. Sellers often have to trust their judgment. Another factor is that they are better capitalized, and so have more staying power. The type and quality of the minerals traded also affects the power that a master dealer has in both local and foreign markets especially in the case of diamonds or other unique and high quality minerals. Gold dealers, on the

other hand, are disadvantaged in the sense that their ability to influence the market price is insignificant. Hence, they see themselves as having less market power.

Master dealers selling gems in international markets are weak compared to their situation as buyers in the domestic market. The stock of knowledge that these master dealers have on the export market differs substantially. A few are very knowledgeable and well connected, but most have very limited information on the export market. To a large extent, the export market for various types of minerals is a buyers' market and local master dealers have less influence in determining prices. This is true even for Tanzanite, over which Tanzania could theoretically have a monopsony market. This can partly be explained by the fact that there are many other sources of supply to these export markets due to smuggling.

2.4 Factors influencing price of gold and gemstone

As the world's coloured gem markets are fairly open, prices fluctuate with variations in supply and demand. The same is less true of gold and precious gems (diamond and Alexandrites), where cartels have sought with some success to maintain a market share large enough to stabilize prices. Coloured gem prices fluctuate more immediately with changes in supply and demand. For certain coloured gems, one can see the effect of surges in supply at each level, with a major new strike having repercussions at the mine level and other successive higher levels. Similarly on the demand side, rising or declining world prices and the demand for certain goods, mainly Tanzanites, are reflected down the market chain. When demand is high the dealers receive orders from their buyers, pass them on to their orders to brokers, and on down to the mine level. When orders are off, mining may even stop, only to resume when a new order comes in for that type of stone. This reflects the lack of capital for mining operations. It also shows that artisanal mining is far more flexible than formal capital-intensive mining, where production and marketing need to be continuous to amortize the equipment.

In a mining area when a rich lode of gems is struck, prices rise in the beginning when the first few brokers to arrive create competition. If supply continues strong, prices decline rapidly as the market responds to the glut. Continuing strong surges in supply have affected gem prices in regional market towns and even on international markets. Two major surges in gem supply took place in the last five years. Both first led to price rises, then to price declines. The first surge came with the discovery in 1992, of rich and diverse alluvial gem deposits in the Ruvumu River basin around Tunduru in southern Tanzania. The mine rush that followed attracted international attention and drew dealers from all over the world. The response was perhaps particularly rapid because this came at a time when world gem market news was just beginning to be broadcast over the Internet, as well as through traditional dealers' telephone and fax network. Soon dealers were taking charter planes and making regular weekly flights into what had previously been quite an isolated area.

In the first volatile years, local miners did not know the difference in value between alexandrite, which is quite rare in the world market, and the more common garnet, ruby, sapphire and other semi-precious stones they were finding. A single good alexandrite bought for a few thousand Tanzanian shillings could fetch US$50,000 in Asian markets. Until the Tunduru discoveries, Sri Lanka had been the major world source of alexandrite. Sri Lankan dealers, some of whom had been stocking alexandrite to maintain its high value, were concerned to see this new supply flooding Thai and Japanese markets. They estimate that current prices for alexandrite are 40% below those in effect before the Tunduru discoveries. Meanwhile, miners and brokers in Tunduru learnt to recognize alexandrite and raised their prices. Margins between buying and selling prices are therefore narrower now throughout the

marketing chain. Sapphire prices also have declined in the world markets, but Tanzanian production has been only one of several new sapphire areas to come into production.

A similar surge in Tanzanite production has contributed to a depression in that market, both locally and in the world market. Tanzanite is produced in only one known area in the world, a few square miles near the mining town of Merelani (also spelt Mirerani). The parastatal Tanzania Gemstone Industries, based in Moshi, had mined it until the early 1990s. Then the mining area was divided into four large blocks, A, B, C and D. Block D was allocated, in plots 200 x 200 meters, to small-scale miners in 1993. It quickly began attracting world attention for its high quality stones, leading initially to a strong demand and rising world prices.

This led to pressure from thousands of miners who had not received plots in the first distribution. Block B was then allocated in October 1995 in much smaller plots, 50 meters by 50 meters. The production surge from Block B in 1996 occurred at a time when all trading was suspended in Tanzania in order to reorganize and issue new regulations, from January through March 1996. The entire production therefore went to Nairobi. There a glut quickly developed and dealers panicked after a short while, fearing that oversupply would cause the top quality stones that they had previously stocked to lose value. They began off-loading stock in Thailand and the US. This led to a worldwide market crash in 1996. Prices declined to half or less their previous year's value in some cases. Top quality colour A 1 gram stones are now selling for US$130-150/gram in the USA. Margins are minimal in Tanzania, Nairobi, Bangkok, the US and Idar Oberstein in Germany. The world markets seem to remain depressed for Tanzanite, but there are occasional signs that growing demand is picking up the slack. The Tucson Gem Show in the first week of February each year is the world-recognized indicator of market trends. A consultant to this study attended the show to gather market data on Tanzanite and other Tanzanian gems. He reports the following trends in with regard to Tanzanite.

TABLE I
Prices Paid at Tucson Gem Show for 1 Carat Tanzanite

	Good	Fine
1991	$120 - $180/carat	$180 - $240/carat
1992	$120 - $180/carat	$180 - $240/carat
1993	$60 - $100/carat	$100 - $160/carat
1994	$60 - $115/carat	$115 - $185/carat
1995	$60 - $120/carat	$120 - $210/carat
1996	$65 - $125/carat	$125 - $220/carat

Excerpted from Jeweler's Circular Keystone

- **Demand**

New supplies of rubies, sapphires, emeralds, tourmalines and garnets from Tanzania have emerged at a time when the demand for low-cost, semi-precious stones for the mass market in North America was expanding rapidly. TV and mail marketing has extended the "real gemstone" market to within the reach of middle-class household budgets, and demand is growing steadily. In Asia, mass production of calibrated cut stones reduced the final costs of jewelry, as did mass production of gold and silver castings. These international market trends favour the continued profitability of marketing Tanzanian

gemstones, even though there is strong competition from different types of gemstones coming from Burma, Brazil, Thailand, Madagascar and other emerging gem mining areas.

The move to mass production, on the other hand, reduces the margins on both cut stones and jewelry, making it harder for smaller producers such as Tanzania to enter the cutting and jewelry production markets.

The world retail market for semi-precious gems has been growing steadily in volume. Price margins, however, have gotten narrower, so the increase in value is less marked. Fashion trends also cause different coloured stones to be in demand from year to year. In 1995, for example, preference for the traditionally popular gemstones such as rubies, sapphires and emeralds declined in favour of citrus-coloured garnet, peridot and other semi-precious stones. Seeing that prices for rubies were declining, while supply was increasing, the International Coloured Gem Association mounted a publicity campaign to promote rubies in 1996. It met with some success in increasing demand, and it will be interesting to see whether demand continues to grow in the aftermath.

Market knowledge and current information greatly influence the ability of participants in the market to profit or lose from their operations. Access to information varies greatly, depending on which level of the market a participant works. The stock of information available in the market has been also influenced by the mechanism through which information flows and the cost of acquiring relevant information. *In the mineral market, participants who take initiatives to invest in information have been found to have greater advantage in terms of market power and even in determining the price.*

Many master dealers who were visited, for example, were found to spend significant amounts of money in telecommunication services such as telex, faxes, telephones, publications and other information services. Traveling abroad and attending shows is another way of acquiring information and again some participants are ready to incur costs for or attending such shows making visits. During the field work the team observed that participants who lack access to telephone communications are weak actors in the market. They cannot acquire information directly and either have to depend on other participants' decisions or act on their own and risk losing in the market.

The quality of the material produced strongly affects the price, as shown in Table 1 above. Top quality stones command prices many times the value of the same stone of lesser quality. Low quality materials sell poorly, or, often in Tanzania not at all. At present, forces of demand and supply lead to radical swings in gem values.

3.0 SECONDARY ECONOMIC ACTIVITIES IN MINING COMMUNITIES

Artisanal mining creates new communities. Some are transient camps that last only as long as the local lode. Others mature into towns, some of which have better infrastructure than the original communities onto which they are grafted. On existing local farming communities, the first economic effect of such a new settlement is usually increased demand for food and other goods and services. Local farmers benefit briefly, but often the population grows more rapidly than the local food supply. The result is localized inflation in the prices of food and other basic services. The aged and other non-producing families in nearby communities suffer particularly from this inflation, as it exacerbates their poverty.

The communities visited during the fieldwork, however, had all matured into relatively well-functioning towns. Many secondary economic activities were taking place in them. They include the following:

- businesses like restaurants, bars, guest houses, groceries, butchers, beverages, retail and wholesale shops, and street food vending;
- supplies of mining equipment, fuel and transport service;
- barbering and beauty salons, laundries, and
- dispensaries, nursery schools and other social services.

The owners of these services are mainly members of the mining community. The capital required to establish these activities in mining areas was found to have been obtained from mining activities. The owners interviewed indicated that they had built up some capital while mining or trading minerals, and invested in a business to have a more stable income. In the Umba mining area, for example, people said that when production in mining is high, retail shops at Kalalani are closed because shop keepers all leave for Kenya to market their stones.

Women participate in most of these activities and sometimes are assisted by their children. Men participate when they are down on their luck in the mines, and they are trying to raise some funds to tide them over until they can resume mining or trading. In Matinje gold mining areas near Dodoma, some mine workers farm during the peak agricultural season, either on their own farms or as labourers on neighboring farms. This was also found to be the case at Mabuki (in Mwanza) and Maganzo diamond areas (in Shinyanga).

Lack infrastructure was mentioned by participants in various economic activities in mining areas as the major problem facing them. Roads, for example are in terrible conditions of disrepair and during rain seasons are sometimes impassable, which makes such economic activities extremely difficult to undertake in these mining areas. Electricity is not available except for the rare owners of diesel generators. Telephones are unknown in most mining areas, so dealers travel with expensive radiophones. Even Arusha, the main gem-trading and tourist center, is very poorly served. There is a long waiting list for telephones, and those who have telephones find access to Dar es Salaam or elsewhere in Tanzania quite difficult. International access is better, but extraordinarily costly.

Mining areas also lack police stations and other security services. This is considered to be a major drawback in developing businesses in the mining areas. In Merelani for example traders said that it is risky to do business as there is not a single police post in town. Thug attacks pose a threat.

Health and education services are also inadequate in the mining areas. It is important for the government to improve such infrastructure and services, or let private companies do so, as this is the key to healthy and sustainable artisanal mining sector development.

3.1 The Impact of Various Economic Activities in Mining Areas

As mining communities grow they create a demand for goods and services. New businesses are founded, and the availability of goods and services in turn encourages more people to settle in the town. Master dealers, for example, appeared to have offices only where the infrastructure was fairly good. In Merelani, a mining settlement of about 30,000 people with a full range of goods and some services, one dealer and several large brokers have established offices there, even though Arusha is less than an hour away. Most dealers consider it safer and more practical to do business from Arusha, where housing, telecommunications and other services are better. In the Kenya-border towns of Tarime and Nyamongo several brokers have permanent offices at the general market place where other commodities are sold.

The mining communities and their farming neighbors, however, continue to suffer from the effects of mining-induced inflation. Prices of many items sold in the mining areas are higher than in other areas of the country. The price of a bottle of Coca Cola can be TSH.1,000, which is 500% higher than the normal price of TSH.200. The result of this is that service providers make money, but those who live in or near mining areas without benefitting from mining are driven into poverty.

In some mining areas the land is not suitable for agriculture. Areas like Kalalani, Daluni in Tanga, for example, are dry and cannot support significant agricultural activities, so people in these areas have to buy most foodstuffs. These areas are particularly affected by mining-related impoverishment and food shortages.

Another striking feature of economic activities found in the mining areas is that they are not covered by the tax system. Both mining itself and the secondary economic activities in mining communities constitute a potential tax base that is currently untouched. Dealers consider this unfair, as they are the only link in the mine to market chain affected by taxation. Studies of best practices in taxation, however, require analysis of the relative costs and benefits of administering taxation at the grass roots level and usually recommend that national taxes be collected at a single point in the chain. Local taxation and services seemed much more appropriate in the communities visited. Tanzania is currently embarking on a comprehensive tax reform that will afford an opportunity to study this question further. It is beyond the scope of this study.

Some illustrative income data was collected during the field work to create a more complete picture of the economic context in which mining markets function. The national household budget survey will be analyzed in a subsequent phase of this study to see whether it is detailed enough to justify further analysis. The table below gives sample income estimates from secondary economic activities in Merelani. The first activity is tailoring. This is common at Merelani and at the tailoring mart visited, two operators were found. According to them, they earn enough to live at Merelani. They report that

TABLE 2: INCOMES IN NON-MINING ACTIVITIES IN MERELANI[3]

No.	Type of Economic Activity	Initial Capital (TSH.)	Costs of Production (TSH)	Profit/Net Income (TSH. per/month)
1.	Tailoring Mart (Two operators)	400,000.00	Rent 29,000.00 per month	180,000.00 ($300)
2.	Bar	N.A	60,000.00 per month	120,000.00 ($200)
3.	Wholesale Shop (selling foodstuffs, bicycles, vehicle spares, etc.)	1,000,000.00	N.A	150,000.00 ($250)
4.	Carpentry	50,000.00	N.A	25,000.00 ($83)
5.	Shoe Shiner	10,000.00	15,000.00	60,000.00 ($100)
6.	Charcoal Selling (4 operators)	130,000.00	Transport 45,000.00 for 100 bags Tax 12,000.00 for 30 bags Rent 2,100.00	483,600.00 ($806 total; $201.50 each)
7.	Selling Second Hand Clothes	50,000.00	N.A	70,000.00 ($117)
8.	Retailer	200,000.00	Transport 20,000.00	80,000.00 ($133)
9.	Nursery School Teacher	N.A	N.A	90,000.00 ($150)
10.	Food Vendor		Transport 6,000.00	50,000.00 ($83)
11.	Hair Cutter (Employed)	N.A	N.A	40,000.00 ($67)

Source: Field Survey (1996).

Note: An exchange rate of TSH.600 US$ 1 has been the average from 1995 through the present (February 1997).

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3. Merelani is a mining town of about 30,000 people that has sprung up next to the Tanzanite mines outside Arusha.

their business is seasonal. There are times when they take in up to TSH. 50,000 per week. Peak times are during the holidays and when mineral production is good. Their major concern is lack of security in the area, which threatens the safety of their property.

Bar operating is another business which is common at Merelani. According to the barman interviewed, the market fluctuates highly depending on the production of minerals. Currently, he sells a minimum of two to three crates of beer each day. The main problem with his business is transport, especially during rainy seasons.

Two wholesalers have set up at Merelani. One of the wholesale shopkeepers interviewed expressed concern that business at Merelani is difficult as most of the retail shopkeepers prefer to buy from Arusha and Moshi.

Carpentry is another economic activity taking place at Merelani. The carpenter interviewed, however, was not very successful due to problems of securing wood and other supplies. Demand is also a problem because many people who come to Merelani, stay for short period and then leave. Only a few people settle permanently and think of buying furniture at Merelani.

Shoe shining is an activity requiring small capital but yielding high income. There is a big market for this business because there are many people coming into Merelani town everyday and they require this service. Most of these shoe shiners also act as brokers and their places of work are sometimes used as a mineral market, so information regarding the market can be exchanged there.

Another economic activity found at Merelani was charcoal selling, which appears to be a profitable business due to the high demand for charcoal in the town. Second hand clothes (*Mitumba*) are also sold at Merelani. Retail shops, nursery schools and food vending are among the other economic activities found there. Efforts to ensure better climate for mining sector operations should also include ensuring a conducive environment for the operation of other economic activities that provide services to mining operators.

Matinje, like Merelani, is well developed in terms of secondary economic activities. The area is estimated to have 20 big retail shops, and is surrounded by good cultivatable land. Most people in the mining community engaged also in farming part time. Mine workers who are out of work in the mines will work as farm labourers. They are paid a minimum of TSH.2,000 for working in one hectare. Some of the farms are owned by claim holders and when there is a fall in production or mining activities or when it is farming season, they attend to their farms.

The main concern of participants interviewed in these economic activities was the lack of transport facilities. Some entrepreneurs bought bicycles to create a taxi service. They provided transport and charged TSH.2,000 ($1.67) per trip.

TABLE 3: ECONOMIC ACTIVITIES AT MATINJE GOLD MINING AREA

No.	Type of Economic Activity	Production Costs (Monthly)	Profit/Income (TSH. Per Month)
1	Retail shop	120,000	150,000 ($250)
2	Transport (Bicycle)	N.A	60,000 ($100)
3	Grocery	60,000	100,000 ($167)
4	Tailor	15,000	40,000 ($67)
5	Bar	750,000	150,000 ($250)
6	Bar	1125,000	225,000 ($375)
7	Retail shop (also selling bicycle spare parts)	150,000	300,000 ($500)
8	Farming (36 ha of maize)	200,000	394,000 based on (estimates of 15 bags per ha.)
9	Bicycle repairing	50,000	300,000 ($500)
10	Clothes shop	100,000	200,000 ($333)
12	Hotel	80,000	100,000 ($167)

4.0. ECONOMIC EVALUATION OF THE GEM AND GOLD TRADES

4.1. Economic Analysis

4.1.1 Methods Used

To estimate the importance of the trade in the Tanzanian economy, we looked at all three ways of calculating gross domestic product (GDP). GDP can be calculated as follows:

1. as the value of final goods and services produced in the economy during a given time period, or
2. as the sum of value-added in the economy during a given period (where value-added by a particular firm is equal to the value of revenue from sales minus the cost of intermediate goods), or
3. as the sum of all incomes in the economy during a given period (usually wage income, profits and direct and indirect taxes).

In theory, all three methods should give the same answer. The price paid for final goods is income to others in the economy and so whether we look at the revenue side of the equation or the income side, we should get the same answer. The value-added approach to calculating GDP is simply a more detailed way of accounting for the final price of the good at each stage of production. It is particularly useful in countries where all businesses must keep detailed accounts and disclose them annually. In Tanzania, as in most developing countries, none of these national statistical calculations is even moderately accurate, because the necessary records are not kept at the household and firm levels. It is not surprising, therefore, that the estimates of the importance of precious minerals done here by all three methods yield quite different results. (The three methods, the equations used and how they were applied are described in detail in Annex 3)

4.1.2. Results

The preliminary estimates of the value of precious minerals production and trading from artisanal mining show that Tanzania's macroeconomic picture has been distorted by lack of statistics on this trade. Several macroeconomic indicators have been undervalued in official statistics, namely exports, foreign exchange earnings, GDP and middle-income employment. The real economic picture in Tanzania is considerably healthier than the official one, largely due to this invisible trade.

4.1.2.1. Final Goods Method based on Mining Production and Exports

Official production statistics show rapid but erratic growth in the last decade. They need to be analyzed together with export figures, as the production figures are estimated mainly from export activity. In fact, nearly all gold, and saleable diamonds and colored gems are exported, but the figures for officially declared exports capture only a small portion of the real exports.

Table 4. Production and Exports of Precious Minerals, by weight, 1989-1996[4]

Mineral	1989	1990	1991	1992	1993	1994	1995
Coloured Gemstones (Kg. Produced)	24,621	32,292	59,625	26,676	32,979	48,507	94,296
Coloured Gemstones (Kg. Exported)	11,389	38,700	59,625	48,938	32,979	48,507	111,404
Gold (Kg. Produced)	112 BOT	1,643 BOT	3,779 BOT	4,525 BOT	3,370 BOT	2,861 BOT	320
Gold (Kg. Exported)	112	1,643	3,779	4,525	3,364	2,803	320
Diamonds (Carats produced)	75,885	84,598	99,762	67,304	40,847	17,177	49,538
Diamonds (Carats, Rough exported)	NA	75,979	90,892	70,706	39,885	22,567	44,492
Diamonds (Carats, Cut exported)	10,276	7,947	3,214	NA	NA	87	NA
Diamonds (Carats, Contract sales)	NA	NA	648,139	8,918	73,674	1,703	NA

Source: Ministry of Energy and Minerals.

Table 5. Declared Value of Precious Minerals Exports, 1989-1996 (in '000 US$)

Mineral	1989	1990	1991	1992	1993	1994	1995
Coloured Gems	784.06	1,584.87	1,759.19	3,236.70	3,914.76	6,464.85	7,279.93
Gold	1,152.06	13,635.06	29,099.70	40,380.00	31,450.80	25,679.40	3,268.80
Diamonds (rough)	9,752.72	7,393.46	10,030.16	8,300.50	5,265.19	2,898.38	4,341.31
Diamonds (cut)	4,461.75	2,648.22	1,303.25	1,720.00	2,450.00	1,820.00	
Diamonds (contract sales)			610.94	107.01	93.00	320.00	

[4]Source: Ministry of Energy and Minerals.

Official gold exports expanded rapidly during the period when the Bank of Tanzania was purchasing it at world market prices, then dropped off sharply after purchases stopped. In the last six months of 1996 there were no official gold exports through Tanzania.

Diamond sales fluctuated sharply and shifted between rough, cut and contract sales over the years. Coloured gemstones sales grew rapidly from the moment of liberalization, particularly since the discovery of the extraordinarily rich alluvial deposits in the Songea and Tunduru areas in the 1990s.

The total declared value of official exports of these three commodities were valued at US$ 14.89 million in 1995. The declared value peaked earlier at US$ 51,917.2 million in 1992 at the height of the Bank of Tanzania's gold buying experience. The 1993 value, $US 40,630.76 million, amounts to 1.7 percent of GDP that year, and 9.7 percent of exports (fob, on a customs basis). In comparison, the total industrial sector accounted for only 14.4 percent of GDP and manufacturing for 4.87 percent.

Interviewees estimated that in 1996, 60 percent of saleable gem material and 70-85 percent of the gold was exported through unofficial channels, either through neighboring countries or directly from Tanzania, by concealment or under invoicing. (ESRF/Tan Discovery fieldwork and Tan Discovery, 1996) The present study found that by the end of 1996, no gold was going through official channels, and an estimated 95 percent of it was going through Kenya. Official gold exports had dropped from 4,525 kg in 1992 to a mere 320 kg in 1995, as only a few legal buyers remained in activity.

Increasingly stringent and variable tax levies have driven most of the remaining buyers out of legal business. The trade quickly shifted in the direction of Nairobi in any case when the dominant legal market suddenly shut down. Closing off the market also depresses production, as artisanal mining is financed by sales.

What is the total value of gold sales? In the absence of any reliable production or sales data, one must make some inferences from existing official statistics.[5] Sparse, but interesting data on regional markets also helps to gauge the scale of mining revenues. The one period when a fairly large portion of gold sales went through official channels was from 1990 through 1994 when the Bank of Tanzania was buying. Estimates of what portion of the total it succeeded in attracting, however, vary from roughly 20 to over 100 percent. It could have exceeded total Tanzanian production, as gold from Eastern Zaire was and is known to pass through neighboring countries, including Tanzania. A conservative

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[5]Most previous studies have not attempted to estimate the total value of informal sector artisanal mining and marketing in the context of the national economy. The exception is the Vethouse study (p.6). It gives an estimate of gold exports averaging 3.2 T per year for the period 1990-1995, valued at US$ 40 million annually. On the same page, it estimates that 1200 claim holders, employing an average of 20 miners paid an average of $500 per month generate US$ 144 million per year, more than three times official export figures. A third calculation, assuming 200,000 miners earning $10,000 per year each, gives a total value of US$ 2,000 million. Both of the latter estimates are faulty, as mine workers are generally not paid salaries, but rather share production. Many claims are idle, and many mine workers work only part of the year. Moreover, their earnings may be seriously overestimated at $500 per month.

assumption would be that Tanzanian gold exports, legal and illegal, since 1995 have been less than their peak level of 4.5 T.

A **low estimate of 3 T/yr** since 1995 would be based on the following assumptions:

(1) The Bank of Tanzania was attracting nearly all Tanzanian gold exports in its peak year plus some from neighbouring Maniema province of Zaire. (Burundi, for example, was legally exporting 11-14 T of gold per year in the late 1980s and early 1990s, mostly reported to be from Zaire, some also from Tanzania.)
(2) Lack of regular revenues from gold buying has hampered mining operations and reduced total production below 1992 levels.

A **high estimate of 20 T/yr** would be based on the hypothesis that the illegal trade predominated even during the period of the official buying program. Officials in the Ministry of Energy and Minerals and others knowledgeable on Tanzanian mining believe that the Bank of Tanzania attracted only one fourth to one fifth of Tanzania's total gold exports, even in its peak year. Although production shifts from site to site, their informal tallying of production figures they claim is consistent with the high estimate. Holding constant the influence of Zairean gold, they therefore estimate total artisanal production at 20 T per year. This estimate assumes that production did **not** decline after official sales stopped in Tanzania, as the market through Kenya remained reliable. In the second phase of the study the team proposes to calculate the relationship between gold yields and mercury consumption, as mercury is mainly used in the initial refining of gold by artisanal miners. Mercury import statistics will be collected for recent years.[6] This may help to close the gap between low and high estimates of gold production.

Coloured gem production, on the other hand, has experienced an extraordinary boom from 1989 through the present. By 1995 official exports had multiplied tenfold in relation to their 1989 levels. If unofficial exports account for 60 percent of the total as our fieldwork indicated, their value in 1995 would have been an additional US$ 10,920 million, bringing the total value of coloured gemstone exports to US$ 18,850 million, even before allowance for under invoicing.

Summary: Value of Gold and Gemstones Exported from Tanzania in 1995

By the above estimates, the total export value of gold, diamonds and coloured gemstones produced in Tanzania in 1995 were as follows:

Low estimate:

- US$ 33.33 m (gold);
- US$ 20.02 m (gems) and
- US$ 11.94 m (rough diamonds),
- for a total of US$ 65.29 million.

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[6]The Vethouse study estimated that about 3T of mercury are consumed in Tanzania per year (no source cited), with about 500 kilos each year going into gold refining in the Lake Zone alone (source: Madini zonal office).

Even this low estimate would make precious minerals Tanzania's fourth most valuable export, after coffee (1994/95 US$ 150.4 m), cotton (1994/95 US$ 105.12 m), and manufactured goods (1994/95 US$ 87.0 m). If all exported through Tanzania they would increase the total value of exports by 10 percent, and constitute 9 percent of the resulting total exports by value. Under present circumstances, where most are smuggled out before final export, they nevertheless contribute $53.5 million to total real exports (see calculations below), adding 7.2 percent to official exports and comprising 8.1 percent of the total.

High estimate:

- US$ 224.4 m (gold),
- US$ 47.32 m (gems) and
- US$ 28.22 m (rough diamonds),
- for a total of US$ 299.9 m/yr.

This assumes 20 T of gold exported per year. For gems it assumes that 80 percent, rather than 60 percent is smuggled, and that there is an average of 30 percent underpricing on declared values. For diamonds the field work has not yet permitted the team to study invoicing practices, so it was assumed to be comparable to the distortions experienced by coloured gems. It will be revised in the second draft. At the high estimate, precious minerals would constitute 42 percent of the substantially increased total export figure.

4.1.2.2. Value-Added from Mine to Market Trade; Impact of Smuggling

The goal of the field work for this study was to understand the economic, policy and geographic factors operating at each level in the marketing chain. In this section we use the value-added approach to evaluate the contribution of minerals trading and the effect of smuggling at different levels in the chain to GDP. Total value-added from each firm and organization in the Tanzanian economy equals GDP at factor cost and current prices, which the Bank of Tanzania estimated at TSH 2,196.324 billion in 1995. In US dollars that came to $3,786.77 million, of which minerals exports comprised 1.7 percent (low estimate above) to 7.3 percent (high estimate above).

The valued-added approach to calculating GDP gives a more precise picture of the effects of smuggling, as a certain portion of the produce is diverted at several different levels in the marketing chain. Analysis of price markups at each stage in the marketing chain shows what proportion of the added value is generated at each level. Prices of gemstones from Northern Tanzania at the mine, for example, averaged 8-28 percent of the dealers' purchase prices in Arusha and Nairobi. This means that, from mine to export level, 73-92 percent of the value added contributed to GDP is generated by trading. In gold the margin is smaller, with the mine price equivalent to US$ 9.17 per gram being 83.36 percent of the sale price of US$ 11 per gram(Late 1996, Nairobi). Only 16.64 percent of value-added is generated by trading between the mine and the export market, while the mine price reflects the reserve value plus the value-added contributed by mining and initial purification.

Table 6. Value-Added in the Gold Marketing Chain, Tanzania and Kenya

Level	Tanzania Price (US$/g)	Tanzania Volume	Tanzania VA US$/g	Kenya Price (US$/g)	Kenya Volume	Kenya VA US$/g
Mine broker	7.50	100.00%	7.50	7.50	0.00%	0.00
Broker	8.67	95.00%	1.11	8.67	5.00%	0.06
Dealer	11.00	5.00%	0.12	11.00	95.00%	2.22
Export	11.38	5.00%	0.02	11.38	95.00%	0.36
			8.74			2.63
			76.86%			23.14%

Trading margins tend to be higher and markets more volatile for gems than for gold because of the relative difficulty of valuing gems. There is also more volatility in new mining areas and with new commodities than with established gem markets. Some extraordinary margins are recorded for the highest value stones from Tunduru area, for example. This is typical of new markets where market information is poor, but the situation cannot be expected to last long. Gradually miners, brokers and dealers all have a better idea of the value of their holdings and margins tend to become smaller and more reliable.

Tanzanite prices are therefore a better gauge of gems contribution to GDP over the medium and long term, as the market is better developed and margins more predictable. In May 1996 a top quality 1.0 gram round stone, colour A with no inclusions fetched TSH 25,000 for the miner at Mbuguni, TSH 40,000 for the mine broker at Mbuguni, TSH 48,000 for the second broker at Arusha and 60,000 for the dealer/ exporter. In this case 42 percent of the domestic value added, for GDP purposes, was generated through the value of the stone itself and the process of extraction. The remaining 58 percent was generated by marketing: 25 percent of value added (less operating costs in each case) was generated by the mine broker, 13.3 percent by the mine to market broker, and another 20 percent by the dealer.

Table 7. Value Added in the Tanzanite Marketing Chain, Tanzania and Kenya

Level	Tanzania Price (% export)	Tanzania Volume	Tanzania VA	Kenya Price (% export)	Kenya Volume	Kenya VA
Mine broker	41.67%	100.00%	41.67%	41.67%	0.00%	0.00%
Broker	66.67%	60.00%	15.00%	66.67%	40.00%	10.00%
Dealer	80.00%	50.00%	6.67%	80.00%	50.00%	6.67%
Export	100.00%	40.00%	8.00%	100.00%	60.00%	12.00%
			71.33%			28.67%
			71.33%			28.67%

4.1.2.2.1 Smuggling and GDP

Stones and gold that are traded through Tanzanian mining market towns such as Arusha, Mwanza and Mwega contribute most of their regional value-added from trade to the Tanzanian economy, **even if, from that point on they are smuggled**. *Tax evasion should not be confused with loss to GDP. In fact, forcible efforts to collect taxes can provide a negative incentive structure for the marketing chain. They actually drive out value-added activities and lead tax revenues in related sectors to decline.*

Once stones leave Tanzania they continue to be traded in regional and world markets, with additional value added from trading, cutting and setting in jewelry. Tanzania can maximize the value-added to its own GDP by keeping the highest volume possible through as many steps as possible within its borders, i.e. by minimizing smuggling. Two methods of doing this are possible: (1) use of force, or (2) creating an incentive structure that attracts trade and related value-added activities. It may also be able to increase contributions to GDP by developing activities such as cutting and jewelry. Efforts are currently underway to stimulate these.

Because gems and gold are small and easily concealable commodities, it is far more feasible to attract the business to the country through a positive incentive structure for traders than to use force. Coercive policies and procedures tend to drive out the business at ever lower levels in the marketing chain. This can cost the country more in foregone value added than it gains in tax revenue or limited scope value-added activities higher in the chain.

The impact of smuggling on Tanzanian GDP works in the following way. Goods are diverted to Kenya at each point in the marketing chain. They may be diverted to Thailand, Sri Lanka, the USA or Europe at any point from the brokers on up. The lower down in the chain diversion happens, the more potential value added is lost to Tanzania.

To illustrate, compare the case of Tanzanite versus that of gold. Tanzanite stays in the Tanzanian marketing chain longer, leaving bit by bit at each level in the chain. Most gold appears to leave immediately from the mine level.

Almost all Tanzanite stones, for example, are in Tanzanian hands for their first point of sale, either at the mine to a mine broker, or in the village nearby to a larger broker. The same is true for gold. After that, however, 95 percent of gold leaves Tanzania in the hands of Tanzanian brokers who sell it in Kenya. Gems follow a more diverse chain.

From Merelani, the team estimates that 40 percent of Tanzanite is sold to Kenya-based brokers in mining towns. At this level, assuming 25 percent of total value-added is generated by mine brokers, 15 percent stays in Tanzania (60 % of goods x 25% margin), while 10 percent goes to Kenya. At the next level, another estimated 10 percent of Tanzanite production is sold to foreign brokers in mining or market towns. At the dealer level, another estimated 10 percent of goods is sold to Kenyan dealers, either because the dealer here is his agent or because it is easier to turn over the goods in Nairobi than to find an overseas buyer.

In the above scenario, where 60 percent of Tanzanian mine production is ultimately marketed through Kenya, 73 percent of the regional value-added generated by Tanzanian small-scale gem mining

Model Business Plan, Arusha and Nairobi, 1995-1997

To illustrate the problem of tax structure, we created the following three year Business Plan for a gem dealership in Arusha compared to a competitor in Nairobi. The model makes the following assumptions:

- each dealership starts with $40,000 in working capital in January 1995 and turns over its inventory approximately four times a year;
- they have identical sales and costs of sales in the first year, the only difference being that the Tanzanian pays transaction taxes at the time of export and maintains a cutting operation;
- in 1996 the Tanzanian dealership functions only nine months, as purchases and sales were halted by a government ban from late January through April;
- in the second and third years the dealers' gross purchases and sales depend on their respective cash flows;
- the corporate tax rates in both countries are 35% of net income; the transaction taxes are zero in Kenya. In Tanzania they include stamp tax (1.25% of gross sales), withholding tax (2% of purchases), export duty (2%, abandoned in mid-1996), royalty (3% on rough semi-precious gems and 1% on cut gems);
- each dealer maintains modest, secure office premises;
- they have identical staffs, vehicles and equipment in the first year, except that the Tanzanian hires a cutter and buys a cutting machine, while the Kenyan dealer pays a 10% commission to have his cutting done outside;
- the dealers declare all exports, fully report their profits and pay corporate tax at the legal rate;
- their costs are identical for all items except those where the differences are known to be significant, namely taxes (higher in Tanzania), rent (higher in Nairobi) and telecommunications (higher in Tanzania).

The results are summarized in Table 8 below, and the full financial tables for each dealership are presented in Annexes 4a and 4b. In the first year, 1995, the two dealerships used their $40,000 working capital to make identical purchases and sales. The Tanzanian dealership ended the year with a working capital of $52,159, while the Kenyan dealer had $71,435, or 36 percent more. This was mainly due to transaction taxes. The government of Tanzania collected $17,150 in transaction taxes and $11,932 in corporate taxes, for a total of $29,082. The Kenyan dealer paid only corporate tax, although his corporate tax is higher ($22,311 vs. $11,932) because he earned more profit.

Capital accumulation began to make a difference as the dealers went into their second and third years. The Kenyan dealer had 37 percent more capital going into the second year than his Tanzanian counterpart. By the third year he had three times the working capital of his Tanzanian colleague. He was therefore able to do considerably more business than the Tanzanian in the second and third years. He generated more pretax profits, and even though he still paid only corporate tax, he paid considerably more total taxes in year two and year three than his Tanzanian counterpart. The differences are particularly striking by the third year. Over the three year period the Kenyan dealer paid 63 percent **more** tax than the Tanzanian, entirely because of his higher volume of business. This structure inhibits capital accumulation and growth in value-added. The result is that by year three, the government is collecting far less corporate tax because its businesspeople have had less capital and been able to do less business.

The implications of this scenario are striking for tax policy. The tax structure that collects duties on export, even though the rates may appear to be low, is in fact penalizing both the taxpayer and itself.

Table 8.

Hypothetical Gem Dealerships in Arusha and Nairobi			
Effect of Transaction Taxes on Business Growth and Total Taxes			
	Arusha	Nairobi	Nairobi/Arusha
Gross Sales			
1995	263,424	263,424	100.00%
1996	253,869	493,338	194.33%
1997	484,738	894,276	184.49%
Cost of Sales			
1995	109,908	109,908	100.00%
1996	131,889	255,378	193.63%
1997	232,158	414,115	178.38%
Working Capital			
1/1995	40,000	40,000	100.00%
12/1995	52,159	71,435	136.96%
12/1996	42,032	135,285	321.86%
12/1997	96,094	287,997	299.70%
Taxes Paid			
Transaction taxes			
1995	17,150	0	0.00%
1996	14,902		0.00%
1997	18,016		0.00%
Subtotal transaction	50,068	0	
Corporate taxes			
1995	11,932	22,311	186.98%
1996	(5,453)	34,381	-630.50%
1997	28,572	82,230	287.80%
Subtotal corporate	35,051	138,922	
Total taxes	85,119	138,922	163.21%
Incomes			
Dealers			
1995	20,004	20,004	100.00%
1996	25,000	35,000	140.00%
1997	30,000	60,000	200.00%
Employees			
1995	21,996	12,000	54.56%
1996	25,000	18,000	72.00%
1997	30,000	32,000	106.67%
Total 1995-1997	152,000	177,004	116.45%
Net Worth			
12/1995	52,159	71,435	136.96%
12/1996	42,032	88,645	210.90%
12/1997	95,094	135,142	142.11%
Source: See model business plan, table 8.			

nevertheless stays in Tanzania. Thirty-seven percent goes to Kenya. This is because much of the volume of goods traded stayed in the Tanzanian marketing chain until the higher levels. Thus, using the low estimate of total regional export value of gems mined in Tanzania, US$ 18.199 m, in 1995 gems contributed an estimated US$ 10.199 m to Tanzanian GDP. Figure 1 (Annex 1) illustrates the proportional distribution of value-added in a typical Tanzanite sale.

In the case of gold, since the Bank of Tanzania stopped buying in early 1995, the measures taken to legalize private trading have not created a viable market in Tanzania. Most gold in the Lake Zone is in Tanzanian hands only from the mine to the Kenyan border. Tanzanian brokers sell 95 percent just on the other side of the border. The other 5 percent is smuggled out through Dar es-Salaam and Zanzibar. Dealers who used to trade legally find the new regulations too onerous to keep in business. The mine price, as of January 1997, is 83.36 percent of the export price. Value added from marketing the marketing chain is 16.64 percent (now entirely unrecorded).

Overall, 77 percent of the value-added by gold mining stays in Tanzania, even when 95 percent of the gold is sold through Kenya. Using the low estimate above gold production and trading contribute $25.7 million per year to Tanzanian GDP, even when 95 percent of it is exported through Kenya. Using the high estimate, the contribution is US$172.8 million.

4.1.2.2.2. Impact of Tax Incentives on Dealers, Business Growth and Tax Revenues

Kenya has turned a blind eye to the import of gems and gold, thereby attracting most of the regional trade. Mozambique, Rwanda and Burundi have at times tried similar approaches. This has created a strong disincentive for Tanzanian dealers, in fact *a business climate in which they cannot effectively compete if they fully respect tax laws.*

4.2.3. Contribution to GDP from Mining Using the Income Method

The baseline survey found 550,000 active persons living in mining towns and earning at least part of their income from mining (Tan Discovery, 1996). Mining towns, conveniently for analysts, are typically slightly segregated from existing indigenous villages. We have been unable to measure incomes directly from mining activities, as both work and income are too sporadic for even the beneficiaries to calculate. The reservation wage of menial labor in such towns, however, provides a convenient bottom line. According to our survey in August 1996, it was 2,000-3,000 TSH/day. This was the wage earned by a construction worker too poor to work in the mines, according to his own account. A shoe-shine boy's net earnings averaged TSH 1,500/d. In contrast, the reservation wage of agricultural labor in non-mining areas is about TSH 400 per day or US$19 per month (Odhiambo, Kristjanson and Kashangaki, 1995). We therefore estimate that some 550,000 persons, mainly from farm households, have increased their daily earning power five to seven fold for at least part of the year by moving into the mining sector. They also work more days per year, as mining is essentially a year-round activity. It shifts from alluvial to reef and back, and is hampered by heavy rains temporarily, but continues throughout all seasons. We therefore estimate that active persons in mining communities work 200 to 250 days per year, in contrast to the approximately 100 worked in agriculture.

These 550,000 active persons represent 3.75 percent of the entire labor force in Tanzania, and 4.4 percent of the agricultural labour force.[7] Eighty-six percent of Tanzanians, 12.6 million people in 1995, work primarily in agriculture. People have moved into mining from diverse occupations, although agriculture clearly predominates.

The average GDP (at factor cost) from agriculture generated by each member of the labour force in agriculture in 1993 was 39,963 TSH (US$ 98.67) per year. This reflects considerable underemployment.

Using the income method of calculating GDP, we estimate that the 300,000 who worked in mining and related activities in 1992 contributed an average of TSH 562,500 per active person per year to GDP (assuming 225 working days/year @ TSH 2,500/d). This would total TSH 112.5 billion added to the official GDP. By 1995 when the number of active persons had risen to 550,000, their value-added contribution to GDP is estimated at TSH 309.375 billion.

This is an enormous parallel economy, if these estimates are accurate. The entire agricultural sector generated only TSH 365.6 billion in 1992, so artisanal mining and related activities generated an amount equivalent to 30.8 percent of all agriculture and 13.3 percent of total GDP. By 1995 official Tanzanian GDP at factor cost in 1995 was TSH 2,196.3 billion.[8] The additional TSH 309.375 billion from artisanal mining would suggest that total GDP was underestimated by 14.1 percent, and that artisanal mining in that year contributed 12.4 percent of total GDP.[9] Compare this to the combined value-added and final goods methods of calculating GDP, whereby precious minerals contributed 1.7 (low estimate) to 7.3 (high estimate) of revised GDP in 1995.

4.3. Foreign Exchange and Minerals Marketing

4.3.1 Impact of Minerals Exports on FOREX Earnings

Whether exported through Kenya, through illicit Tanzanian channels, or entirely legally, through the formal banking sector, minerals generate foreign exchange. The amount of foreign exchange benefit generated by minerals exports is equal to the proportion of GDP generated. The same methods used above to calculate the proportion of GDP remaining in the Tanzanian economy also indicate the magnitude of the foreign exchange benefits. In the second phase of the study, the team proposes to work with monetary economists and the Central Bank to estimate these effects.[10]

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[7]Projected from World Tables figures for labour force and population growth rate.

[8]Bank of Tanzania, *Economic and Operations Report for the year ended 30th June 1996*, Dar es Salaam, 1996, p. 71-72.

[9]The number of days per year worked and the average incomes need to be the subject of further questioning--phase two of the study should include this subject.

[10]The size of the entire informal sector in Tanzania has been estimated by several different methods. Sarris and Brink (1993), using the missing income method, estimated it at 60% to 68% of total GDP in 1985-88. With the demand-for-currency method, Bagachwa and Naho (1994)

Tanzania has recorded negative trade balances consistently for more than twenty years. From 1973 through 1993, the average dollar value of imports of good and services exceeded exports by 127 percent (World Tables, 1995). For the decade from 1983 through 1993, the average was 184 percent. Large official transfers and, to a lesser extent private transfers offset some of the imbalance, particularly from the mid 1980s on. The government budget also consistently ran a substantial deficit. In such circumstances one would expect rapid devaluation of the currency and rampant inflation. Devaluation was indeed close to 100 percent per year in the late 1980s when imports were first liberalized, but over the two decades, inflation in the CPI and monetary devaluation vis-a-vis the US dollar have each averaged only about 24 percent per year. Since the currency was allowed to float freely in 1994, devaluation has actually decreased.

4.3.2 Impact of Exchange Controls and Currency Fluctuations on the Trade

The behaviour of the exchange rate strongly affects the minerals markets in Tanzania. One problematic area for traders is the gap between the official and parallel exchange rates, and another is the transaction cost of two exchanges when exchange with the Kenyan shilling intervenes. Although both Kenyan and Tanzanian shillings are supposed to be floating freely, and are exchanged in Bureaux de Change, values over $10,000 are still subject to exchange rate management through official channels. They receive the lower cheque dollar rate of exchange rather than the cash rate. Most of the master dealers interviewed affirmed that they have been affected by this cheque exchange rate as it makes it hard to compete with smugglers. Dealers reported a difference of 2 to 5 percent between the cash and cheque exchange rates. This exchange rate difference has been a powerful incentive for smuggling the mineral products through the neighboring Kenya.

The gap in the Bureaux de Change rates is larger in Arusha than in Dar es-Salaam, perhaps because dollars are abundant in Arusha due to the combined influences of tourism and the minerals trade. During the field work from August 1996 through February 1997, Bureaux de Change in Dar es-Salaam were offering TSH 600-620, while those in Arusha offered 500-550, a 16 percent disadvantage for Arushan importers.

In Mwanza and Arusha, interviewees indicated that when the Kenyan shilling depreciates against the Tanzanian shilling, mineral sellers resort to a circular trade. With the proceeds of their mineral sales in Kenya they buy consumer goods which they bring back and sell in Tanzania. It was reported in the lake zone that there has been an increased tendency to treat precious minerals, especially gold, as a means to finance imports directly.

4.4 Revenue Implications of Employment and Income Generated in Artisanal Mining

It is estimated that about 550,000 people or 3.65 percent of the total labour force are employed in the sector. If Tanzania were to move from its current reliance on transaction taxes to more wider applicability of income and business taxes, this would represent a substantial tax base. At present, dealers and claim holders, a few individuals at the apex of the pyramid, pay the only taxes that are

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calculated that it had increased from 40-45% of GDP in the 1970s to 40-70% of GDP in the 1980s. Both of these were too early to capture the mining boom.

collected for the sector. As an example, the table below gives a summary of the estimates of income of the participants in the Arusha gemstone market.

Table 9: ESTIMATES OF TOTAL INCOMES OF PARTICIPANTS IN ARUSHA MARKET FOR THE YEAR 1995

	Participants	Amount in TSH.
1.	Master Dealers	504,120,330 (gross income)
2.	Brokers	270,154,456
3.	Miners and Mine Workers	2,701,544,565
Total		3,475,819,351

The table above indicates that the estimates of the total incomes of participants in Arusha market for 1995 was 3,475,819,351 millions of T. shillings. The income of the master dealers was 504,120,330 or 14.5% of the total income estimated in 1995. This shows that the tax burden is concentrating on a very small fraction of the total income, while over 80% of the total income is either loosely taxed or escapes taxation completely.

The current trend in tax reform worldwide, however, is toward more indirect taxation, usually in the form of a value added tax (VAT), rather than broadening the income/corporate tax base. The Government of Tanzania has indicated that it is working on tax reform in the context of its structural adjustment programme, and that it plans to announce a new plan in the coming year. While not yet officially announced, it appears that a VAT is likely to be imposed. Provided exports are excluded, this would be an improvement in the business climate for the minerals trade. If minerals exports are not excluded, it would probably drive most of the remaining legal trade underground or out of the country. The recent experience of Thailand is illustrative. This thriving center of coloured gem trading and jewelry making imposed a 7 percent VAT on all transactions last year. It set off a depression in gem markets, sparked several bankruptcies and caused some major foreign investors to withdraw (Bangkok Post, Aug. 5, 1996 and Internet gem newsletters). Cutting was particularly affected, as it was already facing a problem of rising labour costs, and the shift of such operations to China seems to have accelerated. Thailand's industry appears to be surviving the effects of the VAT, but Tanzania's fledgling gem sector is not so robust. The impacts of tax reform, and particularly how the VAT is applied, need to be explored carefully in advance.

Local taxation authority is currently inadequate, as powers of taxation are concentrated in the central government. The negative externalities of mining, both artisanal and formal, are mainly experienced by local communities. In addition to the economic problems of mining-induced localized inflation, these include strains on existing socials services such as schools and health facilities. Environmental damage in the form of unfilled pits, slag heaps and pollution of the air, soil and water supply is also mainly felt locally. Moreover, local communities know who is mining what where, and would be much better placed than central government authorities to apply reasonable taxes to mining if they had the authority to tax. With that authority should also

go transparent procedures for deciding on and administering the resulting local government budgets.

4.5 Policies Favoring Value Added Activities

When one mentions value-added, policy makers generally think that upstream and downstream processing activities are the subject. Calculating the economic value added generated in a year by each step in the marketing chain, as we did above, shows the importance of trading as a source of value added, and of volume of business rather than mark up as a source of profits. Both concepts tend to be poorly understood by many policy-makers and even some business people. The price markup for cut stones compared to rough may be 2 to 3 times. People therefore tend to equate this with the only "value-added" activity in the chain. In fact, the vast majority of current economic value added is being generated by trade, i.e. collecting, sorting, buying and selling.

Volume is the main reason that trading is more profitable and generates more value-added for firms than cutting stones. There is a limited market for cut stones, and they must compete with mass production in Thailand and other lesser cutting centers. Traders have a smaller markup on rough stones, but make up for it with high volumes. The advantage is greater as one ascends the marketing chain. Small brokers may have a large margin and very low volume of transactions. Dealers rely more on volume of transactions. Contrary to popular opinion, the most successful dealers are not those who have the highest mark-ups. A dealer who sells one parcel per month for which he paid TSH 1 million, and gets TSH 1.5 million has TSH 500,000 in monthly gross profit. Another who pays TSH 1.1 million per parcel and sells five per month at TSH 1.4 million has a monthly gross profit three times that size, TSH 1.5 million. Only the largest dealers have sufficient volume of gem quality stones to justify investing in lapidary equipment and hiring a qualified cutter.

The relationship between volume and global value-added is also very important in deciding how much policy weight to put on activities such as heat treatment, faceting and polishing, of stones and final refinement of gold. These are often called value-added activities, with the implication that trade is not adding value. They are developing gradually in Tanzania, with government encouragement. They are areas, however, in which Tanzania can only gradually develop a comparative advantage. Some twenty new cutting machines have been imported in the last year or two, which shows that dealers are trying to look to the future and develop the capacities needed to be competitive in processing gems. Most are not currently economically viable, however, and dealers must subsidize the cutting through profits on raw stones.

From an economic point of view it is seriously misleading to regard cutting or heat treatment as the most interesting forms of "value added" for precious and semi-precious stones. The reason is that volume is more important than price margins. Price margins appear high for a single stone that is successfully cut and sold. Unfortunately only a tiny proportion of stones can be successfully cut and sold. Two- to three-fifths of the raw stone weight is generally lost, so that a 1 gram raw stone yields a 1-2 carat faceted stone. The waste portion could be used to make tiny calibrated stones for mass produced jewelry in Thailand. In Tanzania there is not sufficient volume, and none of the lapidaries do calibrated cutting. Moreover, in a certain portion of valuable stones, a less experienced cutter spoils the stone or gets considerably less value from it than could have been obtained, making it sell slower or not at all.

World market dealers often prefer to have stones cut close to their final selling market, so that fashion can determine what cut to give. For the highest value stones, the most valuable cut is often to the final buyer or the jeweler's specifications. This argument is diminishing in weight, however, as market information and fashions are increasingly globalized and rapidly communicated. International gem shows, magazines, and most strikingly the Internet now communicate changing tastes and designs around the world. Tanzania is on the verge of this global market, with some few dealers truly connected, but most having only occasional and/or second hand exposure.

Tanzanian dealers are nevertheless, with government encouragement, gradually developing a cutting industry. Recently import tariffs on cutting machines and other lapidary equipment were eliminated. Negative incentives for exporting raw stones have also been created for some dealers. In March of 1996, regulations were issued requiring foreign dealers stay out of mining areas, to work from towns, to establish lapidaries and to have stones over 1 gram cut before exporting. They were also to deposit a $50,000 bond. These regulations would actually have made a dealership non-viable, particularly the bond requirement. The start-up working capital of the dealerships we modeled in Tanzania and Kenya was only $40,000. If a dealer has to tie up $50,000 at zero interest, most will not go into that business at all. At a time when interest rates were 39%, a potential dealer would have to deduct that as the opportunity cost of his capital and count his rate of return only when it exceeded that amount. Field interviews suggested that those foreigners who most wanted to stay because of long term residency or family relationships were accommodated by the government, either by being given permission to operate as Tanzanians or through relaxation of the most onerous requirements. A few foreign dealers, some of whom had been pretending to mine in order to be well situated in the trade, decided to abandon their operations. This deprived the sector of capital, but Tanzanian dealers considered it necessary to protect their ability to compete.

Dealers who cut stones need a different set of buyers from the ones to whom they sell rough stones. They may actually be in competition with their traditional buyers if they start cutting. Add to this the lower volume of business for lapidary activities, the higher costs of operation and the lack of skilled cutters. All these factors may be overcome gradually, but the sudden obligatory transition was judged not to be viable by most foreign dealers. From the point of view of the Tanzanian national economy a policy forcing dealers to undertake capital-intensive processing leads to waste of resources, capital and labour, that could generate more value added if engaged in trading. On a voluntary basis, they are already moving in the right direction, and can be expected to gradually develop some comparative advantage, particularly for the substantial local tourist market.

5.0 OPPORTUNITIES AND CONSTRAINTS IN MINERALS MARKETING

5.1 Opportunities

Tanzania faces three major opportunities to enhance economic growth and socioeconomic equity in the mining sector. One is to continue to let artisanal mining thrive and generate employment, and in particular to protect it from being squeezed out by formal capital-intensive mining. There are means to create a balance between the development of formal mining and continued artisanal mining, and Tanzania seems to be opting to attempt this. Without meaning to do so, however, by opening up formal mining exploration and production, Tanzania is likely to cut off the livelihoods of thousands of artisanal miners and marketers.

A second opportunity is to attract more of the trade of precious minerals through Tanzania. This involves creating a business climate in Tanzania that is safe, legal and efficient–more attractive to miners, brokers and dealers than Kenya's.

A third is to develop processing, cutting, jewelry, crafts and mining service industries. Upstream and downstream economic activities have considerable future potential, particularly if Tanzania continues to protect artisanal mining. If international mining companies come to dominate the sector, they will market their minerals to the most internationally competitive markets, which today means Asia.

Minerals are depleting resources, which places a special responsibility on governments and miners to exploit them in economically and socially desirable ways. Tanzania has a rapidly growing and underemployed labour force, so preserving room for a labour-intensive approach has a sound economic and social rationale.

5.1.1. Balanced Development of Modern and Artisanal Mining

The Government of Tanzania has made a series of commitments to artisanal miners to keep opportunities open to them. This is in keeping with Tanzania's tradition of grass roots development. Now, however, in a context of liberalized economic policies, investment promotion plans have been developed and a number of exploration and production contracts signed with international mining companies. Interest is high, as evidenced both by the exploration underway and the attendance of between 50 and 100 mining companies at promotional and policy meetings called by the Government. The most interesting geological formations reportedly have all been allocated for large-scale exploration. Many of the current permit holders are junior mining companies specializing in exploration. If the exploration proves productive, they would normally either sell out to large mining companies or go into partnership with them in order to bring mines into production.

Many of these exploration permits overlap existing artisanal and small-scale mining operations, for which valid claims are already registered. Large firms which confirm the presence of major deposits generally either buy out the valid claim holders on the proposed mining site, or get a government commitment to do so.

Buying out small claims is standard practice in mining. It poses problems for Tanzania's policy of protecting artisanal mining as an employment, however. The mining companies and artisanal miners are operating in a dual economy. Access to capital is the key to success for companies, but artisanal miners rely on labour-intensive methods. An international mining company can afford to offer a generous buyout to a small claim holder. Individual claim holders can even be encouraged to negotiate a share in the mining interests or other means of continuing their own incomes. The problem is that the workers who depend on them get no compensation, and have much less chance of finding a job with an international mining company. For every mine claim holder bought out, ten to two hundred workers and their families lose their access to an important source of income.

International mining companies invited to a policy seminar in Arusha in 1996 argued for a single mining code applicable to all types of mining. They understand that under such an arrangement, capital-intensive mining methods will prevail. Their arguments include the following points:

- major capital investments are needed for modern mining,
- modern methods are more efficient, producing higher yields and faster growth,
- theft and smuggling are minimized by their tighter controls,
- the health of workers and their families is better protected,
- environmental impacts are more scientifically approached.

These are valid points, but lack an historical and socioeconomic perspective. Modern methods definitely have a place in developing Tanzania's resources. They do allow companies to identify major deposits more accurately, thereby leveraging investment capital needed to exploit them. They bring more ore out of the earth more quickly. For the ores they process, they can obtain higher yields, which is an important argument for a depleting resource. They could reprocess slag heaps from artisanal mining, however, and obtain equally complete exploitation of the resource.

Capital intensive mining companies do generate revenues for themselves and the government more rapidly. They do minimize random smuggling, but they themselves are the primary beneficiaries of those controls. The degree to which they benefit government coffers varies greatly. Some negotiate agreements in which their investment costs are recovered very quickly in a tax sheltered period and then sell out or abandon the mine when the deeper hard rock mining, the more expensive phase of operations, is reached. The next company to take over will generally negotiate new tax shelters. Negotiated agreements generally provide for royalty payments, but the governments' ability to monitor collections is limited. Historically, the ability of governments to reallocate those revenues to the benefit of the common good is also minimal.

The health of modern mine workers is considerably better protected. Artisanal miners' methods and lack of overarching organization results in many accidents. Working conditions are often poor. Workers and families are poorly housed and/or separated. These problems need to be addressed.

The environmental argument is less clear. Gold production is the main concern. Artisanal miners use mercury to purify the ore, releasing traces of this toxic and long-lasting element into the soil, air, and sometimes water. It affects those who do the processing quite directly, and enters the food chain. Self-contained retorques are available that recycle the mercury and prevent its escaping into the atmosphere. Miners have been slow to adopt them, however.

Capital intensive gold mining operations instead generally create ore heaps on top of well drained beds and sprinkle them day and night with an arsenic solution. The solution which drains out is processed to extract the gold. This method also enters the environmental chain. Birds land on the ore heaps and die throughout the surrounding area. They are then eaten by other animals, who also die. Another problem from both types of mining is the slag heaps and holes in the earth that they leave. Toxic drainage from slag heaps can and does get into water supplies over a period of many years, despite the precautions of active mining companies. The slag heaps created by modern companies are generally protected from this at the time of active mining, but after the company leaves they become a public problem. The slag heaps and pits left by modern companies are larger than those of artisanal miners, by a factor of thousands sometimes.

Tanzania is breaking new policy territory in trying to protect artisanal mining as a sector. Its hope is that artisanal mining can gradually involve into small-scale formal mines. Part of the US$12 million World Bank loan it has taken out will fund programs to educate artisanal miners and institute arrangements to mitigate their environmental impact. Creating a viable marketing system based on licensed buyers and brokers will be a critical factor in the success of this effort. Miners, brokers, dealers and government must all have confidence in it.

Artisanal/small-scale indigenous mining will have a far better chance of survival if protected zones are established, in which international mining companies are not allowed to buy out claim-holders. Alluvial deposits, which lie close to the surface, lend themselves to artisanal exploitation. They can be mined with hand tools relatively safely and with less environmental impact than pit mining. This slows production, but for gems that is generally a good thing. It avoids production surges that could saturate the market.

For gold, the market-supply argument does not hold. Modern mining methods could produce gold more quickly than artisanal, and have little impact on international prices. Even for gold, however, artisanal mining of surface deposits would be a wise policy for Tanzania, particularly as an interim measure. Many countries, including Thailand and Sri Lanka, protect artisanal gem mining, but for gold this is more rare. Ghana and Eritrea both have systems that reserve certain areas for artisanal mining and others for modern capital intensive mining.

Tanzania, if it adopted a generous zoning plan, would maintain wide distribution of incomes from mining, instead of concentrating it in the hands of foreign mining companies and government. Since gold is a depleting resource that maintains its value over time, exploiting it slowly benefits more Tanzanians. More generations of Tanzanians will share in the benefits, and a wider participation will let more families benefit directly from employment and incomes in the process. In the end, capital intensive methods will probably be adopted, as they are more efficient. Stretching out the transition, however, allows Tanzanians to accumulate savings and spreads capital throughout the society. This creates the basis for a more widespread, better balanced economic development.

5.1.2. Competing with Kenya

When Tanzania's artisanal mining was liberalized over the last decade, market channels already existed to established markets, mainly through Nairobi. One ongoing challenge is to create a regulatory framework and infrastructure needed to make Tanzanian markets competitive and to attract the mineral trade to follow the legal channels. This effort has only been partially successful, but has met with many setbacks. The collapse of state monopolies created a marketing vacuum. As

marketing was shrouded in secrecy, policy-makers have had to proceed by trail and error. It is not surprising that they set tax rates above those that are optimal for either sectoral growth or revenue generation. They have had little solid information on which to base economic calculations, and no policy-maker is likely to trust a tax-payer to tell him what the market can bear in the way of tax imposition. Ministry officials have nevertheless engaged in a continuous dialogue with dealers and other mining sector participants to arrive at proposed new policies that may be more incentive-oriented.

Official statistics show declining gem, diamond and gold exports from 1992-1997 at a time when baseline surveys show all three sectors were booming. This suggests that despite good intentions, at least some of the policies have not been providing the right incentives.

One should consider it a policy success that the Tanzanian government did not overreact to this situation, did not seize on the undesirable aspects of artisanal mining as a pretext to suppress it. The government allowed artisanal mining to flourish, and to find regional markets when its own were inadequate. The one brief exception was a period of three months between 28 January-1 April 1996, when gem marketing was banned while the government put together a new policy.

The present study provided some key elements of the strategy needed to compete with Kenya, partly by portraying clearly what business climate is necessary for good marketing, and partly by asking brokers what advantages they found in selling in Kenya. The concerns can be summed up in four points: (1) economic/tax advantages, (2) good infrastructure, (3) safety, and (4) reasonable, reliable laws. Tanzania can do much in each of these fields to increase its competitiveness.

5.1.3. Developing downstream value-added activities

The third area of opportunity is in downstream value-added activities such as gold purification, gem cutting, jewelry, crafts and mining services. Tanzanians and foreign investors are already moving to develop various types of mineral processing. Three gold refining companies have been set up in the Lake Zone, more than twenty new lapidary operations are trying to get established, Tanzanite heat treatment has become generalized, and there is small growth in a crafts and jewelry market oriented towards Tanzania's potentially large tourist market. The policy framework has been reformed to eliminate import taxes on most of the machinery needed for such investments. Most operators, however, were found to face difficulties associated with trying to develop a comparative advantage in a new area: lack of infrastructure, poor information on suppliers and markets, difficulty in communicating information about their products, and stiff competition from established producers elsewhere in the world.

Tanzanian efforts to develop value-added activities have concentrated a bit too much on gold purification, gem faceting and heat treatment. Many possibilities exist for generating jobs and incomes upstream from the trade. There are, as yet, no reliable suppliers of mining and purifying equipment, or jewelry supplies. There is an urgent need for roads, the building of which could generate thousands of jobs. Downstream there are also many neglected opportunities, the first of which is in the local processing of second quality material. As only top quality material is currently marketed, the vast majority of the gemstone mined is simply left in the mining area. Using this material for crafts and low-cost tourist items would require less technical skill than cutting grade A gemstones. Polishing tumblers can be made available in the mining villages, and operated on a budget of less than $10 per month for

supplies and batteries or electricity. Polished bits of non-gem rough can be made into necklaces, bracelets and other jewelry or crafts. The metal settings are available very cheaply, but not in Tanzania.

5.2 Constraints and their policy implications

Creating an appropriate business climate for the existing players in the market networks in Tanzania is one of the keys to the future of artisanal mining. And artisanal mining can be the foundation of a widely shared prosperity in Tanzania. This study has tried to describe the markets as they are. Every link in the chain exists for a reason, in most cases many more reasons than we have been able to analyze. Our hypothesis is that the policy framework should begin with the reality that exists, and try to improve on it, rather than imposing an outside model. Reasonable provisions to legalize the status of each type of participant, and to protect their legal operations, are still not in place.

The analysis of the participants in the mineral market made in the previous section reveals that a number of factors are responsible for the current narrowness of the official mineral market for the small scale mining subsector in Tanzania. Both market and government failures have greatly contributed to these factors. Instability, inappropriateness and lack of transparency in policies, and the regulatory and legal frameworks regarding the sector are the main features of government failure. Specifically, inappropriate fiscal policies, bureaucracy and cumbersome procedures in the marketing process, lack of stability and transparency in the rules and policies governing the marketing process, financial constraints, lack of enforcement of both production and marketing regulations, have in one way or another contributed to the narrowness and volatility of the minerals markets. On the other hand, poor market information, lack of technical skills, inadequate business connections, and under-capitalization seem to be the major causes for the weak competitive position of many Tanzanian participants. These are elaborated in the following subsections of this chapter.

5.2.1 The fiscal regime

5.2.1.1 High and unpredictable tax levels

Uncompetitive high and unstable tax levels were mentioned as constituting the major problem facing the minerals markets in Tanzania by almost all participants of the market interviewed. Most of these participants were aware that tax rates are higher in Tanzania than in Kenya – Tanzania's major competitor. Tax administration is also arbitrary and unpredictable, which increases the incentive for smuggling.

5.2.1.2 Many different taxes, payable to different authorities

The other problem of tax system mentioned by the participants is that there are many types of taxes. They mentioned these taxes as stamp duty, withholding tax, royalties, export tax, income tax and sales tax. One has to go to several different offices to process each export shipment.

5.2.1.3 Fears of future taxation

There is now discussion of imposing 20% VAT. Unless all exports, including precious minerals, are exempted from VAT, as is the case in Kenya, the imposition of a 20% VAT would clearly destroy what remains of legal trade in Tanzania. One has only to factor it into the Business Plan (see Chapter Four) to

see that it bankrupts the dealer within two years, and drives the remaining trade over to Kenya. Dealers who establish a pattern of exports now could set themselves up for sharply increased taxes in the future if they declare the full value of each export shipment.

5.2.1.4 Cumbersome and unclear tax payment procedures

Sometimes the procedures of paying taxes are unclear and cumbersome. The tax rates applied to gems are outlined in the Business Plan (Chapter Four). The various transaction taxes applied in Tanzania total 8.25% on rough gems and 6.2% on cut gems. In addition there is 35% corporate tax on the annual profits.[11]

The effect of all types of transaction taxes was illustrated in the Business Plan comparing the ability of a dealer to make his business grow and of the government to generate tax revenues from the sector in Tanzania and Kenya. Both countries apply the same corporate tax rate. But Tanzania also applies transaction taxes. This yields higher tax revenues for Tanzania in the first year of business, but deprives the dealer of operating capital. The result is that the Kenyan dealership grows much more rapidly.

The effect of uncertainty also has a depressing effect on precious minerals business in Tanzania. Tax rates change often, sometimes in dramatic ways that make business competition difficult or impossible. For example, during a brief period in 1996, authorities attempted to impose an additional two percent export tax. On gold, a recent attempt to impose a transaction tax of 30% on dealers in northern Tanzania killed what remained of legal trade in gold. The total markup between the mine and export price was only 17% at the time, so there is no way that the trade could pay such a tax at any point in the chain.

5.2.1.5 An inequitable taxation system

The tax system is also viewed as inequitable and inefficient. Dealers and miners consider it inequitable because while 550,000 people work in the sector, only a few dealers and miners pay any tax. Mining itself escapes most taxation.

5.3 Asymmetric information and the skills gap

More up to date market knowledge and marketing skills would improve markets at every level. Participants in the market at all levels interviewed during the field trip confirmed that there is an acute lack of information and market knowledge. Participants at the pit or mining areas level of the market know little more about markets than what they can learn at the *Vijiweni*. Brokers know more about the secondary markets, but have little technical knowledge of gemstones. Dealers have more information about the export market, and the leading ones employ cutters to appraise each stone and determine exactly how it can be cut. Most locally-owned trading companies lack timely information about the world market, however, and most of them have not been operating satisfactorily due to this gap of information.

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[11]. Kenya applies no transaction taxes on exported precious minerals, and the same 35% corporate tax on profits. Mozambique, which has a rich gem mining area directly adjacent to the Tunduru alluvial deposits, charges only one percent on rough gem exports.

Most participants do not really understand how supply and demand determine prices. They tend to personalize each transaction and spend a lot of time negotiating deals and trying to collect payments. The transaction costs are elevated as a result. Government economists need to work with the mining community to explain, for example, how surges in supply of Tanzanite depress prices on the world market. Policies which encourage more gradual production would help maintain more stable prices internationally, and ensure that greater benefit, flow to Tanzania in the long term. The Government can play an important role in putting in place a conducive macroeconomic, regulatory and institutional framework that will promote mineral marketing. It can also facilitate access to timely market information, through lower telecommunications costs, and wider availability of internet services. The dealers' association TAMIDA could offer information services to its members, as well, including the publication and/or radio broadcast of world gemstones/minerals' market information within Tanzania.

This study reveals that miners and mine-workers have the following characteristics:

- they do not know what type of gems or quality is in demand in the market. They mine and later seek a market, or they get market information indirectly through the fact that a dealer places an order with brokers to collect a certain stone to fill an order he has received from overseas;

- they cannot properly prepare their gemstone parcels as they do not know how to sort stones by quality, or what price to seek;

- they sometimes cease mining operations when local brokers stop buying a certain type of stone. The same stone might be needed in other parts of the world but producers are not in a position to know that.

In general, miners and mine-workers lack gemological information. Miners usually pay 10% or more of the value of stones they market for the assistance of mineral brokers. They rely on the broker's better knowledge of the market and his mobility to reach those markets.

Only those working in alluvial grounds can change quickly to mine other type of minerals required by the market. This is the case for most artisanal miners in Umba Valley areas and Singida. It is difficult for those involved in underground mining to suddenly change, because their capital investment is in one type of mine. When the market declines, some reef miners are forced to stop mining operations until it recovers.

Present marketing arrangements in most mining areas favour the buyer. Miners beg buyers to purchase their stones. In mine rush areas where there are many buyers the situation is a bit different for good stones. Buyers of gemstones or diamonds sometimes compete to offer high prices. This is the case in Merelani and Maganzo (Shinyanga) mine sites, (Arusha Region) and sometimes in Tunduru (Mbeya Region).

Mineral Brokers have the following characteristics:

- Their survival in business depends on their knowledge of the supply and demand of a particular mineral, in particular who wants to sell, who has what to sell and who needs what to buy. Small brokers in mining areas maintain good contacts with mine workers and those in gem centres frequently visit mineral dealers offices to know the type of material they need;

- The gemological skills of brokers are developed by experience, not training. Success depends on the individual's ability to analyze the quality requirements of dealers, and to learn from past mistakes. Neither formal training nor gemological instruments are readily available;

- A broker's reputation is based on his ability to bargain and his honesty, something every broker works hard to establish;

- There is a loose cooperation among brokers. They meet at "*Vijiweni*" and assist each other on a number of issues;

- One can access short-term credit from a fellow broker or exchange vital market information and sometimes lay down common strategy on issues strengthening their business. In every mining or marketing centre there are "*Vijiweni*" places where one can always meet brokers.

Master dealers are characterized by their need to:

- develop contacts throughout the world who trust them to supply good quality minerals promptly and at favorable prices;

- gather information on the local availability and prices of minerals.

The six most successful firms in Arusha seem to have good contacts and information. They speak daily by telephone with their overseas contacts. It has, however, been noted that most local dealers have less information about the world market and many operate only sporadically or marginally due to this information gap. The high cost of overseas telephone communications in Tanzania is a serious obstacle to the maintenance of international market contacts. Ignorance of the market caused by this information gap has been found to reduce the earnings of the participants in the market.

Mineral dealers get most of their market information through visiting foreign buyers, by making visits abroad to attend gem shows or when marketing to individual companies. The Internet, which has become a major marketing tool for precious minerals trade worldwide, has just become commercially accessible in Dar es Salaam in the last few months. One or two dealers are connected, but none was using it for active trading. Telephone services are not yet adequate in Arusha and Mwanza -- where most gem and gold dealers are located. Very few dealers subscribe to international mineral journals where they monitor the market on supply and demand of various minerals. Dealers who cooperate communicate market news to each other regularly, especially the requirements of visiting foreign buyers. They will pool their materials, if necessary, to fill an order.

5.4 Bureaucracy and cumbersome procedures in the marketing of minerals

It was also noted that a lot of unnecessary paper work and bureaucracy greatly contribute to the narrowness of the mineral market for small scale miners in the country. These problems are mainly encountered when one is applying for a license or involved in exporting, which is a very cumbersome and time-consuming experience. Bureaucratic hassles have affected the size of the official market in a number of ways. There are brokers who would like to buy a license, but operate without one because getting it requires one or more long and expensive trips to Dar es Salaam every six months. In Tanga, brokers reported that although the official monthly fee is only TSH.10,000, there are hidden costs estimated at TSH.300,000 before one is licensed. This was found to be the case in Arusha as well. It was everywhere

cited as the main deterrent to getting a license. Once a broker is operating without a license, he has less to lose by smuggling, as he is already subject to police action if stopped. This contributes in large measure to products ending up in the unofficial market.

The above bureaucratic delays constitute what economists call transaction costs. In Tanzania they constitute very high, if invisible business costs. Any serious businessman will always look for ways to save time. If it takes less time to export through the unofficial channels, then that route will be adopted. Apart from the cumbersome procedures, the interviews also revealed elements of corruption within the sector.

5.5 Lack of enforcement of marketing regulations

Lack of clarity and enforcement of regulations guiding the mineral market was also found to be among the major factors affecting the minerals markets in the country. It was observed in the Arusha market for example that licensed brokers lamented that they took all the troubles of paying license fees, and other related payments to acquire licenses only to find that they occasionally experienced police harassment, and unlicenced brokers often escaped it. Active brokers in Arusha only are estimated in thousands, while only about 100 brokers are licensed. Because of this lack of control even those who do not have licenses and would like to acquire them hesitate to do so and hence the majority of them continue to operate unofficially. Failure to control the rules and regulations has also contributed to an increase in smuggling, as most unlicenced brokers are either smugglers or agents of smugglers.

Currently, there are no *official* gold dealers in the Lake Victoria gold fields, although it is known that Mwanza is among the largest gold markets in East Africa. In this case, the law is not enforced, because at the mine level, officials know that the rules are not reasonable and therefore not enforceable. There are big brokers and (unofficial) gold dealers in the Mwanza market who have been operating freely and undisturbed. A vicious circle is established, as no one will register to formalize their business so long as they can operate well informally.

The field survey showed that local governments in mining villages are aware of the existence of these informal traders and have been taxing them in different ways. For example, it was noted at Sekenke that operators in the mineral trade have to pay TSH.5,000 per month to the village government. At Mabuki, all actors in diamond mining pay a total of TSH.100,000 as contribution to education and water services. In Kalalani, traders reported a more informal relationship, in which, when villagers need funds for a community project, they know that they can count on the mining community.

The relative ease of this relationship suggests that if local communities had the authority to tax mining in their territories at a reasonable level, this would be acceptable to the miners. This is an important factor in tax policy, as voluntary compliance reduces the costs of administering taxation. Such taxes should be used to mitigate environmental problems and other negative externalities created by mining.

5.6 Financial constraints

Operating capital is a critical factor in the ability of a dealer to function effectively. Well capitalized dealers have a strong competitive advantage over new ones. This is particularly a constraint for indigenous Tanzanians, most of whom have built a small capital in the brokerage field or mineral consulting and attempted to become master dealers. If it is known that a person is active in mining, bank

credit will **not** be available even for well secured loans, as the profession is, and rightly so, considered risky. This means that nearly all participants in the trade operate with their own or family capital.

The advantages that Kenyan dealers enjoyed because of better capitalization came out in interviews. Sellers prefer to deal with them because they pay cash on the spot, and often cover hospitality costs as well. Brokers and miners complained that, in contrast, local dealers in Arusha often lacked capital and would agree to a price only to pay it in small installments. When dealers were filling a foreign order for shipment, their suppliers complained that payments extended over a period of months. This hampered brokers and miners from doing their jobs properly, as they had to stop to try to collect overdue payments. In contrast foreign buyers pay promptly.

A capital cushion could also help dealers cope with market volatility, and improve their ability to time their purchases and sales advantageously. Mineral markets are inherently volatile. Markets experience recurring of boom and slump periods. Dealers in the rarest, most valuable commodities therefore try to gain enough market share to play a role in maintaining prices. They try to stock gems, which is an effective mechanism for building savings when supply is good, and to sell during lean periods. But this requires a strong capital position, which most Tanzanian dealers lack. Most of the buyers interviewed admitted that 1995 was marked by excess supply of minerals, especially Tanzanite, that flooded the market, causing a fall in price by half or more in all market levels.

As Tanzanite is a unique commodity, found only on this one site, if mineral dealers had had enough capital they could have bought large stocks and released it slowly to maintain international price levels. Lack of working capital is a problem that has also greatly affected master dealers. It is estimated that of the 60 plus licensed master dealers in Arusha, only 10 are active. Dealers at all levels would like access to capital loans. To set up in business they estimate that between TSH.10-30 million is the minimum capital requirement. (This is why we used TSH.25 million as the start-up capital in the Business Plan.) Most dealers and some claim holders surveyed indicated that they have collateral for loans from formal financing institutions. Financial institutions, however, refuse to finance them if they know that mining is involved.

5.7 Lack of Independent Appraisals of Value

Government assay offices throughout much of Africa provide quite reliable certificates of gold purity, yet they are lacking in Tanzania. This is urgently needed, as are reputable laboratories and consulting firms capable of establishing the minimum value of mineral reserves at specific claims. The presence of such institutions would go a long way to facilitate trading, reduce mistrust and lighten transaction costs. Moreover, financial institutions cannot be expected to lend to artisanal miners and traders until they have reliable independent appraisers of value for precious minerals.

5.8 Smuggling

Smuggling of precious minerals is very common in all major gold and gemstone centers, particularly in border areas. Different routes are used by smugglers depending on the convenience, border contacts and the size and value of the minerals. Except for a small portion which goes out through Zanzibar, lake zone gold generally goes directly across the border to the Kenyan town of Sirare.

Gems follow more varied routes:

- Traveling by public transport across the border via Horohoro in Tanga Region involves gemstones collected from Tanga, Morogoro and Southern regions;

- The Taveta route in Kilimanjaro and Namanga border post in Arusha region are normally used by smugglers who operate mainly in Arusha and Kilimanjaro Regions.

Parcels carried in the public transport usually have values between TSH. 300,000 to TSH. 1.5 million. The number of people involved varies from time to time. During the survey it was estimated between 25-35 mineral smugglers passed through Tanga town every month to cross Horohoro by bus.

- Private transport is used by experienced smugglers, who carry gemstone parcels valued at TSH.2.0 million and above. The cost of smuggling varies depending on the type of assistance smugglers have arranged at the border or how well they have hidden the gemstone parcel.

  It was not possible to assess the number of people involved in this type of smuggling every month. It costs a smuggler US$300-US$400 to send a parcel to Nairobi from Arusha.

- Minerals are also smuggled by small brokers traveling on foot, bicycles or pack animals on panya routes across the border. They generally carry gem parcels valued between TSH.50,000 and TSH.350,000.

5.8.1 Motives for Smuggling

Price and time are the key factors sellers take into account in choosing where to sell. Tanzanian sellers find that in Kenya they have a better chance of making rapid sales in good conditions, provided by adequately capitalized dealers. As Nairobi has a bigger market with many dealers who have been in business for decades, it provides sellers with certain advantages. They can sell their goods and obtain cash more quickly. They can sell medium-quality stones as well as top quality, whereas in Arusha dealers buy a much smaller volume of stones that are top quality. Gold sellers find their accommodations paid for by the buyer in Nairobi, while in Arusha they must pay their own costs. The Nairobi market also has more diverse and cheaper consumer goods, so traders can buy consumer goods with the proceeds from minerals sales and turn a cyclical profit on both. This, incidentally, increases the loss to the Tanzanian GDP.

Nairobi is also closer to the northern mining areas than Dar es Salaam, and more accessible by road for miners/minerals brokers outside of Arusha. Other reasons for smuggling include fencing other stolen goods, financing imports, and tax evasion on exports and imports. Security during travel and selling is also an issues of concern to sellers. According to the mining community's views, security is definitely not provided by the "security forces." Miners and brokers who attempted to legalize their operations frequently complained that they were subject to as much or more harassment by the authorities when operating legally as when not licensed. In established mining areas, the community develops informal mechanisms for ensuring security. In mine rush areas, on the other hand, problems include theft, armed robbery and officials' taking part or all of one's goods.

The main reasons cited by mining sector operators for the existence of smuggling are:

- searching for better mineral markers and prices;
- avoiding official bureaucracy;
- advantage of the presence of many foreign brokers in the mining areas;
- using the informal credit available to minerals operators; and
- low marketing costs.

Several dealers argued that the best way to increase mineral exports is for the government to review the present tax rates. Under-invoicing of gemstone prices is a form of smuggling where the parcel is exported officially but only a portion of the true value is declared for tax assessment.

The presence of a big number of foreign brokers in the mining areas also increases the chances of mineral smuggling. Kenyan brokers dare not sell in Tanzania for fear of being disclosed to authorities by competing brokers. Also some brokers are only agents of foreign companies in Nairobi and Mombasa, so they are required to send all the minerals purchased to their sponsors.

The presence of strong international illegal buyers in Tunduru believed to be developing a cartel in 1995 to early 1996 forced the government to intervene by issuing new trade regulations and banning foreign traders' direct access to mining areas. Tanzanian dealers welcomed this protection from competition. Tanzanian miners and brokers, however, complained that they could sell better when they had more access to international buyers.

Credit from informal sources often forces miners to sell part of their minerals product to creditors, some of whom are foreigners. This form of returning borrowed funds is unofficial. Some of the mining operations, such as the underground mining of Tanzanite, are very costly to run, so miners elicit advances from both local and foreign mineral dealers. Some mineral dealers also get financial support from other traders and usually the interest is paid back in foreign currency. All these factors force some of the mineral operators to smuggle minerals outside the country.

5.8.2 Why Kenyan dealers offer a better market

In Kenya, there is no tax or VAT charged on exports; only 35% corporate tax on profits. Telecommunications are cheaper and more easily available. Roads are better to Nairobi. Mineral dealers there have more capital and better international networks. They have accumulated capital over the years, which makes them grow faster than their Tanzanian counterparts. The size of the market is larger and more diverse, and mineral operators are more experienced. [12]

5.8.3 Nationality and smuggling

There seems to be a complex relationship between the nationality of traders and the economic impact of smuggling. The main determinant of whether a transaction helps Tanzania's GDP and current account balance or those of neighboring countries is where and in what currency the transaction takes place. Foreign gem dealers contributed to a substantially higher value-added from trading within Tanzania in

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[12]. See model in the box at the end of Chapter Four on "The Advantages of Doing Business in Kenya: Comparative Model of Gem Dealer's Accounts."

1991-1995. The domestic market for gemstones has been depressed since the new regulations came out in 1996. On the other hand, the greater capital base of foreign dealers made it possible for them to squeeze out Tanzanian dealers.

Tax compliance on the part of exporters is a more complex issue. At the broker level it has an impact mainly because Tanzanian brokers are more likely to be harassed by Kenyan police than Kenyan brokers. Many fear to travel there, although those who do are no more likely to pay Tanzanian export taxes than Kenyan brokers. None of the brokers pays taxes, with rare exceptions. Some dealers, on the other hand, pay some taxes. In the case of dealers, it seems to depend in the first instance on where the dealer's primary business interests are located.

Persons whose primary business interests are in Tanzania have the greatest incentive to pay taxes and conform to Tanzanian law. Persons whose primary business interests are in another country, on the other hand, whether they themselves are of Tanzanian or foreign nationality, have a greater incentive to evade taxes. In applying the 1996 regulations that set more difficult conditions for foreign dealers than for nationals, Tanzanian gem traders and the Ministry of Energy and Minerals took account of this factor. By common consent, and with the support of Tanzanian dealers, several foreign nationals whose primary business is located in Tanzania were exempted from the more difficult conditions and allowed to operate as Tanzanians. Foreign dealers **not** licensed to do business in Tanzania, however, rarely if ever pay export taxes on their purchases.

Recently Tanzania, Kenya and Uganda got together and revived the idea of an East Africa with free trade and potentially more complete economic cooperation. How Tanzania decides to deal with the problem of foreign brokers in minerals markets will depend in part on what is negotiated in this regional context.

6.0 RECOMMENDATIONS FOR BETTER INTEGRATED MINERAL MARKETS

6.1 General Recommendations

The most important policy consideration regarding artisanal mining is that liberalizing the sector has been a great success. Despite some delays and fluctuations in establishing a new policy and regulatory framework, the sector has grown at a rate unparalleled by any other sector in the economy. It has, moreover, generated employment and income on an unprecedented scale among the lowest income agricultural population in the least developed areas of the country. As the sector evolves, it will be important and difficult to ensure its continued vitality. There is a risk that, in the name of reform, measures may be taken that would jeopardize the continued operation of artisanal mining.

The government has, over the last year, laid down a progressive policy framework and development strategy designed to promote continued growth in all forms of mining.[13] It calls for a "transparent, streamlined and competitive legal and regulatory system to attract local and foreign investments in the mineral sector and encourage formal small-scale mining."[14] It aims to provide adequate incentives to foreign investors while maximizing government revenues and minimizing environmental damage. Most of the specific policy recommendations currently under consideration would benefit all forms of mining, from formal, large-scale foreign investments to small-scale joint ventures and artisanal mining. Clearer claim boundaries, simpler procedures, the development of financial tools to facilitate mining investments, and the provision of tax incentives will encourage all types of miners.

Professional associations also need to play a more solid role. Riddled throughout the marketing system, raising transaction costs and participant anxiety, is a generalized problem of mistrust. Professional associations such as TAMIDA, the Chamber of Miens and FEMATA need to work with the government to consciously create an atmosphere of trust.

The following concrete steps are recommended:

- **Reverse the policy on smuggling**

A major focus of this marketing study is the problem of smuggling. There are two possible responses to smuggling. One is to enforce the law. The other is to change it. Tanzanian officials seem at present to be caught between the two. The recommendation of this study is that the best way to attract the trade to go through Tanzania is to change the law. The reasons are simple:

(1) taxation and attempts to regulate exports are the main factor forcing the trade out through Kenya; and

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13. See *The Mineral Sector Policy of Tanzania* (draft version, 12 February 1997); Ministry of Energy and Minerals, *Mineral Sector Development Strategy* (draft II, 11 December 1996); and *Proceedings of the Workshop on Mineral Sector Development Strategy*, 13-15 November 1996 (working draft 04, 27 February 1997).

14. *The Mineral Sector Policy*, section 4.2.2.

(ii) it is impossible to enforce the law. Precious minerals are too easy to conceal. Like all high value/low volume products, they cannot be readily controlled across long, largely un-monitored land and sea borders.

- **Remove fiscal and monetary disincentives**

The main implications of the above recommendation would be in the fiscal area. The fiscal regime policy to mineral markets should aim:

- to increase government revenue;
- to attract new capital -- as investors invest and reinvest in mining and trading activities; and
- to improve the ratio of official exports hence discouraging smuggling activities.

To achieve the above, there is need:

- to eliminate the remaining constraints to a fully market-based exchange rate;
- to institute competitive and transparent tax arrangements. We believe that the greatest growth in the sector, and the greatest overall tax yield, would result from eliminating all taxes and royalties on exports of artisanal precious minerals production. This is essentially because neighbouring Kenya, which currently attracts the majority of the trade, imposes no taxes and facilitates the trade of exporters instead of treating them as smugglers. To be competitive Tanzania would have to do the same thing. If it succeeded and was able to attract a substantial portion of the trade into Tanzania, additional foreign exchange would be generated. The additional foreign exchange would be used to purchase imports. The tax revenues from imports would more than compensate the forgone revenue, which, in any case, is currently collected on only 5.0%-40% of precious minerals.
- if the government opts not to test the zero export tax hypothesis, minerals taxes at export need to be consolidated and paid at a single point and the total tax burden must be reduced to a minimum. Mineral taxes should be competitive especially in comparison to those applicable in neighbouring countries;
- to continue the recently enacted policy of zero tax on imports of mining, lapidary and heat treatment equipment.

In addition to the above two major policy areas, the government can do much to promote the orderly growth in the sector. Each of the main constraints needs to be addressed: lack of knowledge and current market information; lack of capital; and cumbersome regulatory procedures.

- **Provide viable infrastructure**

The Government has primary responsibility for the infrastructure, and this is a critically inadequate area for Tanzanian mining development as well as for other investors. Roads are poor, and sometimes

impassable. Telecommunications facilities are inadequate and among the most expensive in the world. Electricity is inadequate and more costly than in neighbouring countries.

Support services such as banking and insurance are also weak. Lack of local banks and poor roads exacerbate the security problems that plague miners and traders of precious minerals miners and traders. For lack of viable legal export channels, shippers often cannot insure their shipments, thus extending the risk of theft throughout the entire marketing network.

- **Reform institutional support**

A study of the institutional aspects of mining was commissioned separately from this study. While the report is not yet official, it is likely to recommend reforms that would substantially enhance the ability of the precious minerals trade to function. It is clear that what is needed includes an increase in the ministries' ability to administer the section: better working facilities; adequate budgets; well-trained staff; coordination among government departments; lower the administrative costs; improved law and order in mining areas and the protection of licenced miners, brokers and dealers; and improved revenue collection from a wider tax base.

- **Create new regulatory institutions**

New institutions are needed to support precious minerals marketing, chief of which is a minerals valuation system. Thai, German and US dealers associations have created either neutral certification services or central buying offices whose valuations are trusted by buyers, sellers and bankers. Francophone African countries have government assay laboratories which, for a modest fee, will provide an accurate appraisal of the purity of gold for dealers, jewellers and even ordinary consumers. Even in countries where other institutions are corrupt, the assay offices have remained strikingly reliable. Gem valuation is more complex and technically demanding. This is why a central marketing organization may be easier for TAMIDA to organize than the gemological certification procedure that prevails in the United States. Having a reliable autonomous source of valuation would greatly facilitate the trade. It would speed sales for those already in the sector and create confidence needed to bring in new people. Many hold back today because they have no way of knowing the value of the materials being traded.

The government could also support the sector through training and promotional activities. This could be done directly, such as the provision of extension services to mineral operators in collaboration with donors and interested NGOs on mineral identification and other market preparation activities and the establishment of institutions or the introduction of mineral market courses in existing institutions where present operators can attend at a fee. It could also be done indirectly, by giving a tax credit to operators for their investments in training, attending gem shows, using the internet and value-added activities. Government can also work with professional associations to provide better international mineral market information and organize mineral markets at primary, secondary and export market levels at intervals and locations agreed by the parties.

6.2 Financial Aspects

The capital available to artisanal miners and mineral market operators can be improved by: increasing the present operators' incomes to allow them to save and invest; formalizing the traditional funding schemes; and giving financial institutions sound appraisal services to allow them to support the sector's

activities. The needs of small scale miners for external sources of capital can be reduced if they can get fair prices for their mineral products from mineral brokers and dealers.

Joint ventures are currently the favoured means of overcoming the chronic problem of shortage of capital among small miners. This works for some of the people some of the time. It is not the only solution, however.

Two institutional innovations would greatly facilitate access to formal credit. One is the reliable valuation service mentioned above. It is particularly a problem for gemstones. Many dealers and brokers have considerable capital tied up in gemstone stocks. In well-developed mineral markets, local banks are able to accept these as collateral because there are trustworthy appraisers.

The second institutional innovation that could facilitate access to credit is the establishment of neutral credit bureaux. Tanzania, like many developing countries, has a long history of subsidized credit schemes and a corresponding plethora of banks with a high proportion of non-performing portfolios. In contrast, in countries where formal lending schemes work, the two most important criteria for viable lending are:

(I) the borrower's history of repayment of previous loans; and

(ii) viable collateral. The new possibilities for collateral have been discussed above.

What would probably establish viable lending much faster is a computerized credit bureau. It need not dwell on past abuses, as subsidized credit tends not to be repaid anywhere in the world. The point of a neutral, computerized credit bureau is that it lets new borrowers establish a good payment history starting from scratch. They first need to know the rules of the game; checking accounts must cover all checks issued, and loans must be repaid punctually. All banking transactions of the individual for a specified period of time (usually the last three years) must be declared to the credit bureau.

The credit bureau becomes a nationwide, possibly regional, repository of credit and banking information on individual borrowers. Borrowers can start with a small loan and repay it promptly. They are then eligible for a larger loan. As loans become really substantial, the habit of orderly repayment has become established.

6.3 Mineral Markets Promotion

The performance of minerals markets in Tanzania can be transformed by improving the knowledge of participants, creating competitive markets, improving the services of supporting institutions and being aggressive to penetrate into new mineral markets.

- **Provide training**

It is essential for the government, mining associations and donors to design and conduct training programmes for interested dealers, brokers and miners on the basic gemological knowledge of the minerals they are dealing with. Mining associations, with a little better effort, could be making market information flow better in both directions. For a cost of less than $1,000 they could put a web page on the internet, as do their Thai, Sri Lankan, European, North and South American colleagues. It should include information on active local dealers and their areas of specialization so that their colleagues throughout

the world can contact them. A gem centre in Arusha, possibly with local branches, could serve as a library, providing mining and mineral market information to operators at a modest fee.

- **Encourage fair competition**

Fair competition in the mineral markets will help to increase the income of participants and stimulate production. Fair and unfair trade practices need to be defined in law, and enforced by both the government and professional associations.

Competition in minerals markets is enhanced when there are many participants. There is a need for the government to review the conditions for dealer licenses to enable more brokers to formalize their activities. The market arrangements should also be reviewed for the development of a true competition among the buyers.

- **Increase local mineral processing**

There is need to ensure increased local capacity in mineral processing and beneficiation. The government has taken the critical first step of providing import tax exoneration for processing equipment and formal mining companies' mining equipment. A wider survey of the equipment and supplies needed to enhance upstream and downstream beneficiation should be done and the tax incentive approach applied.

- **Improve security for legitimate operations**

The services offered by institutions like the police, customs, revenue and immigration departments are essential for the smooth growth of the mining sector. When police arrest illegal mineral brokers they help the government campaign for all operators to secure licenses and pay taxes. When the police harass those holding valid broker licenses, they end up increasing the number of people who will be dealing in minerals without licenses.

Lack of security in many mining areas, even the established ones like Merelani, has forced many mineral dealers to operate from their offices. It keeps miners from even entering their own claims. Any effort to create better mineral markets in the mining area should also address the issue of security.

Local safe vaults or bank branches with safe-deposit boxes are also badly needed. Miners and dealers at present have to ensure their own security. In the atmosphere of grandiose dreams and greed that prevails, this is difficult. Tanzania's tradition of peaceful cooperation and ethnic tolerance goes a long way to overcome this, but better institutions will keep it from being constantly put to the test.

- **Remove remaining foreign exchange controls**

The customs and commercial banks issue and approve export documents. The CD3 form for exports worth over $10,000 is used to restrict exporters from using the foreign exchange generated by their sales while they are overseas. They are allowed to use the FOREX eventually, but must first remit all export proceeds and exchange them at the cheque rate. Then they may exchange them back into FOREX, losing 2-10 percent overall. Once the right to use the FOREX has been conceded, forcing dealers to lose money on the process is perceived as an unjust nuisance. It fosters noncompliance. Filing the CD3 form is rapid in itself, and dealers did not complain about the filing. It probably would be wise to eliminate the

repatriation requirement and the cheque exchange rate, but keep the requirement to file the form. Internationally it has become the main means of identifying money laundering from other illicit activities, which is always a possibility in precious minerals marketing.

- **Simplify immigration procedures.**

The Immigration Department can assist promotion of mineral markets by simplifying the procedure to get business visas to mineral buyers and resident permits to foreign investors and workers in value-added activities. The department needs to be tough on illegal foreign mineral brokers presently operating in mining areas. The government efforts to promote legal trade cannot be successful if there are big numbers of foreign brokers in areas like the Merelani (Tanzanite) mine. The department can improve its performance if it works very closely with the Mines Department of the Ministry of Energy and Minerals and mining association leaders whose members are in a good position to know who is a foreigner and mineral buyer.

6.4 Socio-Economic Situation in Mining Communities

Enhancement of local authority structures and the implementation of community development plans will improve living conditions in the mining areas. These developments will also help formalize most economic activities in mining communities and hence increase the number of tax payers. In order to sustain these changes, it is proposed that local communities have the authority to levy taxes. Some of the revenues should be earmarked for environmental restoration and improvement of community social services.

- **Attract more trade to Tanzania**

Attracting more of the current trade to Tanzania should be a goal of the proposed marketing and fiscal reforms. Many policy-makers state the goal as "attracting the trade towards formal channels." The two can be the same thing only if Tanzania eliminates its high transaction taxes, and adopts an incentive-based competitive legal and regulatory framework for marketing. Otherwise the two goals are in contradiction. Attempts to force the trade into legal channels in order to tax it, or to gain from the remaining foreign exchange rate differences, will actually continue to drive the trade out of Tanzania.

- **Develop upstream and downstream sectors**

Policies that encourage voluntary moves into these areas are constructive; those that force it fail because they force economic operators to allocate scarce resources to less viable uses. Policies that would do most to facilitate the development of value added in these areas include:

- communicating information about opportunities, technology and training to interested parties;
- developing the infrastructure required to run a business, such as roads, power supply and telephone lines, and reducing user costs on all these inputs;
- creating a low, uniformly enforced, and predictable fiscal framework; and

- facilitating the development of skilled manpower.

At present, the gemstones of Tanzania are generally exported in rough form, in contrast to gold, which is generally refined to at least 99% purity. Rough gems fetch a lower price per weight, although the higher volume of business makes this trade more profitable to most dealers than the export of cut stones. The degree to which minerals extracted are subjected to further processing and/or beneficiation is largely determined by the local capacity. Government has stressed commitments by dealers to engage in lapidary and other processing, without examining their technological and financial capacity to do so.

Not many participants in the sector have a basic knowledge of gemology. As a result, even simple processing like lapidary and cutting is not adequately performed. There have been cases whereby customers are not satisfied with the standard of the stones cut locally so, as a means to avoid conflict with customers, many traders would prefer to sell rough stones. Capital allocation is also a factor. An oven for heating sapphire costs over US$200,000. With that much operating capital a dealer would be among the most active in Tanzania. He could multiply his capital several times over by trading during the period it would take him to learn the art of heat treating and build a network of suppliers and buyers.

6.5 Government Ministries

- **The importance of frequent inspections**

The growth of the mineral trade has always being influenced by the administrative role of government departments and the support given to mineral traders. It was observed that the procedures of claim allocation and the frequency of mine inspections influences the type of technology and production organization systems used by mine operators and hence the quality and volume of the gemstones, gold, and diamonds produced by small miners. In Umba Valley mining area, for example, workers invade unattended gemstone claims and mine in an uncontrolled manner. Most of the minerals are sold to small brokers who smuggle them to Kenya.

These areas are those given to mining companies or individual owners who have failed to operate them. Regular mine inspections could have addressed this problem, as inactive mines revert to the state. But the mine office does not have sufficient operating funds to conduct regular mine inspections.
Frequent inspections might also have mitigated the collapse of the Tanzanite market, which resulted from the allocation of hundreds of tiny plots and a scramble to produce. The size of mine plots at Block B, Merelani Tanzanite mine are only 50 ft x 50 ft. This was done in response to pressure to allocate the area to many applicants. At present, there is dangerous underground mining where several pits cross each other in underground tunnels. Pit owners normally do not go under the pits for safety reasons and this has resulted in the poor custody of recovered Tanzanites, which are stolen by workers and end up in brokers' hands. If minimal safety standards were enforced, the mining would have to slow some, and less of the minerals would leave the country.

- **A proper recording/ market information system required**

The present recording system of mineral purchases and exports does not allow easy data processing to monitor the export trends of individual coloured stones, gold, and diamond. This information will enable the Mineral Resources Department (MRD) staff to advise dealers and miners. No serious support to mineral trading was noted during the study. A few foreign buyers visiting the Ministry of Energy and

Minerals are usually directed to dealers but there is no foreign market information, service or any training in gemology ever conducted or organized by MRD. New mineral dealers also complain the MRD was not in a position to advise them on how to start value-added activities or the choice of equipment. Very few MRD staff have gemological knowledge which limits the ability of field staff to advise mineral operators.

- **Call for coordination**

Coordination among government departments, as well as with representatives of mineral operators is very important for the growth of the mineral trade. Government departments should share information on the plans and records of operators in the areas of inspection, taxes and other relevant issues. This will lower administration costs as well as reduce the unnecessary bureaucracy hampering mineral operations. The cost of poor coordination was noted in a meeting with brokers in Arusha where those with a license are as harassed by police as those without. The police refuse to recognize their licenses and sometimes arrest them without communicating with the mines office. This practice has discouraged other brokers from securing licenses and hence, the delivery of government revenue.

The Tanzania Revenue Authority, for example, should work closely with the Ministry of Energy and Minerals to streamline the revenue collection procedures. Tax assessment exercises should be clear to mineral operators and educational programmes should be carried in order to discourage informal practices.

In Mwanza, two government officers working on separate departmental objectives drove out all legitimate trade. The sales department of Tanzania Revenue Authority (TRA) was insisting on collecting 30% of the gold purchased by gold dealers, a tax which is supposed to be paid by gold miners. The zonal mines office was reluctant to cooperate with the TRA on grounds that the exercise would discourage government efforts to formalize the activities of the mineral traders. When the TRA representative tried to collect from dealers, they disappeared.

- **Balance the interests and activities of formal and artisanal mining**

Efforts to ensure better mineral market should also involve the encouragement of balance in activities of the formal and artisanal mining. Technical criteria and zoned reservations need to be established as efficient mineral market will need continued opportunities for artisanal mining. Ghana has paved the way in this area, creating rapid growth in both modern and artisanal mining over the last five years. The largest, richest deposits tend to be developed by modern mining companies. But many reefs are too narrow to be economically exploited. When companies narrow their claims after the prospecting phase, reserves are created for artisanal miners. Even in the largest reefs, if they are close to the surface, the first thirty metres could be reserved for artisanal miners. International mining companies would object, as that is the most cost effective area for their mining as well. But international companies can and do take over areas that have been artisanally mined for centuries, and make viable profits from the deeper levels. Such a policy would not keep them from investing in Tanzania.

In contrast to reef mining where formal companies will likely take first pick, alluvial deposits should generally be reserved for artisanal mining first. If more efficient modern technology can still generate economic yields once alluvial mining has been voluntarily abandoned, and if the environmental consequences permit, it can be used to reprocess the leavings.

Annex 1

Table 1: **Gemstone Exports (Jan 1991 -June 1995)**

	1991	1992	1993	1994	1995
Mineral	Value(US$)	Value(US$)	Value(US$)	Value(US$)	Value(US$)
Tanzanite	573018.27	379761	1721691.4	3286338	3640832
Ruby	1225361.1	1821949.4	901575.5	424780	262114
Anylite	57416.7	291774.5	93152.45	117947	105548
Rhodolite	161764.9	235405.84	332664.82	615561	492459
Red Garnet	42460.3	193818.24	272156.59	167911.5	229216
Tourmaline	35744.3	36996.33	72703.64	161087	84195
Other Garnet	19812.8	23262	62161.4	265870	117123
Amethyst	14098.5	29310.7	33363.34	18455	2279
Chrysoprase	16007.4	25130.7	25063.1	35626	39231
Chrysoberyl	4.8	14050	0	1570	415738
Lolite	4321	12233.96	8465.99	7930	20604
Sapphire	54906.8	9007.75	47462.96	324854	537575
Scapolite	4984.5	4270.9	7101.57	6452	13573
Emerald	37.5	4221.87	1008.03	9817	950
Peridot	1358.4	3669.28	4173.13	5194	1522
Aquamarine	456.1	3406.01	3119.32	10054	4475
Apatite	127.5	1674.15	269.09	271	138
Zircon	1875.2	1107.44	6436.93	28126	12737
Spinel	432.6	566.45	988.65	5390	35734
Other	545003.33	145094.18	321205.31	970671.1	17846.65
Sub-total	**2759192**	**3236700**	**3914763**	**6464845**	**2517558.34**
Diamonds	11323409	8300500	5265188	3019708	30000
Grand total	**14082601**	**11537200**	**9179951**	**9484553**	**2817558.34**

Source: Ministry of Energy and Minerals

ANNEX 2

The Tucson 1997 Report

The Tucson Gem and Mineral Shows have been an annual event for over 30 years, and over that time, have grown tremendously. While it started as a mineral show, Tucson became a significant gem market about 15 years ago, and largely due to the AGTA (American Gem Trade Association) show, has become one of the largest, most important gem markets in the world today. Lasting over two weeks, the size and scope of the Tucson Gem Shows are almost impossible to comprehend. This year, to try to put the magnitude and importance in perspective, there were no fewer than 19 different gem shows, each at a different site and each with at least 100 dealers represented. This means that during the first part of February, no fewer than 1,900 dealers from virtually all the gem centers of the world were in Tucson, Arizona. The number is really much higher since some shows have significantly more than 100 dealers.

The largest and most important of the various shows, is still, without a doubt, the AGTA Show held at the Tucson Convention Center. The AGTA Show was a particularly important show in 1997. It is always an excellent barometer for the availability and demand for any gem species, but this year, especially for Tanzanite. There were over 230 dealer exhibitors in the AGTA Gem Fair '97 from virtually every corner of the world, with the dominant centers represented being New York, Israel, India and Bangkok. AGTA and other show guides are included with this report.

One of the most important aspects of going to the AGTA Show is to get a feeling of what is new in the gem world, and to get a feeling for relative availability. Any new discoveries, natural or synthetic, generally first show up in Tucson. This year, for instance, the new Tanzanite simulant made from quartz, was particularly significant.

Tanzanite was the dominant gemstone at the AGTA GemFair '97. There was far more of it, and at cheaper prices, than ever before. This was especially true for calibrated goods from Asia. The question of why was the major point of discussion at the show. There seems to be no single reason for the current glut of Tanzanite. Among those theories offered were, however:

1. Mosha's (an Israeli claim holder) loss of control of Block "B" at Merelani. Apparently, after the owner lost control, this rich and relatively shallow area of the deposit was first divided up among Mosha's sons, each getting 100 meter x 100 meter sub-blocks. The remainder of Block "B" was offered as 10 meter x 10 meter sub-blocks to independent miners who ravaged the Block, producing huge amounts of rough Tanzanite in a short period of time.

2. The Government freeze of gem dealing by Tanzanians from 28 January - 1 April 1996 opened up a huge black market for rough minerals to be smuggled out to Nairobi, Kenya where they were then sent to India, Israel, Bangkok and the United States for cutting. There was little or no export control in Tanzania for rough gem material. This timing coincided with the peak of production by independents in Block "B".

3. The relative crash of a previously hungry Japanese Tanzanite market shifted Indian dealers' focus to New York in search for buyers.

4. Huge amounts of rough being cut into calibrated goods resulted in huge stockpiles, particularly among Indian dealers. With the very high interest rate that they pay on funds used to purchase inventory, these goods had to be sold very quickly.

A result of all of the above is now the commonplace offering of 5,000-8,000 carat parcels in New York for as low as US$80.00/carat for mixed parcels. It is doubtful that prices this low could be obtained in Arusha. Everyone seems to be dumping their stocks. Prices on calibrated goods have dropped 30-70% in the past year.[15]

Very fine, well-cut Tanzanite over five carats in weight seems to still be relatively rare and maintaining relatively stable prices. The problem voiced by several suppliers, however, is that the average jeweler really did not differentiate much between the cheap, lower quality grades, and the larger, finer stones. This could result in the American market viewing Tanzanite as a very inexpensive stone, and, if not set properly, with relatively low durability. One major outlet for the Tanzanite has been the Home Shopping Network on television where Tanzanite has been set in rings and bracelets with little concern for the relative softness of the material. Once people realize the risks of improperly mounted Tanzanite, the reputation of the material could be dramatically marred and would be dangerous to the future of the Tanzanite market.

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15. Personal communication, Doug Parker, Kuhn and Co.

Tanzanite Prices

The prices for Tanzanite as reported for the past five years in Jeweler's Circular Keystone, an important trade magazine, are shown in Table I and will be discussed below. Figures for finer quality Tanzanite were not available, although it is well known that since its discovery in 1968, the price has fluctuated dramatically. In 1970, the first Tanzanites were sold by a Los Angeles dealer, Martin Ehrman for $15.00/carat. With Tiffany's promotion of Tanzanite, the price rose to $100.00/carat by 1972, and to $300.00 to $400.00/carat in the Mid-Seventies. By 1980, large important stones were going for as high as $2000.00/carat. In the 1980's Tanzanite almost disappeared until its revival in the late 1980's. At that time, fine stones at Tucson were bringing $600-$800/carat. Since 1991, there has been over a 10% per year decrease in the price of fine goods averaged over time. This year, the finest stones could be obtained for between $200 and $300/carat. At least one very fine 10 carat Tanzanite sold for $175.00/carat, and a 45 carat stone sold for about $150.00/carat.

Another significant market that should be noted opened up this year at Tucson, and that is the market for fine, undamaged crystals of Tanzanite. There were more for sale than ever before; obviously, the result of the huge amounts of rough being smuggled out. I was shown one crystal, weight approximately 3500 carats, and the German dealer who had the piece was asking $200/carat assuming a 20% recovery or $170,000.00. About a dozen crystals were seen in the $25,000 to $75,000 range and literally dozens in the $5,000 or less range. A major market could develop for fine crystals with little cutting value if they could be recovered without damage. The slightest "ding" can bring the value of a crystal down by over 50%. There was a German group, known by the name Bora Gems in the main Tucson Gem and Mineral Show that was held in the Convention Center from February 13-16. This group had a significant number of crystals and a large amount of rough, tumbled, and cabochon stones for sale. They claimed to be mining in Block "B". Bora Gems was offering cabochon rough, tumbled Tanzanite and facet rough to the trade. Top quality cabochon rough in less than 100 gram lots were being offered at $5.60/gram; tumbled Tanzanite in 100 gram or less lots were $8.40/gram for the finest grade; and facet rough in 1 gram (5 cart) sizes were $100/gram for the finest quality. Assuming a 20% yield on the facet rough, this would suggest a cost of $100/carat to the cutter for a one carat Tanzanite of the finest grade (see Attachment A).

Table I extracted from Jeweler's Circular Keystone shows the prices for both good and fine 1 carat Tanzanites holding steady between 1990 and 1992, at between $120 and $240/carat. In 1993, both grades dropped in price significantly to as low as $60/carat for good stones to $100 to $160/carat for fine stones. The price for good quality stones stayed in this range, rising only from $100 to $125/carat for the top price for good stones between 1993 and 1996. During this same period, fine stones dropped from $180/carat to $240/carat in 1992, to $100 to $160/carat in 1993. The top end price for fine goods recovered in the next three years to $220/carat in 1996. It is important to note that these reported prices are the prices that retail jewelers paid to wholesalers for single stones.

The prices for larger than 1 carat stones in good to fine qualities are not recorded by JCK. However, generally speaking, the price of a fine 5 carat or larger Tanzanite dropped from about $600 to $800/carat in 1992, to $400 to $600/carat in 1993, and dropped at a rate of about $50/carat for the years between 1994 and 1996. The "Tanzanite Work Sheet" provided by Gemtech International Corp (Attachment B) reported prices for "super" stones to be about $350/carat and fine stones at #$300/carat. They also reported a price of $235/carat for 1.3 carat fine rounds in January 1997 (Attachment C).

The prices observed at GemFair '97 indicated a significant drop in price for good to fine Tanzanites of all sizes. As noted above, the finest quality Tanzanites at the show could be obtained for less than $225/carat

and perhaps as low as $150/carat for significant stones. Calibrated stones under a carat could be purchased for as little as $50.00/carat.

Quality of cut is a major factor. The African cut stones tend to be cut to retain weight at the expense of beauty and cost significantly less per carat. Generally, African cut stones need to be re-cut at a significant loss in weight. Stones cut in Germany and the U.S. seem to be very well cut, and are holding their value.

There is no duty of gem rough coming into the U.S. and the cut material falls under the protection of Preferred Nation Status. If there is an export duty in Tanzanite leaving Tanzania, it is unimportant since almost all of the rough is being smuggled out. One dealer at the AGTA Show who does cut a great deal of Tanzanite rough in the U.S. stated that it costs him about $700.00 to bring out $100,000.00 in rough. It was unclear whether this was official export with very low valuation on the rough, or bribes to officials. There is no way to estimate the amount of rough leaving Tanzania, but it is obviously a huge amount over the past year.

Other East African Gemstones at Tucson

East Africa is just beginning to realize its importance in the world gem markets. At Tucson, it was obvious that Tanzanite has become a staple of the gem markets along with ruby, emerald, and sapphire as shown in marketing pieces. Other gemstones were also in abundance. Rhodolite garnet was being offered in significant amounts and the price of $45.00 per carat seems to be holding for average stones. Rhodolites for as low as $15.00/carat and as high as $165.00/carat were also observed. The Alexandrites for $2000.00/carat and cats eye chrysoberyl from Tunduru were not as abundant as last year, but were very popular. Other Tanzanian gemstones observed were very fine scapolites from Morogoro for $17.00/carat and "mocha" zircon for $15.00/carat. Tsavorite, while popular, was present in relatively small amounts, with top 2-3 carat stones bringing $1200-1500/carat.

Dealer's Comments

Dealers claim that they can choose from mixed parcels up to 5,000 carats in size for as little as $85/carat. These are good commercial stones for a middle man. Somewhere, it is felt, the middle man is getting the material for about $60/carat in order to sell it to the wholesaler for $85/carat. These are goods that an average jeweler could sell well. They are having problems selling the 5,000 carat lots, so now breaking up into smaller parcels by size and by color grade. It was reported that even the rough in Arusha is not being sold in huge mixed lots, but rather is now color graded into segregated lots. It was generally felt that the suggested $60/carat price for the middle man, presumably in Asia, is lower than what they would be offered for in Arusha, Tanzania.

The general feeling was that the finer quality stones will be stable in price at $200-$300/carat and the poorer commercial stones could, at least temporarily, drop significantly, to 1972 levels of $100/carat for 3 carat and above stones.

There was generally a feeling of frustration at the huge supplies at unstable prices among the dealers in Tucson. Everyone knows that the Merelani deposit is very limited and should supplies cease for any reason, the commercial market could evaporate as it did in 1972 when Tiffany's lost access, and, therefore, dropped marketing of the material. If however, any gem deposit in the world could be secured, it would be Merelani due to its small size. The independent miner, however, probably would not be part of the equation. Government corruption must also be set aside. Last year, on 28 January 1996, the government forbade the Tanzanians to deal in gemstones. At the same time, independent miners took over the shallow workings of Block "B" and produced huge amounts of material. Foreign buyers illicitly purchased this production at black market prices and smuggled material out. It wasn't until April 1, 1996, that Tanzanians could again deal and the situation rectified itself somewhat. If the Merelani deposit could be secured and access tightly controlled, the Tanzanian government would have the opportunity to develop Tanzanite as a very important gemstone. By securing the deposit and open-pit mining using legitimate mining companies, the government could control the supply, not unlike what DeBeers has done with the Diamond Producers Organization and Diamond Corp. where all production is sent to the CSO for sorting and distribution. On the other side of the equation, the government must help develop the demand for Tanzanite by international advertising and marketing. In doing so, it would be controlling both the supply and demand for Tanzanite and insure its market stability as long as supplies last. No one has ever estimated the resources of this very limited and very unique deposit.

Conclusions to Annex 2

The AGTA 1997 Show Guide has on page 54 a promotion of Tanzanite as "a fashion-forward stone for customers who crave something different". The AGTA GemFair '97 was larger and more elaborate than ever with over 230 dealers from all over the world. It is, and since its inception, has been, a key indicator of gem market trends, prices, new materials, new synthetics and treatments, and availability. This year, the most significant observation was the incredibly rich supply of Tanzanite and the aggressive marketing by suppliers to help sell Tanzanite. For the first time since its discovery in 1968, Tanzanite was one of the most common gemstones in the show and it was readily being promoted along side of ruby, sapphire, and emerald as a "staple" of the business.

Of the approximately 230 dealers in the GemFair, about 25 had inventories of Tanzanite at the show exceeding 1,000 carats. One dealer, named Heskia, boasted over 10,000 carats in his inventory with a value of over $2,000,000.00 Another, Bill Barker, estimated that he had 4,000 carats at the show. Given these numbers, if we attempt to estimate the total number of carats at the AGTA GemFair '97, we would have to say that a very conservative estimate would be 25 dealers times 1,000 carats each or at least 25,000 carats of Tanzanite. One very important new product that was offered at the Gem Fair was a very believable Tanzanite stimulant made of artificially colored quartz (See Gems and Gemology). This will undoubtedly show up in places like Nairobi, Arusha and Dar, and be very attractive, especially to unsuspecting tourists.

ANNEX 3

Methods of Economic Analysis

To estimate the importance of the trade in the Tanzanian economy, we looked at all three ways of calculating gross domestic product (GDP). GDP can be calculated as (I) the value of final goods and services produced in the economy during a given time period, or as (ii) the sum of value-added in the economy during a given period (where value-added by a particular firm is equal to the value of revenue from sales minus the cost of intermediate goods) or as (iii) the sum of all incomes in the economy during a given period (usually wage income, profits and direct and indirect taxes). In theory, all three methods should give the same answer. The price paid for final goods is income to somebody in the economy and so whether we look at the revenue side of the equation or the income side, we should get the same answer. Finally, the value-added approach to calculating GDP is simply a more detailed way of accounting for the final price of the good at each stage of production.

In practice, the three approaches may give very different answers. This is particularly true when some of the activity in an economy takes place in the informal sector. Consider the chain of production presented in Table 1 based on activity in the gold mining sector. Outlined below is an example of the three ways of calculating GDP and our argument for why we think we should base estimates of the contribution of the mining sector to GDP on the value-added approach. To make things simple we will restrict the example to one particular transaction involving gold produced for export but the result is a general one. Initially, we assume that all transactions take place in the formal market. Then, we relax this assumption and suppose that certain portions of the individual transactions take place in the informal sector. The chain of production is as follows:

Calculation of GDP - All Sectors Formal

Final Goods Approach		Value-Added Approach (Millions of Tanzanian Shillings)		Income Approach	
Gold Exports	1,000	VA Dealer	300	Labor Income	620
		VA Broker	100	Profit/Loss	241
		VA Mine-Broker	100	Proprietor's Income	55
		VA Mine Worker	500	Rental Income	5
				Indirect Taxes	79
Total GDP	1,000		1,000		1,000

As expected, all three methodologies yield the same result, total GDP is equal to 1,000. Now, relax the assumption that all transaction take place in the formal sector and assume the following; 5% of final goods are exported through official channels, 5% of goods are sold to brokers through official channels, 95% of goods are sold to official brokers and 100% of mine-brokers and miners transactions take place in the formal market.

Finally, realizing that only formal transactions will show up in the national accounts, we estimate GDP according to the three methodologies using only formal transactions.

Calculation of GDP - Accounting for Formal and Informal Sectors

Final Goods Approach		Value-Added Approach (Millions of Tanzanian Shillings)		Income Approach	
Gold Exports	50	VA Dealer	15	Labor Income	526.00
		VA Broker	5	Profit/Loss	48.05
		VA Mine-Broker	95	Proprietor's Income	11.75
		VA Mine Worker	475	Rental Income	0.25
				Indirect Taxes	3.95
Total GDP	50		590		590

Since only 5% of the gold in this example is exported through formal channels, the final goods approach method to calculating GDP wildly underestimates the contribution of the gold mining sector to GDP. Since we know that a large portion of final sales from mining activities take place in the informal sector, it will be important in our economic analysis to take this into account. Further, as we demonstrate here, since both the value-added approach and the income approach provide more detail about the composition of GDP they force us to think more carefully about each aspect of the gold mining activity and not just the final sale.

This example highlights a couple of important issues. First, the method of calculating GDP may lead to serious underestimates of the mining sector's contribution to GDP at present. For example, to the extent that the contribution of the mining sector to Tanzania's GDP is calculated based on official exports (i.e., using the final goods approach) its actual contribution at present is seriously underestimated. This could falsely lead to the belief that the mining sector is underdeveloped and a policy that wrongly encourages excess investment in the sector. Alternatively, if the income approach (or factor cost approach) is used to estimate GDP and if mine workers are counted as part of the rural population whose reservation wage is estimated at 400 TSH per day then GDP is also seriously underestimated as is the contribution of the mining sector to GDP. For example, this study found that an estimated 550,000 persons are involved either full or part-time in mining in 1995 and that these individuals have a reservation wage of 2,500 shillings a day. This implies that their daily contribution to GDP is underestimated by 1.2 billion shillings or 1.4 million USD per day. Based on a conservative estimate of days worked per year of 100 this amounts to 5% of GDP.

Second, to the extent that activities in the mining sector are undeclared (or take place in the informal sector) the contribution of the mining sector to Tanzania's exports is also undervalued. This fact alone is trivial since exports are a part of GDP. However, in light of Tanzania's large trade deficit and the emphasis placed by policy-makers on reducing this deficit, the fact becomes important. The fact that exports are being sold through unofficial channels does not mean that Tanzanian dealers are not earning foreign exchange for their exports. The movement of goods to Kenya constitutes an export, and earns foreign exchange, even though indirectly. This in fact may help to explain how Tanzania has managed to record such large negative trade balances for many years without a corresponding devaluation of its currency (which now floats freely). Consumption of imports are clearly greater than official exports can finance. Traders interviewed during the study indicated that the proceeds of minerals smuggling were used mainly to finance imports.

These are important issues because in order to determine the best policy vis a vis the mining sector, it is important to have a fairly clear idea of the way in which it is benefitting the economy. For example, suppose the government wants to raise tax revenue from the mining sector of the economy. Based on the figures in Table 2, a 1% tax on the value of final exports (remember the government can only tax those

exports that go through the formal market) would yield .5 million shillings in tax revenues. A value-added tax of 1% would yield 5.9 million shillings in total revenues. Or, viewed in another way, a value-added tax of only .08 percent would yield exactly the same tax revenue as a 1% tax on gold exports.

Because the way in which GDP is calculated is so important for accurate policy analysis, we will, where possible, use all three methods of calculating GDP, the final goods approach, the value added approach and income approach to estimate the mining sector's actual and potential contribution to GDP. Since the type of data we have been able to collect for this project so far lends itself most readily to an accurate estimation of GDP based on the value-added approach, our primary/initial method of estimating GDP is based on the value-added approach. However, in attempting to estimate spillover benefits from mining activities, we will use the income approach.

Estimates (provided in section 4) of the contribution of the mining sector to GDP are based on the following formulas:

Tanzanian Miner:	(1)	VATanzania, mined	=	Pm * QTanzania, mined
Tanzanian Mine-Broker:	(2)	VATanzania, mine-broker	=	(Pmb -Pm) * QTanzania, mine-broker
Kenyan Mine-Broker:	(3)	VAKenya, mine-broker	=	(Pmb -Pm) * QKenya, mine-broker
Tanzanian Broker:	(4)	VATanzania, broker	=	(Pb -Pmb) * QTanzania, mine-broker
Kenyan Broker:	(5)	VAKenya, broker	=	(Pb -Pmb) * QKenya, mine-broker
Tanzanian Dealer :	(6)	VATanzania, dealer	=	(Px -Pb) *QTanzania, mine-broker
Kenyan Dealer:	(7)	VAKenya, dealer	=	(Px -Pb) * QKenya, mine-broker

Total Value-Added = (1)+ (2)+ (3)+ (4)+ (5)+ (6)+ (7) = ((VAi k = ((Q I k [Pk - Pk-1]

Where, I stands for the country of transaction and k stands for the point of transaction.
Hence, total value-added to the Tanzanian economy is equal to the sum of (1), (2), (4) and (6) and total value-added to the Kenyan economy is equal to the sum of (3), (5) and (7).

Note also, because of the equivalence of the final goods approach and the value-added approach to estimating GDP, total value-added to the Tanzanian economy is exactly equal to the true contribution of the mining sector to Tanzanian exports and hence its overall trade balance. By this same logic, total value-added to the Kenyan economy is precisely equal to lost foreign exchange earnings to the Tanzanian economy due to smuggling. Also, value-added to the Kenyan economy at each point of transaction is the potential foreign exchange benefit to the Tanzanian economy of curtailing smuggling at that point.

A final point worth investigating are the spillover benefits of the mining sector to other sectors of the Tanzanian economy. In theory, the question is not so difficult in practice it is complicated. Using our estimate of the mining sector's direct contribution to GDP, we could use the Keynesian multiplier to estimate the indirect impact of this increase in income on Tanzania's GDP. The problem with using the Keynesian multiplier is that it does not take into account supply bottlenecks and hence will tend to overestimate the spillover effects. To counterbalance this, we estimate only first-round effects. In other words we only account for the fact that part of income generated by small-scale mining will be spent on domestic goods and services and hence contribute to GDP. We will not account for spending by beneficiaries of the small-scale mining sector. The calculation is as follows:

Direct Contribution to GDP		Indirect Contribution to GDP
(1) VATanzania, mined	= Miner's Income	(1) * (1-s-m)
(2) VATanzania, mine-broker	= Mine-Brokers Income	(2) * (1-s-m)
(4) VATanzania, broker	= Broker's Income	(3) * (1-s-m)
(6) VATanzania, dealer	= Dealer's Income	(4)* (1-s-m)

Total Spillover Benefits of Small Scale Mining Sector = [(1) + (2) + (4) + (6)] *(1-s-m)

Where s is the marginal propensity to save and m is the marginal propensity to import. Since estimates of the marginal propensities to save and import are not readily available, we propose to begin with the average propensity to save (the savings rate for Tanzania) and the average propensity to import (or imports as a fraction of GDP).

The sample accounts below use round figures to illustrate how the method applies, and are not meant to reflect reality. The team's estimates of actual figures based on field work are in the following subsection.

Table 1: Marketing Activities in the Gold Mining Sector
(All sectors formal)

Dealer/Exporter	
Revenues from sales to Exporter	1,000
Operating Expenses	
Labor	10
Telecommunications	25
Travel & lodging	30
Office premises & supplies	5
Entertainment	5
Gold Purchase	700
Tax (@ 35% on profits)	79
Profit/Loss	146
Broker	
Revenues from sales to Dealer	700
Expenses	
Labor	60
Travel & Lodging	10
Gold Purchase	600
Profit/Loss	30
Mine-Broker	
Revenues from sales to Broker	600
Expenses	
Labor	80
Travel & Lodging	5
Gold Purchase	500
Profit/Loss	25
Mine Worker	
Revenues from sales to Mine-Broker	500
Expenses	
Reservation Wage	470
Travel & Lodging	5
Profit/Loss	25

Table 2: Marketing Activities in the Gold Mining Sector (Includes Estimate of Formal and Informal Sector Activities)

Dealer/Exporter

	Formal (5%)	Informal (95%)
Revenues from sales to Exporter	50.00	950.00
Operating Expenses		
Labor	0.50	9.50
Telecommunications	1.25	23.75
Travel & lodging	1.50	28.50
Office premises & supplies	0.25	4.75
Entertainment	0.25	4.75
Gold Purchase	35.00	665.00
Tax (@ 35% on profits)	3.95	75.05
Profit/Loss	7.30	138.70

Broker

	Formal (5%)	Informal (95%)
Revenues from sales to Dealer	35.00	665.00
Expenses		
Labor	3.00	57.00
Travel & Lodging	0.50	9.50
Gold Purchase	30.00	570.00
Profit/Loss	1.50	28.50

Mine-Broker

	Formal (95%)	Informal (5%)
Revenues from sales to Broker	570.00	30.00
Expenses		
Labor	76.00	4.00
Travel & Lodging	4.75	0.25
Gold Purchase	475.00	25.00
Profit/Loss	23.75	1.25

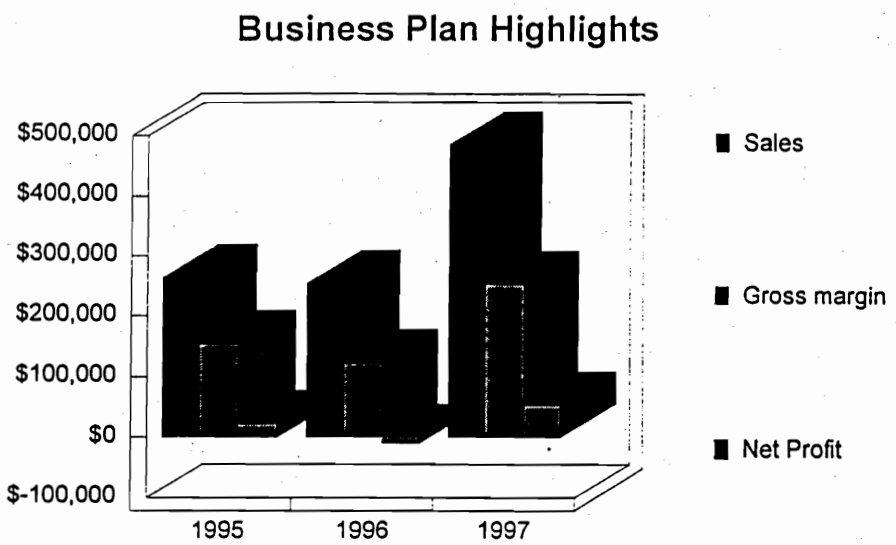
Mine Worker

	Formal (95%)	Informal (5%)
Revenues from sales to Mine-Broker	475.00	25.00
Expenses		
Reservation Wage	446.50	23.50
Travel & Lodging	4.75	0.25
Profit/Loss	23.75	1.25

ANNEX 4a
Gem Dealer in Arusha

1.0 Executive Summary

Arusha



5.2.1 Sales Forecast

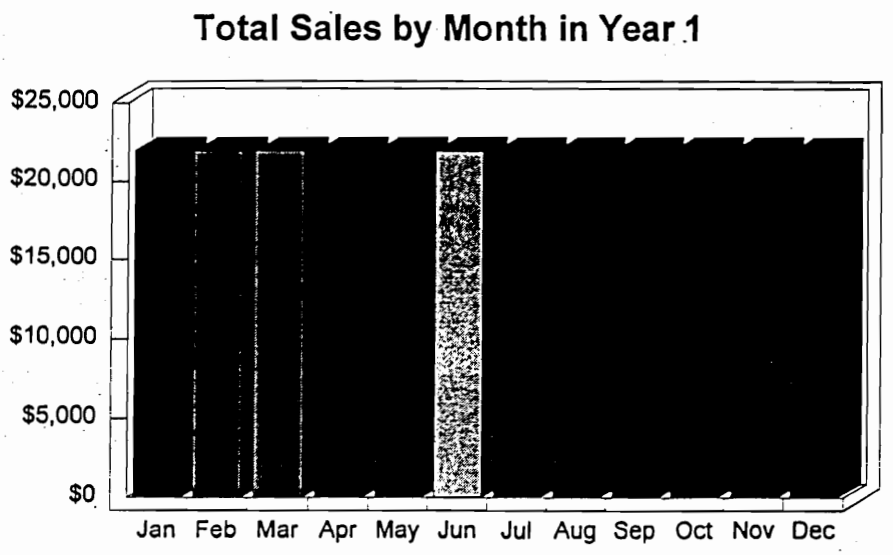


Table 5.2.1: Sales Forecast

Sales	1995	1996	1997
Ruby Cabochon, kg rough	$47,424	$56,909	$113,818
Ruby gem, gm cut to karats	$36,000	$43,200	$86,400
Almondite garnet, kg rough 1st qual	$36,000	$43,200	$86,400
Green tourmaline, gem 1gm size	$9,600	$11,520	$23,040
Tanzanite, col. A, cut >1k	$18,000	$10,000	$25,000
Tanzanite col A, gm rough	$67,200	$30,000	$32,000
Rhodololite garnet, gm rough	$7,200	$8,640	$17,280
Sapphire, 1st qual, 1 gm size	$18,000	$21,600	$43,200
Sapphire, parcel mixed, 2nd qual	$24,000	$28,800	$57,600
Other	$0	$0	$0
Total Sales	$263,424	$253,869	$484,738

Cost of sales	1995	1996	1997
Ruby Cabochon, kg rough	$23,712	$28,454	$56,908
Ruby gem, gm cut to karats	$12,000	$14,400	$28,800
Almondite garnet, kg rough 1st qual	$21,000	$25,200	$50,400
Green tourmaline, gem 1gm size	$2,796	$3,355	$6,710
Tanzanite, col. A, cut >1k	$4,800	$5,760	$12,500
Tanzanite col A, gm rough	$24,000	$28,800	$25,000
Rhodololite garnet, gm rough	$3,600	$4,320	$8,640
Sapphire, 1st qual, 1 gm size	$6,000	$7,200	$14,400
Sapphire, parcel mixed, 2nd qual	$12,000	$14,400	$28,800
Other	$0	$0	$0
Subtotal Cost of Sales	$109,908	$131,889	$232,158

6.4 Personnel Plan

Table 6.4: Personnel Plan

Job title	1995	1996	1997
Dealers	$20,004	$25,000	$30,000
Buyers, staff and guards	$12,000	$14,000	$18,000
Cutter	$9,996	$11,000	$12,000
Other	$0	$0	$0
Subtotal	$42,000	$50,000	$60,000

7.0 Financial Plan

7.1 Important Assumptions

Table 7.1: General Assumptions

	1995	1996	1997
Short Term Interest Rate	39.00%	30.00%	25.00%
Long Term Interest Rate	35.00%	28.00%	22.00%
Payment days	1	1	1
Inventory Turnover	4	4.00	4.00
Tax Rate Percent	35.00%	35.00%	35.00%
Expenses in cash%	100.00%	100.00%	100.00%
Sales on credit	75.00%	75.00%	75.00%
Personnel Burden %	15.00%	15.00%	15.00%

Note: Ratios in assumptions are used as estimators and may therefore have different values than ratios calculated in the ratios section.

7.4 Projected Profit and Loss

Table 7.4: Projected Profit and Loss

	1995	1996	1997
Sales	$263,424	$253,869	$484,738
Direct Cost of Sales	$109,908	$131,889	$232,158
Other	$0	$0	$0
Total Cost of Sales	$109,908	$131,889	$232,158
Gross margin	$153,516	$121,980	$252,580
Gross margin percent	58.28%	48.05%	52.11%
Operating expenses:			
Promotion/hospitality	$3,996	$4,500	$5,000
Travel	$4,500	$6,000	$9,000
Direct taxes on sales	$17,150	$14,902	$18,016
Other	$0	$0	$0
Payroll expense	$42,000	$50,000	$60,000
Vehicles/equipment	$16,572	$20,000	$25,000
Telecom/electr./supplies etc.	$7,128	$9,979	$15,000
Trading losses/theft/extortion	$16,668	$20,002	$25,000
Rent	$1,596	$1,596	$2,000
Depreciation	$0	$0	$0
Payroll Burden	$6,300	$7,500	$9,000
Licenses	$1,083	$2,166	$2,166
Contract/Consultants	$0	$0	$0
Other	$0	$0	$0
Total Operating Expenses	$116,993	$136,645	$170,182
Profit Before Interest and Taxes	$36,523	($14,665)	$82,398
Interest Expense ST	$2,432	$916	$763
Interest Expense LT	$0	$0	$0
Taxes Incurred	$11,932	($5,453)	$28,572
Net Profit	$22,159	($10,127)	$53,063
Net Profit/Sales	8.41%	-3.99%	10.95%

7.5 Projected Cash Flow

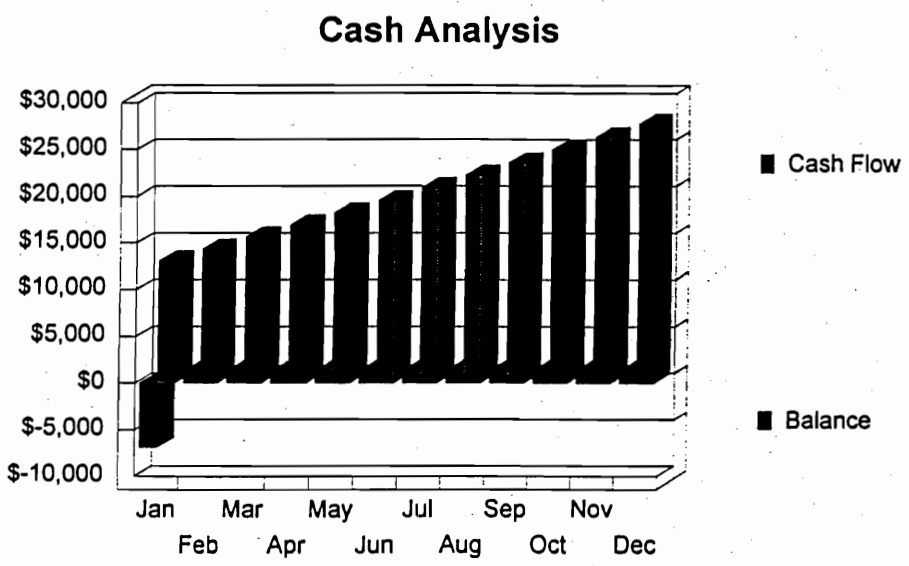


Table 7.5: Projected Cash Flow

	1995	1996	1997
Net Profit:	$22,159	($10,127)	$53,063
Plus:			
Depreciation	$0	$0	$0
Change in Accounts Payable	$0	$0	$0
Current Borrowing (repayment)	($6,948)		
Increase (decrease) Other Liabilities	$0	$0	$0
Long-term Borrowing (repayment)	$0	$0	$0
Capital Input	$0	$0	$0
Subtotal	$15,211	($10,127)	$53,063
Less:	1995	1996	1997
Change in Accounts Receivable	($10,000)	$0	$0
Change in Inventory	$17,477	$5,495	$25,067
Change in Other ST Assets	$0	$0	$0
Capital Expenditure	$0	$0	$0
Dividends	$0	$0	$0
Subtotal	$7,477	$5,495	$25,067
Net Cash Flow	$7,734	($15,623)	$27,996
Cash balance	$27,734	$12,111	$40,107

7.6 Projected Balance Sheet

Table 7.6: Projected Balance Sheet

	1995	1996	1997
Short-term Assets			
Cash	$27,734	$12,111	$40,107
Accounts receivable	$0	$0	$0
Inventory	$27,477	$32,972	$58,040
Other Short-term Assets	$0	$0	$0
Total Short-term Assets	$55,211	$45,084	$98,146
Long-term Assets			
Capital Assets	$0	$0	$0
Accumulated Depreciation	$0	$0	$0
Total Long-term Assets	$0	$0	$0
Total Assets	$55,211	$45,084	$98,146
Debt and Equity			
	1995	1996	1997
Accounts Payable	$0	$0	$0
Short-term Notes	$3,052	$3,052	$3,052
Other ST Liabilities	$0	$0	$0
Subtotal Short-term Liabilities	$3,052	$3,052	$3,052
Long-term Liabilities	$0	$0	$0
Total Liabilities	$3,052	$3,052	$3,052
Paid in Capital	$8,333	$8,333	$8,333
Retained Earnings	$21,667	$43,826	$33,699
Earnings	$22,159	($10,127)	$53,063
Total Equity	$52,159	$42,032	$95,094
Total Debt and Equity	$55,211	$45,084	$98,146
Net Worth	$52,159	$42,032	$95,094

7.7 Business Ratios

Table 7.7: Projected Business Ratios

Profitability Ratios:	1995	1996	1997
Gross margin	58.28%	48.05%	52.11%
Net profit margin	8.41%	-3.99%	10.95%
Return on Assets	40.14%	-22.46%	54.06%
Return on Equity	42.48%	-24.09%	55.80%
Activity Ratios			
AR Turnover	0.00	0.00	0.00
Collection days	0	0	0
Inventory Turnover	5.87	4.36	5.10
Accts payable turnover	0.00	0.00	0.00
Total asset turnover	4.77	5.63	4.94
Debt Ratios:	1995	1996	1997
Debt to net Worth	0.06	0.07	0.03
Short-term Debt to Liab.	1.00	1.00	1.00
Liquidity ratios			
Current Ratio	18.09	14.77	32.16
Quick Ratio	9.09	3.97	13.14
Net Working Capital	$52,159	$42,032	$95,094
Interest Coverage	15.02	-16.02	107.99
Additional ratios	1995	1996	1997
Assets to sales	0.21	0.18	0.20
Debt/Assets	6%	7%	3%
Current debt/Total Assets	6%	7%	3%
Acid Test	9.09	3.97	13.14
Asset Turnover	4.77	5.63	4.94
Sales/Net Worth	5.05	6.04	5.10

Table 7.6: Projected Balance Sheet

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Short-term Assets												
Cash	$13,078	$14,349	$15,633	$16,928	$18,236	$19,556	$20,889	$22,233	$23,590	$24,959	$26,340	$27,734
Accounts receivable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Inventory	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477
Other Short-term Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Short-term Assets	$40,555	$41,826	$43,110	$44,405	$45,713	$47,033	$48,366	$49,710	$51,067	$52,436	$53,817	$55,211
Long-term Assets												
Capital Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Accumulated Depreciation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Long-term Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Assets	$40,555	$41,826	$43,110	$44,405	$45,713	$47,033	$48,366	$49,710	$51,067	$52,436	$53,817	$55,211
Debt and Equity												
	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Accounts Payable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Short-term Notes	$9,421	$8,842	$8,263	$7,684	$7,105	$6,526	$5,947	$5,368	$4,789	$4,210	$3,631	$3,052
Other ST Liabilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Short-term Liabilities	$9,421	$8,842	$8,263	$7,684	$7,105	$6,526	$5,947	$5,368	$4,789	$4,210	$3,631	$3,052
Long-term Liabilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Liabilities	$9,421	$8,842	$8,263	$7,684	$7,105	$6,526	$5,947	$5,368	$4,789	$4,210	$3,631	$3,052
Paid in Capital	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333
Retained Earnings	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667
Earnings	$1,134	$2,984	$4,847	$6,721	$8,608	$10,507	$12,419	$14,342	$16,278	$18,226	$20,186	$22,159
Total Equity	$31,134	$32,984	$34,847	$36,721	$38,608	$40,507	$42,419	$44,342	$46,278	$48,226	$50,186	$52,159
Total Debt and Equity	$40,555	$41,826	$43,110	$44,405	$45,713	$47,033	$48,366	$49,710	$51,067	$52,436	$53,817	$55,211
Net Worth	$31,134	$32,984	$34,847	$36,721	$38,608	$40,507	$42,419	$44,342	$46,278	$48,226	$50,186	$52,159

Table 7.5: Projected Cash Flow

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Net Profit:	$1,134	$1,850	$1,862	$1,875	$1,887	$1,899	$1,911	$1,924	$1,936	$1,948	$1,960	$1,973
Plus:												
Depreciation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in Accounts Payable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Current Borrowing (repayment)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)
Increase (decrease) Other Liabilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Long-term Borrowing (repayment)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Input	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal	$555	$1,271	$1,283	$1,296	$1,308	$1,320	$1,332	$1,345	$1,357	$1,369	$1,381	$1,394
Less:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Change in Accounts Receivable	($10,000)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in Inventory	$17,477	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in Other ST Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Expenditure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Dividends	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal	$7,477	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Cash Flow	($6,922)	$1,271	$1,283	$1,296	$1,308	$1,320	$1,332	$1,345	$1,357	$1,369	$1,381	$1,394
Cash balance	$13,078	$14,349	$15,633	$16,928	$18,236	$19,556	$20,889	$22,233	$23,590	$24,959	$26,340	$27,734

Table 7.1: General Assumptions

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Short Term Interest Rate	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%
Long Term Interest Rate	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
Payment days	1	1	1	1	1	1	1	1	1	1	1	1
Inventory Turnover	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Tax Rate Percent	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
Expenses in cash%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Sales on credit	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
Personnel Burden %	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%

Note: Ratios in assumptions are used as estimators and may therefore have different values than ratios calculated in the ratios section.

Table 6.4: Personnel Plan

Job title	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Dealers	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667
Buyers, staff and guards	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Cutter	$833	$833	$833	$833	$833	$833	$833	$833	$833	$833	$833	$833
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500

Table 7.4: Projected Profit and Loss

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Sales	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952
Direct Cost of Sales	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Cost of Sales	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159
Gross margin	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793
Gross margin percent	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%
Operating expenses:												
Promotion/hospitality	$333	$333	$333	$333	$333	$333	$333	$333	$333	$333	$333	$333
Travel	$375	$375	$375	$375	$375	$375	$375	$375	$375	$375	$375	$375
Direct taxes on sales	$1,429	$1,429	$1,429	$1,429	$1,429	$1,429	$1,429	$1,429	$1,429	$1,429	$1,429	$1,429
Other												
Payroll expense	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500
Vehicles/equipment	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381
Telecom/electr./supplies etc.	$594	$594	$594	$594	$594	$594	$594	$594	$594	$594	$594	$594
Trading losses/theft/extortion	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389
Rent	$133	$133	$133	$133	$133	$133	$133	$133	$133	$133	$133	$133
Depreciation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Payroll Burden	$525	$525	$525	$525	$525	$525	$525	$525	$525	$525	$525	$525
Licenses	$1,083	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contract/Consultants	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Expenses	$10,742	$9,659	$9,659	$9,659	$9,659	$9,659	$9,659	$9,659	$9,659	$9,659	$9,659	$9,659
Profit Before Interest and Taxes	$2,051	$3,134	$3,134	$3,134	$3,134	$3,134	$3,134	$3,134	$3,134	$3,134	$3,134	$3,134
Interest Expense ST	$306	$287	$269	$250	$231	$212	$193	$174	$156	$137	$118	$99
Interest Expense LT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Taxes Incurred	$611	$996	$1,003	$1,009	$1,016	$1,023	$1,029	$1,036	$1,042	$1,049	$1,056	$1,062
Net Profit	$1,134	$1,850	$1,862	$1,875	$1,887	$1,899	$1,911	$1,924	$1,936	$1,948	$1,960	$1,973
Net Profit/Sales	5.17%	8.43%	8.48%	8.54%	8.60%	8.65%	8.71%	8.76%	8.82%	8.87%	8.93%	8.99%

Table 5.2.1: Sales Forecast

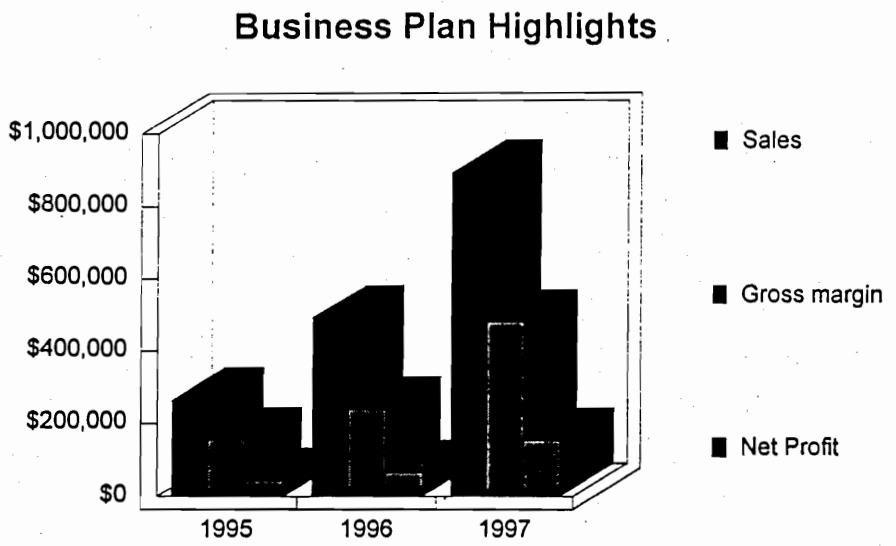
Sales	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Ruby Cabochon, kg rough	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952
Ruby gem, gm cut to karat	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Almondite garnet, kg rough	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Green tourmaline, gem 1gm	$800	$800	$800	$800	$800	$800	$800	$800	$800	$800	$800	$800
Tanzanite, col. A, cut >1k	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Tanzanite col A, gm rough	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600
Rhodololite garnet, gm rough	$600	$600	$600	$600	$600	$600	$600	$600	$600	$600	$600	$600
Sapphire, 1st qual, 1 gm size	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Sapphire, parcel mixed, 2nd qual	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Sales	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952

Cost of sales	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Ruby Cabochon, kg rough	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976
Ruby gem, gm cut to karat	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Almondite garnet, kg rough	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750
Green tourmaline, gem 1gm	$233	$233	$233	$233	$233	$233	$233	$233	$233	$233	$233	$233
Tanzanite, col. A, cut >1k	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400
Tanzanite col A, gm rough	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Rhodololite garnet, gm rough	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300
Sapphire, 1st qual, 1 gm size	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500
Sapphire, parcel mixed, 2nd qual	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Other		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Cost of Sales	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159

ANNEX 4b
Gem Dealer in Nairobi

1.0 Executive Summary

Nairobi



5.2.1 Sales Forecast

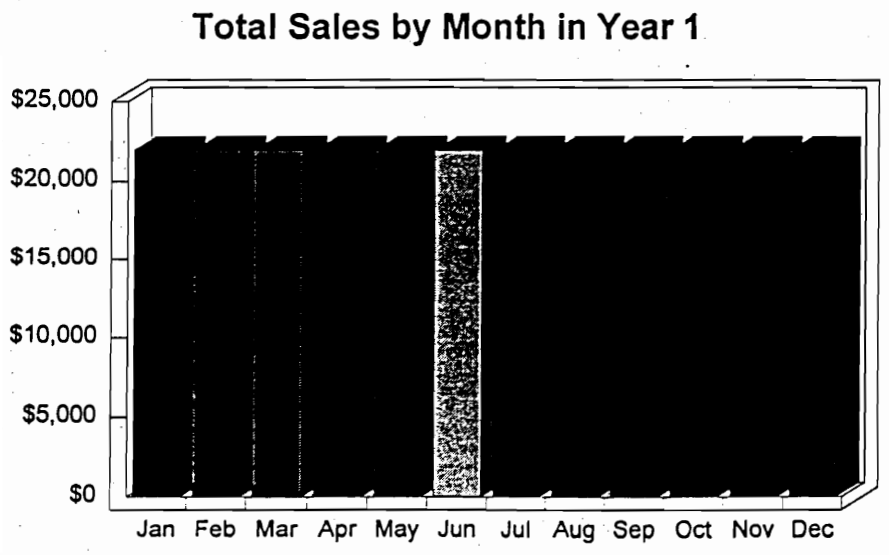


Table 5.2.1: Sales Forecast

Sales	1995	1996	1997
Ruby Cabochon, kg rough	$47,424	113818	227636
Ruby gem, gm cut to karats	$36,000	86400	172800
Almondite garnet, kg rough 1st qual	$36,000	72000	129600
Green tourmaline, gem 1gm size	$9,600	23040	46080
Tanzanite, col. A, cut >1k	$18,000	20000	50000
Tanzanite col A, gm rough	$67,200	60000	32000
Rhodololite garnet, gm rough	$7,200	17280	34560
Sapphire, 1st qual, 1 gm size	$18,000	43200	86400
Sapphire, parcel mixed, 2nd qual	$24,000	57600	115200
Other	$0	$0	$0
Total Sales	$263,424	$493,338	$894,276

Cost of sales	1995	1996	1997
Ruby Cabochon, kg rough	$23,712	56908	113816
Ruby gem, gm cut to karats	$12,000	28800	57600
Almondite garnet, kg rough 1st qual	$21,000	42000	75600
Green tourmaline, gem 1gm size	$2,796	6710	13420
Tanzanite, col. A, cut >1k	$4,800	11520	25000
Tanzanite col A, gm rough	$24,000	57600	25000
Rhodololite garnet, gm rough	$3,600	8640	17280
Sapphire, 1st qual, 1 gm size	$6,000	14400	28800
Sapphire, parcel mixed, 2nd qual	$12,000	28800	57600
Other	$0	$0	$0
Subtotal Cost of Sales	$109,908	$255,378	$414,116

6.4 Personnel Plan

Table 6.4: Personnel Plan

Job title	1995	1996	1997
Dealers	$20,004	$35,000	$60,000
Buyers, staff and guards	$12,000	$18,000	$32,000
Cutter	$0	$0	$0
Other	$0	$0	$0
Subtotal	$32,004	$53,000	$92,000

7.0 Financial Plan

7.1 Important Assumptions

Table 7.1: General Assumptions

	1995	1996	1997
Short Term Interest Rate	39.00%	27.00%	25.00%
Long Term Interest Rate	35.00%	24.00%	22.00%
Payment days	1	1	1
Inventory Turnover	4	4.00	4.00
Tax Rate Percent	35.00%	35.00%	35.00%
Expenses in cash%	100.00%	100.00%	100.00%
Sales on credit	75.00%	75.00%	75.00%
Personnel Burden %	15.00%	15.00%	15.00%

Note: Ratios in assumptions are used as estimators and may therefore have different values than ratios calculated in the ratios section.

7.4 Projected Profit and Loss

Table 7.4: Projected Profit and Loss

	1995	1996	1997
Sales	$263,424	$493,338	$894,276
Direct Cost of Sales	$109,908	$255,378	$414,116
Other	$0	$0	$0
Total Cost of Sales	$109,908	$255,378	$414,116
Gross margin	$153,516	$237,960	$480,160
Gross margin percent	58.28%	48.23%	53.69%
Operating expenses:			
Promotion/hospitality	$3,996	$8,000	$16,000
Travel	$4,500	$9,000	$18,000
Direct taxes on sales	$0	$0	$0
Other	$0	$0	$0
Payroll expense	$32,004	$53,000	$92,000
Vehicles/equipment	$16,572	24200	42000
Telecom/electr./supplies etc.	$5,669	8300	14200
Trading losses/theft/extortion	$16,668	24300	41600
Rent	$2,556	3700	6400
Depreciation	$0	$0	$0
Payroll Burden	$4,801	$7,950	$13,800
Licenses	$455	$455	$455
Contract/Consultants	$0	$0	$0
Other	$0	$0	$0
Total Operating Expenses	$87,338	$138,905	$244,455
Profit Before Interest and Taxes	$66,178	$99,055	$235,705
Interest Expense ST	$2,432	$824	$763
Interest Expense LT	$0	$0	$0
Taxes Incurred	$22,311	$34,381	$82,230
Net Profit	$41,435	$63,850	$152,712
Net Profit/Sales	15.73%	12.94%	17.08%

7.5 Projected Cash Flow

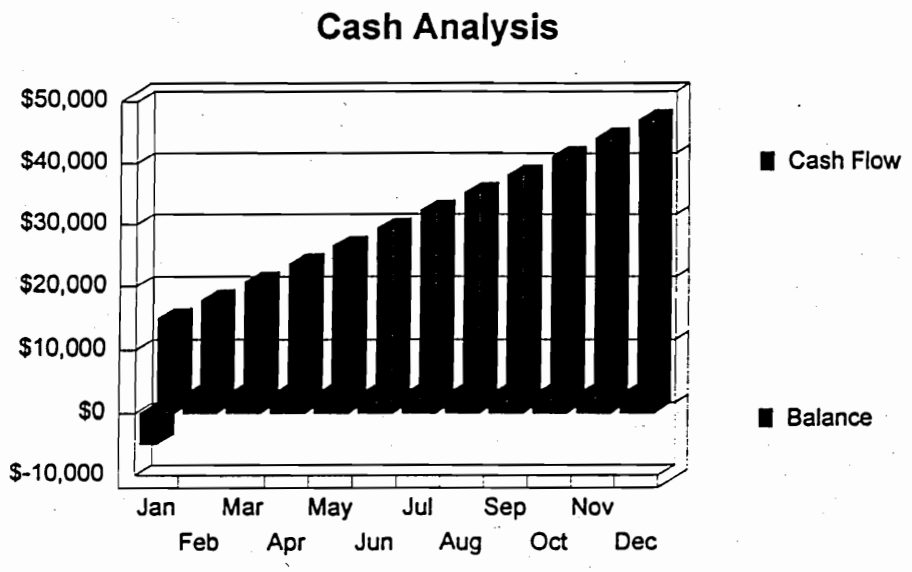


Table 7.5: Projected Cash Flow

	1995	1996	1997
Net Profit:	$41,435	$63,850	$152,712
Plus:			
Depreciation	$0	$0	$0
Change in Accounts Payable	$0	$0	$0
Current Borrowing (repayment)	($6,948)		
Increase (decrease) Other Liabilities	$0	$0	$0
Long-term Borrowing (repayment)	$0	$0	$0
Capital Input	$0	$0	$0
Subtotal	$34,487	$63,850	$152,712
Less:	1995	1996	1997
Change in Accounts Receivable	($10,000)	$0	$0
Change in Inventory	$17,477	$36,368	$39,685
Change in Other ST Assets	$0	$0	$0
Capital Expenditure	$0	$0	$0
Dividends	$0	$0	$0
Subtotal	$7,477	$36,368	$39,685
Net Cash Flow	$27,010	$27,483	$113,028
Cash balance	$47,010	$74,493	$187,520

7.6 Projected Balance Sheet

Table 7.6: Projected Balance Sheet

	1995	1996	1997
Short-term Assets			
Cash	$47,010	$74,493	$187,520
Accounts receivable	$0	$0	$0
Inventory	$27,477	$63,845	$103,529
Other Short-term Assets	$0	$0	$0
Total Short-term Assets	$74,487	$138,337	$291,049
Long-term Assets			
Capital Assets	$0	$0	$0
Accumulated Depreciation	$0	$0	$0
Total Long-term Assets	$0	$0	$0
Total Assets	$74,487	$138,337	$291,049
Debt and Equity			
	1995	1996	1997
Accounts Payable	$0	$0	$0
Short-term Notes	$3,052	$3,052	$3,052
Other ST Liabilities	$0	$0	$0
Subtotal Short-term Liabilities	$3,052	$3,052	$3,052
Long-term Liabilities	$0	$0	$0
Total Liabilities	$3,052	$3,052	$3,052
Paid in Capital	$8,333	$8,333	$8,333
Retained Earnings	$21,667	$63,102	$126,952
Earnings	$41,435	$63,850	$152,712
Total Equity	$71,435	$135,285	$287,997
Total Debt and Equity	$74,487	$138,337	$291,049
Net Worth	$71,435	$135,285	$287,997

7.7 Business Ratios

Table 7.7: Projected Business Ratios

Profitability Ratios:	1995	1996	1997
Gross margin	58.28%	48.23%	53.69%
Net profit margin	15.73%	12.94%	17.08%
Return on Assets	55.63%	46.16%	52.47%
Return on Equity	58.00%	47.20%	53.03%
Activity Ratios			
AR Turnover	0.00	0.00	0.00
Collection days	0	0	0
Inventory Turnover	5.87	5.59	4.95
Accts payable turnover	0.00	0.00	0.00
Total asset turnover	3.54	3.57	3.07
Debt Ratios:	1995	1996	1997
Debt to net Worth	0.04	0.02	0.01
Short-term Debt to Liab.	1.00	1.00	1.00
Liquidity ratios			
Current Ratio	24.41	45.33	95.36
Quick Ratio	15.40	24.41	61.44
Net Working Capital	$71,435	$135,285	$287,997
Interest Coverage	27.21	120.21	308.92
Additional ratios	1995	1996	1997
Assets to sales	0.28	0.28	0.33
Debt/Assets	4%	2%	1%
Current debt/Total Assets	4%	2%	1%
Acid Test	15.40	24.41	61.44
Asset Turnover	3.54	3.57	3.07
Sales/Net Worth	3.69	3.65	3.11

Table 7.6: Projected Balance Sheet

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Short-term Assets												
Cash	$14,986	$17,836	$20,698	$23,573	$26,460	$29,359	$32,270	$35,194	$38,129	$41,077	$44,038	$47,010
Accounts receivable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Inventory	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477	$27,477
Other Short-term Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Short-term Assets	$42,463	$45,313	$48,175	$51,050	$53,937	$56,836	$59,747	$62,671	$65,606	$68,554	$71,515	$74,487
Long-term Assets												
Capital Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Accumulated Depreciation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Long-term Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Assets	$42,463	$45,313	$48,175	$51,050	$53,937	$56,836	$59,747	$62,671	$65,606	$68,554	$71,515	$74,487

Debt and Equity

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Accounts Payable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Short-term Notes	$9,421	$8,842	$8,263	$7,684	$7,105	$6,526	$5,947	$5,368	$4,789	$4,210	$3,631	$3,052
Other ST Liabilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Short-term Liabilities	$9,421	$8,842	$8,263	$7,684	$7,105	$6,526	$5,947	$5,368	$4,789	$4,210	$3,631	$3,052
Long-term Liabilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Liabilities	$9,421	$8,842	$8,263	$7,684	$7,105	$6,526	$5,947	$5,368	$4,789	$4,210	$3,631	$3,052
Paid in Capital	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333	$8,333
Retained Earnings	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667	$21,667
Earnings	$3,042	$6,471	$9,912	$13,366	$16,832	$20,310	$23,800	$27,303	$30,817	$34,344	$37,884	$41,435
Total Equity	$33,042	$36,471	$39,912	$43,366	$46,832	$50,310	$53,800	$57,303	$60,817	$64,344	$67,884	$71,435
Total Debt and Equity	$42,463	$45,313	$48,175	$51,050	$53,937	$56,836	$59,747	$62,671	$65,606	$68,554	$71,515	$74,487
Net Worth	$33,042	$36,471	$39,912	$43,366	$46,832	$50,310	$53,800	$57,303	$60,817	$64,344	$67,884	$71,435

Table 7.5: Projected Cash Flow

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Net Profit:	$3,042	$3,429	$3,441	$3,454	$3,466	$3,478	$3,490	$3,503	$3,515	$3,527	$3,539	$3,551
Plus:												
Depreciation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in Accounts Payable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Current Borrowing (repayment)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)	($579)
Increase (decrease) Other Liabilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Long-term Borrowing (repayment)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Input	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal	$2,463	$2,850	$2,862	$2,875	$2,887	$2,899	$2,911	$2,924	$2,936	$2,948	$2,960	$2,972
Less:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Change in Accounts Receivable	($10,000)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in Inventory	$17,477	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in Other ST Assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Expenditure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Dividends	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal	$7,477	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Cash Flow	($5,014)	$2,850	$2,862	$2,875	$2,887	$2,899	$2,911	$2,924	$2,936	$2,948	$2,960	$2,972
Cash balance	$14,986	$17,836	$20,698	$23,573	$26,460	$29,359	$32,270	$35,194	$38,129	$41,077	$44,038	$47,010

Table 7.1: General Assumptions

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Short Term Interest Rate	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%
Long Term Interest Rate	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
Payment days	1	1	1	1	1	1	1	1	1	1	1	1
Inventory Turnover	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Tax Rate Percent	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
Expenses in cash%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Sales on credit	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
Personnel Burden %	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%

Note: Ratios in assumptions are used as estimators and may therefore have different values than ratios calculated in the ratios section.

Table 6.4: Personnel Plan

Job title	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Dealers	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667	$1,667
Buyers, staff and guards	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Cutter	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667

Table 7.4: Projected Profit and Loss

	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Sales	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952
Direct Cost of Sales	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Cost of Sales	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159
Gross margin	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793	$12,793
Gross margin percent	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%	58.28%
Operating expenses:												
Promotion/hospitality	$333	$333	$333	$333	$333	$333	$333	$333	$333	$333	$333	$333
Travel	$375	$375	$375	$375	$375	$375	$375	$375	$375	$375	$375	$375
Direct taxes on sales	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other												
Payroll expense	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667	$2,667
Vehicles/equipment	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381
Telecom/electr./supplies etc.	$594	$472	$472	$472	$472	$472	$472	$472	$472	$472	$472	$472
Trading losses/theft/extortion	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389	$1,389
Rent	$213	$213	$213	$213	$213	$213	$213	$213	$213	$213	$213	$213
Depreciation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Payroll Burden	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400
Licenses	$455	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contract/Consultants	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Expenses	$7,807	$7,230	$7,230	$7,230	$7,230	$7,230	$7,230	$7,230	$7,230	$7,230	$7,230	$7,230
Profit Before Interest and Taxes	$4,986	$5,563	$5,563	$5,563	$5,563	$5,563	$5,563	$5,563	$5,563	$5,563	$5,563	$5,563
Interest Expense ST	$306	$287	$269	$250	$231	$212	$193	$174	$156	$137	$118	$99
Interest Expense LT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Taxes Incurred	$1,638	$1,846	$1,853	$1,860	$1,866	$1,873	$1,879	$1,886	$1,893	$1,899	$1,906	$1,912
Net Profit	$3,042	$3,429	$3,441	$3,454	$3,466	$3,478	$3,490	$3,503	$3,515	$3,527	$3,539	$3,551
Net Profit/Sales	13.86%	15.62%	15.68%	15.73%	15.79%	15.84%	15.90%	15.96%	16.01%	16.07%	16.12%	16.18%

Appendix: Gem Dealer in Nairobi

Table 5.2.1: Sales Forecast

Sales	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Ruby Cabochon, kg rough	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952	$3,952
Ruby gem, gm cut to karat	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Almondite garnet, kg rough	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Green tourmaline, gem 1gm	$800	$800	$800	$800	$800	$800	$800	$800	$800	$800	$800	$800
Tanzanite, col. A, cut >1k	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Tanzanite col A, gm rough	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600	$5,600
Rhodololite garnet, gm rough	$600	$600	$600	$600	$600	$600	$600	$600	$600	$600	$600	$600
Sapphire, 1st qual, 1 gm size	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Sapphire, parcel mixed, 2nd	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Sales	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952	$21,952

Cost of sales	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Ruby Cabochon, kg rough	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976	$1,976
Ruby gem, gm cut to karat	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Almondite garnet, kg rough	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750	$1,750
Green tourmaline, gem 1gm	$233	$233	$233	$233	$233	$233	$233	$233	$233	$233	$233	$233
Tanzanite, col. A, cut >1k	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400	$400
Tanzanite col A, gm rough	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Rhodololite garnet, gm rough	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300
Sapphire, 1st qual, 1 gm size	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500
Sapphire, parcel mixed, 2nd	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Other		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Cost of Sales	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159	$9,159

ANNEX 5

ROYALTIES COLLECTED ON GEMSTONE EXPORTS, 1996-1997

Coloured Gemstone Exports and Royalty Revenues 1996-April 1997*

Month	Weight (gms)	Value (US$)	Royalty	Value Tsh	Yield % of Val	Exchange Rate
1996	161,328,317	9,583,248	117,659,945	5,749,948,800	2.05%	600
January	46,575,472	1,038,644	11,525,532	623,186,400	1.85%	600
February	0	0	0	0	ERR	600
March	946,383	833,394	9,495,753	500,036,400	1.90%	600
April	6,398,965	666,086	9,107,764	399,651,600	2.28%	600
May	25,540,918	1,264,457	12,951,303	758,674,200	1.71%	600
June	18,332,190	792,271	11,392,344	475,362,600	2.40%	600
July	3,019,794	812,933	10,846,233	487,759,800	2.22%	600
August	1,564,284	690,441	9,426,197	414,264,600	2.28%	600
September	1,402,555	1,123,062	12,839,200	673,837,200	1.91%	600
October	30,272,243	723,215	9,888,582	433,929,000	2.28%	600
November	26,646,884	978,999	12,070,089	587,399,400	2.05%	600
December	628,629	659,746	8,116,948	395,847,600	2.05%	600
1997						
January	1,962,905	1,003,574	11,312,383	602,144,400	1.88%	600
February	974,169	385,815	4,075,010	231,489,000	1.76%	600
March	71,810,850	469,046	6,154,822	281,427,600	2.19%	600
April	835,092	657,479	7,180,715	394,487,400	1.82%	600
4 mo total 1997	75,583,016	2,515,914	28,722,930	1,509,548,400	1.90%	600
4 mo total 1996	53,920,820	2,538,124	30,129,049	1,522,874,400	1.98%	600

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Source: Ministry of Energy and Minerals

Master Diamond Dealers' Exports

Month	Weight (carat)	Value (US$)	Royalty (Tsh)	Value Tsh	Yield % of Val	Exchange Rate
1996	8,604	728,772	16,427,347	437,263,056	3.76%	600
January	99.03	11,376.25	312,475	6,825,750	4.58%	600
February	0.00	0.00	0	0	ERR	600
March	2,514.83	92,376.28	53,331	55,425,768	0.10%	600
April	485.47	23,192.34	639,094	13,915,404	4.59%	600
May	373.53	119,567.48	668,810	71,740,488	0.93%	600
June	488.58	54,539.70	1,678,672	32,723,820	5.13%	600
July	244.30	37,816.20	1,134,486	22,689,720	5.00%	600
August	498.68	33,272.78	1,430,685	19,963,668	7.17%	600
September	1,014.25	196,936.82	5,857,744	118,162,092	4.96%	600
October	771.25	32,475.60	848,730	19,485,360	4.36%	600
November	1,834.42	39,701.16	1,191,420	23,820,696	5.00%	600
December	279.32	87,517.15	2,611,900	52,510,290	4.97%	600
1997						
January	100.94	21,170.55	1,720,460	12,702,330	13.54%	600
February	281.35	60,209.80	1,806,335	36,125,880	5.00%	600
March	420.33	66,523.20	1,995,975	39,913,920	5.00%	600
April	82.45	18,962.50	562,900	11,377,500	4.95%	600
May	1,087.35	154,035.75	4,667,800	92,421,450	5.05%	600
5 mo total 1997	1,972.42	320,901.80	10,753,470	192,541,080	5.59%	600
5 mo total 1996	3,472.86	246,512.35	1,673,710	147,907,410	1.13%	600

** Formal mines such as Williamson have 3-5 year royalty exemption currently in effect.

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EQUITY AND GROWTH THROUGH ECONOMIC RESEARCH

Trade Regimes and Growth

LESSONS FROM EAST ASIA FOR PROMOTING TRADE IN AFRICA

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Lessons from East Asia for Promoting Trade in Africa

EAGER/Trade Survey Paper

I. Introduction

For more than two decades, many observers of the phenomenal economic success of the East Asian Newly Industrialized Countries (NICs) have argued that an 'East Asian model' of economic development should be adopted by other developing countries. Citing the phenomenal growth rates, egalitarian distribution of income and thriving industrial sectors in Japan, South Korea, Taiwan, Hong Kong, and Singapore, such observers claim that a duplication of the NIC's development strategies could produce similar results elsewhere. Others dispute this claim, however, noting that while these positive results of East Asian development strategies are powerful, there is less agreement as to which policies and strategies actually led to those results. In looking to an East Asian model for Africa, this lack of consensus raises a number of questions as to both the relevance and replicative nature of such a model.

The role of the state is perhaps the most significant of these questions. Early neoclassical theorists such as Bela Balassa, Anne Krueger, and Jagdish Bhagwati argued that East Asian successes could be largely attributed to governments following an outward-oriented trade strategy characterized by the government limiting itself to providing a stable macroeconomic environment in which scarce resources can be allocated on the basis of undistorted, market-determined price signals. More recent writers such as James Riedel argue that the East Asian case should be interpreted as a validation of neoclassical principles precisely because these countries fulfilled the minimal functions of government as originally laid out by Adam Smith: the provision of public goods, including (1) international and domestic peace and security, (2) the administration of justice, and (3) the provision of infrastructure.[1]

In recent years, however, the pendulum has swung back in the direction of explaining East Asia's success in terms of more government involvement in the economy rather than less. Writers such as Alice Amsden and Robert Wade have argued that, contrary to popular opinion, East Asian governments have intervened quite extensively in their economies, actively promoting certain industries and eliminating others. That such intervention could produce such high rates of growth re-opens the question of the appropriate degree of government involvement in the development process. In examining the East Asian model for relevance to Africa, this is a particularly important topic. It raises a number of questions as to both the necessary and sufficient level of government capacity required for Asian-style, outward-oriented growth.

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[1] James Riedel, "Economic Development in East Asia: Doing What Comes Naturally?" in Helen Hughes, ed., Achieving Industrialization in East Asia. (Cambridge: Cambridge University Press. 1988): 28.

This paper reviews the literature on the East Asian experience in an effort to answer the following questions:

1. How did East Asia effectively adopt and implement an outward-oriented trade strategy?

2. What role did the East Asian governments play in that strategy?

3. What relevance does the East Asian experience with this strategy have, if any, to Sub-Saharan Africa?

Much of the existing literature on this topic is divided into four camps. The first two -- the neoclassical and statist camps -- embody the market-versus-state debate cited in the previous section. The World Bank falls somewhere between the two camps, taking what it calls a "market-friendly" approach. The third camp, represented primarily by Paul Krugman and Alwyn Young from the National Bureau for Economic Research, denies the existence of an 'East Asian miracle' and consequently questions the appropriateness of the conventional wisdom which looks to this region as a model for development. The fourth camp, based on the new institutional economics, offers new insights and suggestions for research into the institutional aspects of the East Asian experience. As each of these camps offers different answers to the three questions posed above, this paper will review each camp, and its answers, separately.

II. The Neoclassical Approach

Neoclassical development economics takes the position that the success of the East Asian countries is due to their adoption of an outward-oriented trade strategy in which the role of government is limited to the establishment of law and order, the provision of social and physical infrastructure, and the maintenance of a stable macroeconomic environment. In contrast, they argue, most African and Latin American governments intervene extensively in their product and factor markets, choosing inward-looking, import substitution policies that have resulted in stagnant industrial sectors, diminishing sources of foreign exchange, and zero to negative rates of growth. A review of the evolution of the neoclassical argument and its chief proponents is set out below.

In the post-world war period, many developing countries chose an import-substitution strategy. Economists at this time increasingly viewed the economics of developing countries as special. Structural rigidities such as low savings rates, small domestic markets, a reliance on primary-product exports and widespread underemployment suggested that a reliance on the price mechanism to allocate resources in these countries would not result in the degree of industrialization necessary for genuine growth to occur. In order to stimulate such growth, economists such as Raoul Prebisch and Hans Singer advocated for government

protection of infant industries via overvalued exchange rates, import quotas and low interest rates. Such a phase -- or subphase -- of 'easy' import substitution was thought to redirect foreign exchange away from the consumption of consumer goods, towards the purchase of capital equipment, intermediate goods and the raw materials necessary for industrialization.[2] By limiting certain kinds of imports, developing country economists thought they could overcome at least one of the constraints inherent in Hollis Chenery's two-gap model: a lack of foreign exchange.

This primary import substitution subphase -- which Gustav Ranis has noted is a "common feature of all developing countries, if occurring at different points in time historically" -- involved the domestic production of nondurable consumer goods that had previously been imported.[3] As Bela Balassa has observed, however, once an economy completes this first stage of import substitution, the rate of growth of its industrial production cannot exceed that of its domestic consumption.[4] Such economies, he argues, face two choices: begin exporting these consumer non-durables or move to the second stage of import substitution which involves replacing the domestic production of both consumer and producer durables that had previously been imported.[5]

In the 1960s, Korea, Singapore and Taiwan chose the first option after experiencing only a brief primary import substitution sub-phase.[6] These countries had pursued a relatively mild version of import substitution in the 1950s in that they had overvalued their exchange rates only slightly, preferred tariffs over quantitative restrictions on imports and rarely allowed real interest rates to be negative. By the end of the decade, they had all shifted toward a primary *export* substitution sub-phase: exporting non-durable consumer goods to the rest of the world which they had previously only produced for their domestic markets. In so doing, the East Asian tigers became the only set of developing economies to rely on the international market rather than their home market for industrialization.

The neo-classical school draws two sets of conclusions or lessons from the East Asian experience in transitioning from controlled, inward-oriented economies to outward-oriented ones. The first pertain to the reasons why an outward-oriented strategy contributes to

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[2] Gustav Ranis, "Asian and Latin American Experience: Lessons for Africa." *Journal of International Development* 2 2 (April 1990): 152. Ranis articulates an evolutionary view of economic development in which countries transition from one sub-phase of the development process to another, beginning with an agrarian sub-phase and ending with the modern growth sub-phase typical of developed countries. The intermediate sub-phases include primary import substitution (PIS), primary export substitution (PES), secondary import substitution (SIS), export promotion (EP), and secondary export substitution (SES). Raoul Prebisch and Hans Singer were considered "export pessimists" in the 1950s - arguing that relying on primary commodity exports would not provide developing countries with the technology and industrialization processes they needed for true modernization.

[3] Ibid., p. 155.

[4] Bela Balassa, "The Lessons of East Asian Development: An Overview." *Economic Development and Cultural Change* 36 3 (April 1988 Supplement): S282.

[5] Ibid., p. S282-S283.

[6] Hong Kong did not experience an import substitution sub-phase.

growth. The second involves the identification of the policies that must be in place for such a strategy to be successful.

Outward-orientation and growth: the neoclassical view

In his role as the director of the World Bank project on effective protection in developing countries in the late 1960s, Bela Balassa emerged as an early proponent of outward-oriented trade strategies which he identified as adherence to the following four principles:

1. Preferential treatment of manufacturing activities, where warranted for infant industry considerations, should be applied on a moderate scale.

2. Equal treatment should be given to exports and import substitutes in manufacturing.

3. Variation in incentive rates within manufacturing should be kept to a minimum.

4. The system incentives should be stable and automatic to minimize uncertainty.[7]

Much of Balassa's empirical work established a positive correlation between economic growth rates and the growth of exports.[8] While he acknowledges that exports and output are also affected by other variables such as increases in the factors of production, he demonstrates a direct relationship between the two by incorporating exports into a production function relationship. Using domestic and foreign investment, labor and export data from nine semi-industrialized countries for 1960-66 and 1966-73, Balassa found that adding export variables (in addition to capital and labor) to explain GDP growth increased the explanatory power of the regression equation from 58% to 77%.[9]

Additionally, he confirmed these findings for less favorable world market periods such as those that occurred due to the external shocks of the 1970s (oil price increases and the world recession). He found, "the results are cumulative, indicating that both initial export

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[7] Chung Lee and Seiji Naya cite Balassa's four principles of an outward-oriented strategy in "Trade in East Asian Development with Comparative Reference to Southeast Asian Experiences." *Economic Development and Cultural Change* 36 3 (April 1988 Supplement).

[8] Bela Balassa, "Exports and Economic Growth: Further Evidence." *Journal of Development Economics* 5 (June 1978): 181-189. There is also a wealth of literature that seeks to develop a coherent theory linking trade with economic growth. See, *inter alia*, Anne Krueger, "Comparative Advantage and Development Policy: 20 Years Later," in Economic Structure and Performance, ed. M. Syrquin, L. Taylor, and L. Westphal (Orlando, Fla: Academic Press, 1984). There is also a good deal of literature on trade as the "engine of growth," including: W. Arthur Lewis, "Slowing Down of the Engine of Growth," *American Economic Review* 80 (September 1980): 555-564; and James Riedel, "Trade as the Engine of Growth in Developing Countries, Revisited," *Economic Journal* 94 (March 1984): 56-73.

[9] Balassa, (1988): S279.

orientation and reliance on exports in response to external shocks contributed significantly to economic growth in developing countries during the period under consideration [1960-78].[10]

Balassa has suggested several reasons for the favorable effects of exports on economic growth:

1. Exports contribute to resource allocation according to comparative advantage.

2. Exports make it possible for developing countries to overcome the limitation of their domestic markets in exploiting economies of scale and ensuring full capacity utilization.

3. Exports expose domestic industries to international competition which, in turn, provides inducements for technological change.[11]

Regarding the role of government in export expansion and economic growth, Balassa takes the strongly neoclassical position that East Asia's success has been due to the response of entrepreneurs to incentives rather than to direct government intervention in the market. He notes that Korea's first two important export products were plywood and wigs, neither of which the government could have foreseen. Rather, he argues, Korea's success in exporting these products and others such as textiles and clothing occurred in response to the incentives provided rather than as the result of government decisions.

Nevertheless, Balassa does not deny that government played an important role in East Asia. He sees its principal contribution as the (1) creation of modern infrastructure, (2) provision of a stable incentive system (particularly a stable real exchange rate), and (3) a government bureaucracy committed to helping rather than hindering exports. The latter he sees as particularly important. In keeping with the neoclassical position, Balassa argues that free capital and labor markets and a small public sector in the East Asian NICs greatly contributed to their success. "The neutrality and stability of the incentive system, together with limited government interventions, well-functioning labor and capital markets, and reliance on private capital, thus appear to have been the main ingredients of successful economic performance in East Asia."[12]

Policies necessary for an outward-oriented trade strategy: the neoclassical view

Anne Krueger has observed, "the experience of the East Asian newly industrialized economies has demonstrated clearly that an outward-oriented trade strategy is not only viable, but essential for prospects for rapid growth."[13] She has also observed that, from this

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[10] Ibid., p. S280.
[11] Ibid.
[12] Ibid., p. S288.
[13] Anne O. Krueger, "The Role of Trade in Growth and Development," In Sustaining Export-Oriented Development: Ideas from East Asia, ed. Ross Garnault, Enzo Grilli, and James Riedel. (Cambridge: Cambridge University Press, 1995): 16.

experience, economists now know those policies that are essential for an outward-oriented strategy to succeed. These include:

- Exchange rate stability.

- Free access to the world market for exporters. This includes duty-free importation of the inputs used in the production of exports and the use of tariffs rather than quantitative restrictions on imports.

- Uniformity of incentives and an expectation that any government assistance is temporary.

Other policies that she cites as contributors to growth, though not necessarily prerequisites to growth are:

- Free labor markets.

- Free financial markets (with positive real interest rates).

- Adequate infrastructure.[14]

While Krueger, and others, have identified these policies as having contributed the most to economic growth, they have been less able to determine the relative contribution of each policy or set of policies. For this reason, she, and other neoclassical economists, infer a great deal from the relative experiences of inward and outward-oriented economies. Krueger characterizes an inward-oriented economy as one that:

- relies on government controls and government pursuit of economic activity
- suppresses and regulates markets
- discriminates more against agriculture
- controls the banking system and relies more on credit rationing at negative real rates of interest
- regulates wages and conditions of work
- neglects infrastructure investment and maintenance
- uses intervention instruments that permit wide disparities in incentives for different policies

By contrast, she characterizes an outward-oriented economy as one that:

- has less regulated labor markets
- discriminates less against agriculture

[14] While infrastructure is certainly a precondition for export activity, Krueger argues that the definition of "adequate infrastructure" has yet to be quantified.

- controls government spending and therefore has small fiscal deficits and lower inflation
- has more realistic exchange rates
- offers positive real interest rates
- provides more statisfactory infrastructure
- allocates more resources to education

Such characterizations are fairly typical of the early neoclassical thinking on the relative benefits of emphasizing exports rather than import-substitution. In 1970, Ian Little, Tibor Scitovsky, and Maurice Scott published the results of their OECD-funded study comparing the economic development of Argentina, Brazil, Mexico, India, Pakistan, Taiwan, and the Philippines. This study was among the first to argue that the import substitution policies that had been followed since the second world war had resulted in the creation of inefficient, high-cost industries that had become detrimental to the economic development of these countries. It made the point that replacing imports with domestically produced output has never led to a reduction in total imports. On the contrary, the more inward-looking industrialization is, the greater its requirement for imported capital and technology. The study's recommendations, innovative and controversial at the time, emphasized the importance of relying on: (1) exports to earn foreign exchange, (2) the price mechanism to allocate scarce resources, and (3) the reorganization of agriculture and industry to develop a competitive industrial base.[15]

While it strongly advocated a shift away from direct governmental control of the market, this study also outlined a role for government very much in keeping with the traditional neo-classical view. They called for a government role in: (1) administering taxes and subsidies; (2) improving the domestic capital market by keeping real interests rates positive and influencing investment decisions; (3) providing information on export markets and arranging trade fairs; (4) providing and maintaining infrastructure; and (5) providing education and training facilities for industry. More deliberate government involvement in promoting industrialization, they warned, results in "a proliferation of administrative controls, and drastic intervention in the economy, whose costs may be considerable." While prices may occasionally be overruled, "such intervention can itself pull in the wrong direction; and it can be inefficient, oppressive, or cause excessive delays."[16]

Jagdish Bhagwati, one of the original contributors to the Little, Scitovsky and Scott study, subsequently directed a research project for the National Bureau of Economic Research (NBER) with Anne Krueger on *Foreign Trade Regimes and Economic Development.* The results of that research confirmed that an export-promoting trade strategy delivers results superior to any other development strategy. It underlines that the essential elements of such a strategy include:

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[15] Ian Little, Tibor Scitovsky and Maurice Scott, Industry and Trade in Some Developing Countries. (Paris: Organization for Economic Cooperation and Development, 1970).
[16] Ibid., p. 4.

1. Keeping the equilibrium exchange rate on exports equal to that on imports ($EER_x = EER_M$).

2. Maintaining a uniform system of incentives for all economic activities.

Both the OECD and NBER research studies acknowledge the important limitation of export-led growth strategies: that such strategies rely fundamentally on the stability and continued openness of the international trade regime. Increased protectionism among OECD countries, for example, does not bode well for Sub-Saharan Africa's turn at such a strategy. Nevertheless, the Bhagwati/Krueger study demonstrates that even if protectionism prevents the world market from accommodating increased exports, countries are still better off pursuing liberalized trade regimes and utilizing relatively neutral across-the-board tariffs than they are if they attempt to control their exchange system. Such attempts at controlling exchange via quantitative restrictions, currency overvaluation and an overly complex system of rebates, subsidies and credits tend to be "chaotic" in that they distort producer incentives without regard to questions of efficiency or social development objectives.

Thus the early neoclassical position, as it had emerged by the early 1980s, is best summarized as viewing the East Asian model as a market-based, outward-oriented development strategy. This strategy was characterized by relatively low and uniform restrictions on imports, a stable macroeconomic environment with a stable real exchange rate, well-functioning domestic markets in which factor prices reflected scarcity values, and a private sector that - via a set of market-determined incentives - made investment and production decisions that launched an effective industrialization strategy.

III. The Statist Approach

Over the past decade, the neoclassical explanation of East Asian growth has come under attack from a group of theorists who argue that the state rather than the market in East Asia should be credited with the region's economic success. Where the neoclassical theorists derive empirical support for their case by contrasting the wealth and dynamism of that region with the relative stagnation of other developing regions -- arguing that governments in East Asia intervened far less in their economies than did governments in Latin America and Africa -- statists refute this claim on two points:

1. Evidence from South Korea and Taiwan reveals that the governments in these countries have actually intervened quite extensively in their market economies, and
2. The real difference between East Asia and other developing regions has not been the *absence* of government intervention but the *quality* of that intervention.

The two leading scholars from the statist camp are Alice Amsden and Robert Wade.[17] Based on her work in South Korea. Amsden developed a "late industrializing model" of development. In the sense that "industrialization was late in coming to 'backward' countries because they were too weak to mobilize forces to inaugurate development," Amsden argues that a strong state in South Korea helped overcome this deficiency.[18] Via five types of control over firms, the Korean government was able to create price distortions and thereby direct investment and the types of economic activity pursued by South Korea's large industries (or *chaebol*).[19] In fact, Amsden attributes the rise of big business in Korea to the state's ability to exert its discipline over it through a system of performance-based incentives. She argues that firms would be rewarded with licenses to expand in exchange for stellar performance in exports, R & D, or new product introduction. With this type of carrot-and-stick incentive system in the 1960's and 1970's, she argues, "every major shift in industrial diversification...was instigated by the state."[20]

Robert Wade has made a similar claim, arguing that "the state in Taiwan has been doing much more than the neoclassical accounts recognize to increase supply responsiveness and to steer the direction of industrial growth."[21] While he makes some distinction between Taiwan's treatment of its larger and smaller firms, where small firms have traditionally operated with much greater freedom, Wade is committed to demonstrating that Taiwan's government designed and implemented a labor-intensive manufacturing growth strategy that emphasized the production of plastics, artificial fibers, cement, glass, fertilizer, plywood, and, above all, textiles. Like Amsden, he argues that this was done by government manipulation of relative prices and other, more direct, methods of shaping investment patterns.

Wade argues that the "basic weakness of neoclassical development economics is its inattention to the idea that governments differ in their *capacities* to guide the market."[22]

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[17] Other writers who have asserted that state economic intervention is an essential component of economic growth include: Alexander Gerschenkron (1963), Raoul Prebisch (1950), Walt Rostow (1971), Christopher Chase-Dunn (1975), James Caporaso (1978), Samuel Huntington (1968), and Robert Kaufman (1979). Others who have suggested that East Asian NICs (other than Hong Kong) have benefited from a consistent, developmentalist, state-led strategy that entails continuing selective intervention by state agencies in private-sector decision making and market transaction to achieve strategic goals, include Frederic Deyo, Chalmers Johnson, Richard Barrett, Stephan Haggard and Bruce Cumings. Many of their arguments can be found in Deyo's edited work, *The Political Economy of the New Asian Industrialism*.

[18] Alice Amsen, Asia's Next Giant: South Korea and Late Industrialization. (New York: Oxford University Press, 1989).

[19] Ibid., pp. 16-18. Amsden argues that the Park administration from 1961-1979 controlled: (1) commercial banks and, thereby, the investments made by Korea's large firms; (2) the number of firms eligible for subsidies or protection; (3) prices; (4) capital flight; and (5) social services.

[20] Ibid., p. 19.

[21] Robert Wade, Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization. (Princeton, NJ: Princeton University Press): 73.

[22] Robert Wade, "The Role of Government," In Achieving Industrialization in East Asia, ed. Helen Hughes. (Cambridge: Cambridge University Press, 1988): 130.

Taiwan, South Korea, and Japan, he observes, have an unusually well-developed capacity for selective intervention that is derived from:

1. A powerful set of policy instruments (financial, trade and foreign investment).

2. A certain kind of organization of the state and its links with other major economic institutions in the society.

3. Superior economic performance -- notably with the rapid restructuring of the economy towards higher technology production.

Wade attempts to explain the causal connections between these three by establishing that the East Asian governments do have powerful instruments of selective industrial promotion at their disposal and asking about the conditions which have allowed these potential net benefits to be realized in the East Asian cases and which may not be present in other developing countries. The next section considers Wade's argument *vis-a-vis* East Asian trade strategies.

Trade instruments

In sharp contrast to the neoclassical position that the success of these three East Asian countries can be directly attributed to their adoption of a neutral policy regime, the core of which is a free trade regime and a small public sector unable to impose 'political' prices, Wade asserts that "trade controls have been important instruments of steerage in all three countries (Japan before 1970s, if not after)."[23] He goes on to argue that the governments have not allowed the domestic market for tradables to be directly integrated into the international market; they have not allowed the use of foreign exchange, the composition of imports, to be decided by domestic demand in relation to prices set outside the country. Rather, they have influenced the volume and composition of imports by a combination of selective controls on trade, both (non-discretionary) tariffs and (discretionary) quantitative controls.[24]

How does Wade reconcile this with the evidence used by the neoclassical position? In 1977, Bela Balassa prescribed a 10-15 percent uniform rate of effective protection for all manufacturing other than the infant industries, which should get a uniform rate of no more than double the normal rate. Wade finds that Taiwan's tariff structure is minutely differentiated by product, with tariffs ranging from zero to well over 100 percent.

He also argues that Taiwan used a 'referral' mechanism to control imports in order to further its secondary import substitution strategy for certain industries like petrochemicals, chemicals, steel, other basic metals, machine tools, forklift trucks, bearings and other

[23] Ibid., p. 139.
[24] Ibid.

machinery and components.[25] By requiring would-be importers to obtain special permission for any of these items or others listed on a 'covertly controlled permissibles list,' the government sought to enhance the ability of local suppliers to respond the increased demand from the export market. Wade offers several possible explanations as to why neoclassical writers such as Ian Little and Maurice Scott did not notice these import controls in the 1970s when they claimed that "progressive trade liberalization occurred through the 1960s 'until the 1970s Taiwan was virtually free of trade controls.'[26] He suggests that "what may have happened in the liberalization of trade controls was a switch of items from the formally controlled to the *de facto* controlled list, so as to permit the planners more flexibility to manage trade quantities while appearing to liberalize."[27]

Wade goes on to challenge the neoclassical assertion that the most important reason for Taiwan's success in increasing manufactured exports is that exporters faced a virtually free trade regime. While exporters were exempt from tariffs on intermediate imports used in the production of exports, he notes that "exporters have to pay duty on many capital goods (often of 20 or more percent in the late 1970s) and cannot freely import some very important intermediates as well as some capital goods."[28] This, he argues, must qualify the neoclassical assertion.

The link between industrial policy and economic growth: the statist view

To explain *how* the governments of Japan, South Korea and Taiwan were able to reap the potential benefits of industrial policy, Wade observes that:

1. The opening of the US market for cheap, labor-intensive manufactures was instrumental to their success;

2. The government interventions employed were (generally speaking) aimed at promoting competitive production;

3. The selective nature of the interventions meant that only infant industries or industries with links to other sectors that could affect the entire economy's growth faced positive

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[25] Ibid., p. 140.

[26] Wade cites both Little's (1979) and Scott's (1979) work in "The Role of Government," In Achieving Industrialization in East Asia, ed. Helen Hughes. (Cambridge: Cambridge University Press, 1988): 141.

[27] Ibid., p. 141.

[28] Ibid., p. 142. See Rhee (1985) and Wade (1988) for a more comprehensive analysis of Taiwan's tariff-rebate scheme. In short, most major established exporters in Taiwan do not pay duties on imports; rather, the duties they owe are cancelled if they can prove that the imported inputs were used to produce exports within a year and a half. Other exporters normally get reimbursed once they actually export. However, duty rebates are based on input coefficients established by the government. While these are well-defined for established products, new products must be considered individually. Wade has observed that the administrative requirements necessary to provide free-trade incentives to exporters but not the domestic market are significant.

industry bias. Other, more established industries, did face a relatively neutral policy regime;

4. The interventions had a high degree of coherence, in the sense that their impact is cumulative. Those activities that received help from trade controls also received assistance through preferential investment finance and/or fiscal incentives too.[29]

[29] Ibid., p. 157.

Conditions necessary for industrial policy: the statist view

To explain *why* these countries were able to reap the potential benefits of industrial policy, Wade observes again that their governments were (potentially uniquely) disciplined and exhibited an organizational capacity that few other developing country governments can match. He outlines six key points why selective industrial policy worked in these countries and why they may *not* work elsewhere:

1. The central decision-making structure is staffed by the best managerial talent available.

2. The central decision-makers are relatively insulated from all but the strongest pressure groups.

3. The insulation of the central decision-makers, in turn, is based on an authoritarian, executive-based political structure, in which the executive jealously guards the feebleness of the legislature.

4. None of the countries has a powerful labor or left-wing movement.

5. None of the countries experiences the conflict chronic in many other countries, between powerful natural resource owners and manufacturers.

6. In all three countries, the political elite sees a pattern of growth which makes sense in the long run as essential to its own survival. Political legitimacy is to an unusual degree based on economic success.[30]

Dwight Perkins and Michael Roemer have also observed that many of the Asian governments viewed rapid economic development as essential to the survival of their regimes, as in Indonesia and Malaysia, or even of their countries, as in Korea, Taiwan, and Singapore.[31] Yet these authors note that African regimes have not made a similar political choice to pursue long-term development over short-term political and personal gain. Rather, they have extracted rents without heeding the sustained economic growth necessary to produce them.

While most Sub-Saharan economies were, and continue to be, based on the export of primary commodities, few have been able to effectively utilize the resources from this primary export sector to develop an industrial base adequate for manufacturing non-durables for export. In the early 1980s, Robert Bates offered one explanation for this. In his landmark study, *Markets and States in Tropical Africa*, Bates demonstrates how many

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[30] Ibid., p. 160.

[31] Dwight Perkins and Michael Roemer. "Differing Endowments and Historical Legacies," In Asia and Africa: Legacies and Opportunies in Development eds, David Lindauer and Michael Roemer. (San Francisco: ICS Press, 1994): 25-58.

African governments use the power of state marketing boards to extract resources from rural areas in a manner that created serious disincentives to production for export.[32] He makes the case that these monopsonies -- the sole purchasers of cash crops for export -- use their market power to keep domestic prices paid to agricultural producers below world prices, thereby accumulating funds ostensibly for developing other sectors of the economy. By examining both the content and the political process behind the formation of agricultural policies, however, Bates demonstrates how African political elites manage to divert much of these funds to build organized support for themselves rather than for the development of the society as a whole. Bates argues that most African agricultural policies are designed not to create a system of rational, price-based incentives for producers in an effort to increase output and move resources from agriculture to industry as the East Asian countries did, but to secure advantages for particular political interests.

Comparative advantage and political will: the statist view

One of the most interesting contributions made by Wade, Amsden and other state-oriented writers is the notion that comparative advantage can be created. Amsden's late industrialization model incorporates a version of 'dynamic comparative advantage' which argues that industries in East Asia *learn* rather than *invent* or *innovate* as they did in the industrialized countries. Thus a resource-poor country can create a comparative advantage in technology by acquiring that technology from *inventors* in the rest of the world and by training its human resource base in its use. In this case, selective government intervention in capital accumulation and skill acquisition in technology-intensive manufacturing industries can actually create comparative advantage where there was none.

As a rebuttal of the neoclassical position that markets are the most efficient determinants of the allocation of resources, this statist version of the concept of comparative advantage is worth consideration. However, it and other aspects of the statist argument rest on an assumption that East Asian governments are motivated to intervene in the economy for essentially neutral, altruistic reasons. While both Wade and Amsden fall short in their examination of the political analysis of state motivations, Peter Evans has recently made an effort to fill this gap in the statist argument.

In his 1995 book, *Embedded Autonomy*, Evans expands on his previous assertion that the reason state involvement works in some cases and fails in others is largely due to the way the state is organized and tied to the rest of society. Taking state involvement in economic activity as a given, Evans does not ask "how much" states intervene, but "what kind" of intervention they attempt to put forward. Since states vary dramatically in their internal structures and relations to society, he concludes, they posses different capacities for action.

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[32] Robert Bates, Markets and States in Tropical Africa: the Political Basis of Agricultural Policies. (Berkeley: University of California Press, 1981).

Based on empirical research into the development of local information technology industries in Brazil, India and Korea during the 1970s and 1980s, Evans is able to demonstrate the difference between a 'predatory state,' defined as one that extracts resources "at the expense of society, undercutting development", and a 'developmental state,' that has "not only presided over industrial transformation, but can be plausibly argued to have played a role in making it happen."[33] The success of the developmental states in East Asia, he argues, derives from their 'embedded autonomy' such that they are not insulated from society, but "embedded in a concrete set of social ties that binds the state to society and provides institutionalized channels for the continual negotiation and re-negotiation of goals and policies."[34] In this way, Evans claims that states can become "midwives" to private entrepreneurs, assisting in the emergence of new groups or inducing existing groups to venture into more challenging kinds of production via a "greenhouse" of tariffs or subsidies or helping local entrepreneurs bargain with transnational capital. Because of the highly mutual nature of the state-society relationship in a state like Korea, the political possibilities for state involvement are greater and more dynamic than the traditional state-versus-market debate would previously have been able to explain.

In contrast, Lindauer and Roemer have contended that applying this model of a state-society relationship to Africa or even Southeast Asia would be ill-advised: "African regimes, like those in Southeast Asia, have limited capacity to intervene decisively in private decision making to accelerate development, as Korea once did. In both regions, clientelism and rent-seeking are characteristic of most regimes. In Africa, these regimes have weakened only where economies were largely destroyed, as in Ghana and Uganda. In contrast to Southeast Asia, Africa's low government salaries, declining standards of performance, and weak official leadership have eroded morale in the civil service and forced many of the most competent officers to seek jobs elsewhere, often overseas. Until these conditions can be overcome, African developers should choose strategies that are no more interventionist than those in Southeast Asia, where civil service capabilities have been improving."[35]

IV. The Market-Friendly View

Somewhere in the middle ground between the neoclassical and statist camps lies the World Bank. While few economists anywhere strongly advocate active government intervention in the market, the World Bank has been particularly loath to do so given the tremendously poor performance of governments from Madagascar to Mongolia. However, the World Bank has identified itself as taking a position somewhere between the two extreme views on the state-

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[33] Peter Evans, Embedded Autonomy: States and Industrial Transformation. (Princeton, NJ: Princeton University Press, 1995): 12.
[34] Ibid., p. 12.
[35] David Lindauer and Michael Roemer, eds. Asia and Africa: Legacies and Opportunies in Development. (San Francisco: ICS Press, 1994): p. 9.

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Monetary and Exchange Rate Policy in Uganda

Interim Report

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Monetary and exchange rate policy in Uganda

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Abstract

The study attempts to examine the importance of the `fundamentals' in real exchange rate determination and to assess whether the exchange rate is affected by monetary policy and whether these effects are permanent or transitory. The study is an empirical one and first estimates the real exchange rate and investigates whether deviations from the equilibrium real exchange rate are correlated with an expansionary monetary policy or disturbances in the money market. A model where the nominal exchange rate is explained by money supply, domestic price level, domestic output and the level of real exchange rate misalignment is specified and estimated. Questions that the study addresses include: How do you balance the inflation objective with the export sector competitiveness objective? Do monetary shocks have any effect on the real exchange rate? Is there a long run relationship between nominal money supply and the nominal exchange rate and do shifts in exchange rate regime have any effect on this relationship? Has monetary policy in Uganda been consistent with the target of achieving international competitiveness?

I Introduction

Exchange rate and monetary policy is one of the most important tools in economic management and in the stabilization and adjustment policies in developing countries. Low inflation and international competitiveness have become the enviable targets in those countries. While the real exchange rate is a proxy measure of international competitiveness, inflation mostly emanates from monetary expansion, currency devaluations and other structural factors. The importance of monetary and exchange rate policies is reflected by current wave of liberalization of the financial markets and the current and capital accounts in the balance of payments.

The proposed study will attempt to assess whether the exchange rate is affected by monetary policy and whether these effects are permanent or transitory. The rationale behind this is that the choice of the exchange rate regime is determined by many objectives. However, once this choice is made, the authorities are expected to adjust their fiscal and monetary macroeconomic policies to fit the chosen exchange rate policy. Furthermore, once the exchange rate regime has been chosen it determines the flexibility or independence of monetary policy.

Questions of interest in the study include:

(a) Do monetary shocks have any effect on the real exchange rate?
(b) Is there a long run relationship between nominal money supply and the nominal exchange rate and do shifts in the exchange rate regime have any effect on this relationship?
(c) Has monetary policy in Uganda been consistent with the target of achieving international competitiveness? How do you balance the inflation objective with the export sector competitiveness objective?
(d) Has the official exchange rate been driven by the bureau exchange rate?

Despite the importance of monetary and exchange rate policies in economic management, few studies have been done on Uganda to assess the relationship between them. It is already recognized in the literature that the real exchange rate is an endogenous variable that responds to both exogenous and policy induced disturbances and that prolonged real exchange rate misalignment will usually generate macroeconomic disequilibrium (see, for example, Elbadawi, 1994). Part of the policy induced disturbances come from the money market. There are some studies that have traced disturbances in the exchange rate to the disturbances in the money market in Latin America (see, for example, Hausman and Gavin, 1995).

II Macroeconomic background

The National Resistance Movement Government (NRM) of Museveni which came to power in 1986 inherited an economy that was in shambles and characterized by, among other things,

- a very high rate of inflation that eroded real incomes, hampered productive investment and damaged economic growth;

- total lack of financial control in government ministries and parastatals leading to huge budget deficits. The then government was financing the deficit by printing money, while public enterprises borrowed from government and banks to cover their losses;
- an exchange rate overvalued by almost ten times compared to the parallel market rate;
- a narrow export base which led to overdependence on coffee and tea as the major forex earners;
- an inefficient financial system, saddled with poor loan portfolio, poorly managed and improperly supervised financial institutions, administered interest rates that inhibited savings mobilizations; and
- a dilapidated infrastructure due to years of neglect and domestic insecurity. Social services like health, education and road networks were run down.

Overall the GDP had fallen between 1971 and 1980 by 40% and import volumes declined by 50%. Production of export crops was disrupted, coffee shipments declined by 34% between 1976/77 and 1986/87, cotton production fell by 55% between 1978 and 1989, tea production dropped by 70% the same period. Inflation accelerated in the 1980s reaching an annual rate of 260% in 1987!

In response to the above challenges, the Government launched a comprehensive Economic Recovery Programme (ERP) in May 1987 consisting essentially of a set of market-oriented economic policies intended to readjust the economy to the new realities. These efforts were mainly supported by aid flows including import support, project aid, commodity aid and debt relief, either through multilateral or bilateral arrangements.

The policy packages adopted emphasized tight monetary and fiscal policies. Main emphasis was placed on liberalizing the trade and payments regime as well as giving a more active role to market signals in price determination. The elimination of overvalued exchange rates was expected to adjust the relative price of tradable to non-tradable in a manner that would enhance export competitiveness.

The biggest success that has been scored by Uganda since the start of the liberalisation efforts has been in the foreign exchange market. Foreign exchange inflows have increased substantially since 1990. Private transfers and workers' remittances have peaked up since 1991/92 from US$107.95 million to US$303.49 million in 1993/94 and further still to US$397.47 million in 1994/95. A marked increase in foreign investment has also occurred - estimates indicate that portfolio investment although limited is growing. Foreign financing through equity rose from US$ 5.165 million in 1993 to US$27.317 million in 1994. The return of flight capital has also been a critical factor. These increased inflows, in addition to the 1994/95 coffee boom, may have been the major source of exchange rate appreciation. The improved foreign exchange situation in the country created problems of macroeconomic management.

The principal government objective is controlling inflation. This is being done through measures such as:

- Tighter control on government borrowing. Today Treasury Bills play more of a

monetary role than a fiscal one. At the same time direct loans to public enterprises have been stopped just as were excessive overdraft facilities for banks; Government has been a net saver with the banking system since 1992/93.

- Control of private sector borrowing through proper liquidity management in the banking system;
- Liberalization of interest rates. Monetary policy management has shifted from direct controls to indirect monetary management through open market operations and the increased use of the Reserve Money Programme (RMP);
- introduction of austerity measures in government expenditure; and
- reforms in the tax policy and creation in 1991 of Uganda Revenue Authority (URA). The government took measures to expand the tax base, simplify the rate structure and improve the tax laws and administration.

These measures were intended to address the traditional sources of monetary instability in Uganda, that is, monetization of the fiscal deficit and excessive borrowing from the commercial banks. Uganda has now put in place a tight policy which with increased monetary deepening should keep inflation down. For the time being expenditure restraint is a strong force for stabilization and will remain the main instrument of control over growth of both base and broad money.

While the government is fully committed to the objective of controlling inflation, the available methods for supporting the exchange rate in the event of an appreciation called for a loosening of the monetary stance. The policy proposals suggested to address the issue of exchange rate appreciation were diverse. Careful study of the full implications of these policies on the economy threw up a number of contradictions to the overall economic objectives of the government's macroeconomic policy stance. In case the government decided to defend a predetermined exchange rate that ensured competitiveness of the non-coffee exports, it would imply liquidity injections into the economy and running the risk of inflation. Totally sterilizing such liquidity injections could stabilize the shilling exchange rate but without necessarily depreciating it to the competitive level. It is possible that sterilization could lead to higher interest rates or budget cuts. Budget cuts are not generally feasible given the strong need for government to increase expenditure in physical and social sectors. The alternative of cuts in government recurrent expenditures had limited viability. As for high interest rates, financing of domestic investments could have been curtailed and this would in turn have weakened domestic demand.

Macroeconomic management in Uganda was a very challenging task, given the inflows, the weakness of available monetary policy instruments and lack of viable options to assist non coffee exports. If government was to target subsidies to this sector, these could fail because of implementation problems. The issue of appropriate monetary policy instruments for timely treatment of increased inflows needed to be addressed.

Some donors for example, indicated the need to cut aid as a means of addressing the problem of appreciation. However, cuts in aid would directly affect government budgeted expenditures and this could unfavourably affect development programmes. The proposal of substituting foreign financing through increased taxation was not possible in the short run.

This is because more than 70% of Uganda's income is generated from agriculture. This sector is mainly subsistence oriented rendering it difficult to tax. The option of reducing foreign aid is also weakened when one considers Uganda's debt equation. Aid in form of debt relief is welcome for the settling of Uganda's debt obligations, since this would in any case not appreciate the exchange rate. Similarly, the proposal to use wind fall coffee revenues for accelerated debt repayment was not tenable because 72% of Uganda's debt is at very low interest rates and the real return of the concessional resources to the economy is considerably much higher. The issue therefore is to design an appropriate framework that can accommodate the increased inflows while maintaining export competitiveness and domestic price stability.

III Overview of the monetary and exchange rate policy management

Monetary policy

Since the Central Bank, Bank of Uganda (BOU), assumed its primary responsibility of formulation and implementation of monetary policy following an amendment of the BOU Act in 1993, several instruments of monetary policy have been actively applied to regulate liquidity in the economy. The Reserve Money Programme (RMP) has helped to guide BOU's conduct of monetary policy to ensure that liquidity expansion is consistent with targeted inflation levels.

The BOU Research Department monitors developments in base money (in relation to the desired target path), inflation, interest rates and exchange rates and, on the basis of the monthly Reserve Money Programme (RMP), advises the Monetary and Credit Policy Committee on the appropriate interventions needed (Musinguzi 1996). The gap between the actual outturn of base money and the desired target path of base money then forms the basis for monetary policy intervention stance (ease or tighten or leave monetary policy unchanged). However, the mix of monetary policy instruments would be guided by the desired outturn in the final targets (inflation, exchange rates, interest rates and growth).

There is a narrow range of monetary instruments which have been used to conduct monetary policy, for example,

- open market operations like foreign exchange deals, the treasury bills and other securities to regulate liquidity;
- cash reserves requirements on demand, time and savings deposits to influence the monetary base;
- liquid assets ratio to ensure desired liquidity levels in the financial sector;
- bank rate to regulate commercial banks's borrowing from the central bank;
- rediscount rate to regulate liquidity impacting on financial instruments like T-Bills, promissory notes, etc.; and
- sterilisation measures using purchase or sale of foreign currency.
- The Central Bank's own security, the Bank of Uganda Bill (BOU Bill) for purely monetary policy purposes

The policy of monetary restraint facilitated by increased fiscal savings with the banking system has helped tremendously in the control of inflation which has been brought down from about 260% in 1987 to the current low and stable single digit level. Annual inflation for December 1996 was 5.4% which is practically unchanged from the end 1995/96 level of 5.3%. Money supply (M2) growth used to be driven by expansion in net government borrowing from the banking system throughout the 1980s. Since 1992/93, this trend has been reversed. Deposit mobilisation efforts have been stepped up since 1986. The share of private time and savings deposits in M2 has been on an upward trend, rising from about 15% in 1986 to over 28% by December 1996. The real economy has grown by about 6.7% on average since 1986/87. It grew by 10.6% in 1994/95 and by 8.5% in 1995/96. Real GDP is projected to grow further 0by 7% in 1996/97.

Exchange rate policy

The most noticeable side of Uganda's adjustment efforts has been in the area of trade policy, foreign exchange market reforms and liberalization of the current account transactions. Key in the policy framework has been the need to eliminate distortions which meant increased reliance on market mechanisms to guide resource allocation. Since 1987, Uganda has made several attempts to unify the multiplicity of exchange rates that prevailed in the exchange market. The policy objective was to eliminate the overvaluation of the Uganda Shilling and to establish a unified market based rate that would provide a uniform price which would promote efficiency in allocation of resources, growth and development.

After authorizing full retention of all non-coffee export proceeds in early 1990, Government in July 1990 legalized the parallel market by licensing foreign exchange bureaux. The bureaux were permitted to conduct spot transactions at freely determined exchange rates and most private sector demand for foreign exchange to finance visible and invisible payments in a bid to address popular concern about capital flight. The policy aimed to alleviate pressure on the official channel for foreign exchange and to provide further incentives to non-coffee exports-surrender requirements on export proceeds, except coffee, were abolished and such inflows could be converted at the market based bureaux rates. In other words, the move towards a market based system was driven by the need to enhance export viability. More importantly the reforms aimed at increasing the efficiency of the foreign exchange allocation processes and the encouragement of foreign capital flows through open and competitive exchange rate payments system.

The licensing of bureaux marked the first step in moving to a market based foreign exchange system. This step constituted an explicit acceptance of past policy mistakes and their consequences, and of the need to include the private sector participation in the market building efforts. Following legalization, the bureaux market grew rapidly. The number of bureaus increased from ten at inception to more than 80 by June 1995. Traded volumes increased from US$248 million in 1991 to US$818 million in 1994. Concomitantly, the Government maintained its policy of active and discretionary devaluations to support the balance of payments. As a consequence, the premium of the bureaux market exchange rate over the official rate declined from about 45% in July 1990 to around 5% in December, 1995.

IV Literature review

The importance of real exchange in adjustment process in low income countries has been appreciated by many economies (Edwards, 1989; Elbadawi. 1989; Kiguel, 1992). These studies conclude that a proper alignment of the real exchange rate is a major determinant of the trend of economic performance. On the other hand, severe macroeconomic disequilibria and balance of payment crises in the developing countries were often cited as the direct consequence of real exchange rate misalignment (Edwards, 1989 and Dornbush, 1982).

It is generally agreed that the real exchange rate is a very significant relative price in the economic system. This is because changes in the real exchange rate influence foreign trade flows, the balance of payments, the level and structure of production and consumption and therefore employment, the allocation of resources in an economy and domestic prices (Khan and Lizondo, 1987). Real exchange rate is seen as an important mechanism for transmitting trade shocks to changes in the current account.

The World Bank (1984) concludes that overvalued exchange rates in African countries led to dramatic collapse of the agricultural sectors. This is because over valued exchange rates tended to undermine overall export and agricultural performance. Fosu (1992) has shown that the dismal performance of the agricultural exports in Ghana could be explained by the trend of the real exchange rate during the post 1960 era.

Most studies have concentrated on explaining the domestic rate of inflation, where the nominal exchange rate enters as one of the explanatory variables (see Canetti and Greene, 1991; Killick and Mwega, 1989, Ndung'u, 1995). Only two of these studies attempt to establish a statistical relationship between money and exchange rate. For example, in Canneti and Greene (1991) and Ndung'u (1995), money supply growth, inflation and exchange rate (among other variables) are analysed in a vector auto-regressive (VAR) model. The authors find that money supply growth drives nominal exchange rate changes with no feedback effects. However, none of the above studies tries to link the real exchange rate movements to monetary policy or even directly explain the movements in the real or nominal exchange rate.

Another strand of the recent literature has attempted to explain the effects of capital inflows on real exchange rate and interest rate differential and monetary policy response (see Asea and Reinhart, 1995). The phenomenon of increased private foreign capital inflows is fairly recent in Uganda and is the result of the recent wave of liberalization of the financial market and foreign exchange market. This is a phenomenon that has been common in Latin America and Asian countries and studies in this area have focussed on the responses of exchange rate and monetary policy to increased capital inflows and what should be the optimal exchange rate management (see, for example, Khan and Reinhart, 1995; Schadler et al. 1993).

The exchange rate regime in Uganda has undergone various shifts dictated by external and internal economic circumstances. The overriding objectives have been to maintain economic stability, a competitive exchange rate and stable low inflation.

These objectives often conflict (Musinguzi 1996). For example. adopting a real exchange rate rule implies that the exchange rate is no longer an anchor to tie domestic prices down. This may imply that shocks from whatever source may push the rate of inflation to a high level and will lead to nominal exchange rate depreciations. The conflict in these two objectives are a possible explanation of the presence of distortionary controls which have characterized Uganda's management of foreign exchange market, imports, the capital account and the domestic goods market.

In the presence of such controls the country has had long periods of expansionary fiscal and monetary policy, high and increasing debt service ratio and various terms of trade shocks. These macroeconomic policies and shocks have had adverse effects on the stability of the exchange rate and the exchange rate regime. Disturbances in the exchange rate can be linked to the disturbances in the money market. For example, Hausman and Gavin (1995) try to relate volatilities in the exchange rate to the volatilities in the money market in Latin American countries. Eichenbaum and Evans (1993) try to relate monetary shocks to disturbances in the real exchange rate in the US. The underlying argument is that the exchange rate is affected by both real and monetary shocks. The shocks hitting the economy in turn determine to a large extent the exchange rate policy pursued.

The choice of exchange rate regime, however, is dependent on several factors, such as the objectives pursued by the policy makers, the sources of the shocks hitting the economy and the structural characteristics of the economy in question (see Aghevli et al. 1991 for detailed discussion). The underlying argument is that whatever the objectives that determine the exchange rate regime, the authorities are presumed to adjust their domestic macroeconomic policies (especially monetary and fiscal policies) to fit the chosen exchange rate policy. The exchange rate regime in turn will determine the flexibility of the monetary policy pursued. However, in a developing country like Uganda, monetary policy is to a large extent driven by fiscal demands, and these fiscal demands rarely adjust themselves to the exchange rate policy in force.

V Objectives, research questions and hypotheses

The objectives of the study will be three-fold

1. To examine the importance of the `fundamentals' in the appreciation of the real exchange rate in Uganda.

2. To assess the link between monetary and exchange rate policy. The basic questions that will be addressed are the following:

(a) Does the exchange rate regime have any effect on the real exchange rate?

Kiguel (1992) argues that the exchange rate regime has limited effect on the real exchange and only affects the real exchange rate in the short run due to rigidities in

domestic prices and wages.

(b) Do monetary shocks have any effect on the real exchange rate?

In Calvo et al. (1995), it is argued that the steady state real exchange rate is independent of (permanent) changes in monetary policy. They argue that this result depends on the fact that there is no direct steady state link in theory between inflation and real exchange rate so that monetary shocks are related to real exchange rate misalignment.

(c) Is there a link between nominal money supply and the nominal exchange rate? In addition, do shifts in exchange rate regimes reflect any disturbances in this relationship?

In the long run, De Grauwe (1994) argues that the correlation between money supply and the nominal exchange rate is relatively strong but tends to be lost in the short run. We would expect this relationship to be stronger in periods of nominal exchange rate flexibility.

3. To investigate the operations of Bank of Uganda in the inter-bank market for foreign exchange and in the Treasury bills and other money markets, as Uganda makes the transition to indirect monetary policy via open market operations (OMO) including repurchase agreements (REPOS). There is also urgent need to determine whether monetary and exchange rate policy and fiscal policy in Uganda have been consistent with targets of achieving export sector competitiveness, domestic inflation, gross and net international reserves, market stability and buoyancy in real GDP growth.

Edwards (1994) argues that in the short run, real exchange rate responds to both real and monetary disturbances, and that, inconsistently expansive macroeconomic policies will generate in the short run, a situation of real exchange rate misalignment, that is overvaluation. Similarly, Elbadawi and Soto (1994) show that under pegged nominal exchange rate, expansionary fiscal and monetary policy can be a cause of persistent real overvaluation.

VI. Methodology and data collection.

The study will estimate non linear 2SLS and nonlinear 3SLS and carry out policy simulations of the ERER using SAS, MICROFIT, HASH and SHAZAM econometric software. Published and unpublished data will be obtained from Bank of Uganda, commercial Banks, Forex Bureaus, Ministry of Finance, Ministry of Planning and Economic Development, Exporters' and Importers' Associations, Economic Policy Research Centre (EPRC), Uganda Revenue Authority, IMF, World Bank, UNDP, African Development Bank and United Nations Economic Commission for Africa (UNECA). To capture institutional aspects interviews will be conducted with officials from BOU, Commercial Banks, Ministry of Finance, MPED, Forex Bureaus, Exporters and cross boarder money changers. The interviews should help in identifying the behaviour of market participants, extent of arbitration and segmentation of foreign exchange markets, and transaction costs involved.

VII. Significance of the study.

The study will benefit policy makers and politician by improving their ability to conduct and anticipate the consequences of their foreign exchange policies and other monetary policies. The banking and financial community will have a clearer and more transparent understanding of how monetary, fiscal, real and exchange rate policies function in Uganda, and their limitations. The exporters and importers will understand better the movements of the nominal and real exchange rates in relation to changes in domestic policies and will improve the profitability of their operations. The general public will gain better understanding of one of the crucial areas affecting Uganda's trade and growth in general and Uganda's export sector competitiveness in particular.

VIII. Target Audience

The target audience for this study will consist first and foremost of Bank of Uganda officials. They will benefit from the research through an improvement in their ability to conduct and anticipate the consequences of their foreign exchange market operations, open market operations and other use of monetary policy. In addition, other members of the banking and financial community will benefit from a clearer and more transparent understanding of how monetary, fiscal and exchange rate policies function in Uganda and what are the limitations of these policies. Furthermore, exporters and importers will understand better the movements of the nominal exchange rate in relation to changes in domestic prices and the implications of these movements for the profitability of their operations. Finally, the target audience will also include the broader community of policy makers, business community, journalists, academics and politicians who will gain better understanding of one of the crucial areas affecting Uganda's trade and growth and regional trade.

IX. Experience and qualifications of principal investigators

Marios Obwona (Co-Principal Investigator). Marios Obwona holds a PhD in Economics from Australian National University, Australia. He is Senior Research Fellow at the Economic Policy Research Centre (EPRC), Kampala. Prior to taking up appointment with EPRC, Marios Obwona was a Senior Lecturer at the Institute of Statistics and Applied Economics, Makerere University. Over the past ten years, Marios Obwona has conducted research and published articles in refereed international and local journals. He has also done several consultancy assignments for World Bank, UNDP, UNIDO, NGOs and other international agencies.

Polycarp Musinguzi (Co-principal investigator). Polycarp Musinguzi holds a PhD in Monetary Economics from University of Southampton, England. He is the Director of Research Department, Bank of Uganda. Polycarp Musinguzi has written extensively on monetary and exchange rate policies in Uganda. He is a member of Presidential Economic Forum, a body responsible for policy formulation and analysis in Uganda.

Dirck Stryker (Co-ordinator). Dirck Stryker holds a PhD in economics from Columbia University. He is Chief of Party for the EAGER/Trade Regimes and Growth project, President of Associates for International Resources and Development (AIRD) and a member of the

faculty of the Fletcher School of Law and Diplomacy at Tufts University. Over the past 28 years has directed many studies related to African economic growth and participated actively in policy reform programs on the African continent. Dirck's specialties are international trade, macroeconomics, agricultural economics and industrial policy with special emphasis on Africa. He is the author of numerous articles and books on economic development and on trade and exchange rate policy in Africa.

X. Description of inputs required

The inputs to be used in this study include four months of Dr. Obwona's and Musinguzi's time, three weeks of Dr. Stryker's time and three weeks of the time of Dr. Fred Opio, Executive Director of Economic Policy Research Centre. In addition, the staff of the Research Department of Bank of Uganda will participate actively in the study.

The study will be based at the Economic Policy Research Centre, which will provide physical space, documentation, computer facilities, research assistance and secretarial support.

XI. Implementation plan and calendar

The study is expected to begin in March 1997 with the collection of data and preliminary estimation of the econometric model. The results of these estimations will be presented in a preliminary report to the EAGER/Trade workshop to be held in July 1997. Further refinements in the models and informal interviews will be undertaken during second half of 1997, and a draft final report will be presented at the EAGER/Trade workshop in early 1998.

XII. Plan for monitoring the impact of the research on policy

The study is designed to have direct policy impact by using policy makers responsible for monetary and exchange rate polices in the research. Dr. Musinguzi is the Director of Research Department, Bank of Uganda, a member of Presidential Economic Forum and advisor to the Governor of Bank of Uganda. Dr. Fred Opio is a member of the `Think Tank', an advisory organ to the Government. In addition, it is expected that the Advisory Committee will include high ranking policy makers from Ministry of Finance, Ministry of Planning and Economic Development, Ministry of Trade and Industry and the USAID sponsored Uganda Investment Authority (UIA) in Uganda.

XIII Revised model for non-linear 2SLS and 3SLS estimation.

Our framework will be derived from the three definitions of real exchange rates given in the equations below.

RER=PT/PN

ePPP=NER*Pf/Pd

RER=NER*WPI/CPI Where:

RER=Real exchange rate

PT=Price of tradable goods

PN = Price of non-tradable goods
ePPP = Purchasing Power Parity real exchange rates
NER = Nominal exchange rate
Pf = Foreign price level
Pd = Domestic price level
WPI = Whole sale index as a proxy for the foreign price level
CPI = Consumer Price index as a proxy for domestic price level

$ERER = f_1 (RER^F, MONSHOCK)$.....(1)

where RER^F = RER fundamentals, that is,
°Terms of Trade , TOT
°Productivity , PROD
°Capital flows , KFLOWS
°Government expenditure, GOV
and MONSHOCK = Monetary shocks proxied by an "Excess Liquidity" variable, EXLIQUID defined as:

$\ln EXLIQUID = \ln B_a - \ln B_p$.....(2a)

where B_a = Actual Base Money path
B_p = Programmed Base Money Path
$= f_2$(Real GDP, Real Interest rate, Inflation, Seasonality, velocity) .....(2b)

Thus, expression (1) above can be reformulated as:

$\ln ERER = \alpha_0 + \alpha_1 \ln TOT + \alpha_2 \ln PROD + \alpha_3 \ln KFLOWS + \alpha_4 \ln GOV + \alpha_5 \ln EXLIQUID$ .....(3)

Assuming the following adjustment process:

$\ln RER_t - \ln RER_{t-1} = \Theta[\ln ERER_t - \ln RER_{t-1}]$..... (4)

it can be shown that:

$\ln RER = \theta\alpha_0 + \theta\alpha_1 \ln TOT + \theta\alpha_2 \ln PROD + \theta\alpha_3 \ln KFLOWS + \theta\alpha_4 \ln GOV + \theta\alpha_5 \ln EXLIQUID + (1-\theta)\ln RER_{t-1}$ ..... (5)

Specifying part of the system of equations and identities that links key determinants of real exchange rates in terms of "RER" fundamentals" and monetary shocks in the economy as above, the system of equations will be completed through relevant additional endegenous variables and a series of accounting identities and definitions as in Obwona and Musinguzi (1997), Ochieng and Musinguzi (1997) and Musinguzi and Mugume (1997) as follows:

The export equation.

Uganda is a small country and price taker. The import and export prices are exogenously determined in the world market and Uganda has to accept them. Uganda is a negligible supplier to the world commodity market and her exports are assumed to be constrained more by supply supply bottlenecks than by the world demand. The supply of exports is specified as negatively related to the ratio of import prices to domestic prices and positively related to RER and capacity to produce in the export sector. In addition, the change in the export sector production is assumed to be proportional to the change in the production for the whole economy. The exchange rate adjustment will come in to boost exports in the sense that it makes more efficient to produce exportable rather than non-traded goods. Usually, in the conventional export function, exports are related to incomes of foreign importing countries. Here, given that Uganda's exports constitute a very small proportion of the world supply, we can argue that the external element

is not a limit factor to Uganda's exports. thus:

$\ln X^s = f_0 + f_1 \ln TOT + f_2 \ln RER + f_3 \ln Y^*$ .....(6a)

where Px is the domestic price of exports. Y* is capacity to produce in the whole economy derived as: $Y^* = Y_0 e^{gt}$ where g is the rate of growth of real income over the sample period and Y_0 is the initial value of real income.

Exports adjust in the following way:

$(\ln X_t - \ln X_{t-1}) = \lambda(\ln X^s_t - \ln X_t)$; $\lambda > 0$. This can be simplified to:

$\ln X_t = g_0 + g_1 \ln TOT + g_2 \ln(RER)_t + g_3 \ln Y^* + g_4 \ln X_{t-1} + U_9$ .....(6b).

The Import equation.

Imports canbe devided into two major activity groups: consumer goods, and capital and raw materials. Imports of raw materials and capital goods is assumed to be related to the production level and the capacity utilization rate in the manufacturing sector. Also, local manufacturing firms depend heavily on imported capital goods, and the utilization rate of domestic industrial capacities depends on the adequancy of imported raw materials. Therefore, the desired demand for imports is related to the amount of real expenditures, real exchange rate, and the ratio of import prices to domestic prices such as:

$\ln Z^d = w_0 + w_1 \ln E_t + w_2 \ln RER + w_3 \ln(FP/P)_t$ .....(7a).

where Z is the volume of imports, PZ is the shilling currency value of one unit of imports, RER is real exchange rate, and E is real expenditure which can be defined as; E = C + G + I.

The demand for imports is related to expenditures instead of income as is usually the case in the standard specification of the import function. The rationale is that it is more logically suitable to relate imports to domestic demand for all goods rather than to the sum of domestic goods and foreign demand for domestic goods. The adjustment of desired to actual import is assumed proportional to the difference between imports in the actual and previous periods as follows:

$(\ln Z_t - \ln Z_{t-1}) = \varphi(\ln Z^d_t - \ln Z_t)$; $0 < \varphi < 1$. .....(7b).

This implies that:

$\ln Z_t = z_0 + z_1 \ln E_t + z_2 \ln RER + z_3 \ln(FP/P) + z_4 \ln Z_{t-1} + U_8$ .....(7c).

Fiscal Sector.

The revenue-expenditure relationships of the government are modelled to capture the implications of depreciation/appreciation on government's fiscal balance. Real depreciation of the shilling might improve current account. but it also increases the shilling value of debt-servicing obligations and imports thus widening the budget deficit.

a. Government expenditure equation.

The factors influencing public expenditure can be categorized into two:

i. Input cost effects which include population growth. real tax revenue. real income. donor budget disbursement measured by grant and aid disbursement and lagged real government expenditure to capture the effect of expenditure to restore the quality of services.

ii. Price effect which emphasizes the inflation influence on the content of the government budget.

Depreciation of RER lowers the real value of government expenditures and thus necessitate an increase in the shilling content of budgeted government expenditures so as to maintain the same or even lower level of real spending.

The public expenditure equation can then be expressed as:

$\ln G = \Upsilon_0 + \Upsilon_1 \ln T + \Upsilon_2 \ln P + \Upsilon_3 \ln Y + \Upsilon_4 \ln DBD + \Upsilon_5 \ln G_{t-1} + U_3$ .....(8).

b. Tax revenue equation.

A number of empirical studies have exploited the determinants of tax revenue in both developing and developed countries and several factors determining a country's taxable capacity have been identified in these studies. The determinants can be grouped into two categories:

i. The level of development as measured by a country's real GDP.

ii. The structure of the economy indexed by such characteristics as the degree of monetization as measured by percentage of monetary GDP, (Mon); and openness of the economy. OE, measured by exchange rate misalignment; the index of industrial production. (IIP).

Government policies are also thought to influence tax revenue directly through a variety of ways. These include. the level of public debt, changing the real value of the exchange rate, RER; and inflation rate. Π.

We can then express the tax equation as:

$\ln T = \Omega_0 + \Omega_1 \ln Y + \Omega_2 \ln OE + \Omega_3 \ln MON + \Omega_4 \ln RER + \Omega_5 \ln IIP + U_4$ .....(9).

The behavioral equations will be estimated using non linear 2SLS and nonlinear 3SLS. The equilibrium rate is the rate which is consistent with internal and external balance at full employment. An alternative approach for modelling the impact of monetary shocks will be conducted using an "excess liquidity variable" which is a measure of the monetary policy stance. Policy simulations will be undertaken to determine the impact of monetary schocks on the ERER path.

XIV. Empirical results.[1]

Some of the variables were dropped due to data unavailability.

Real effective exchange rate equation[2].

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[1] * implies that the variable is significant at below 5%, ** implies significance at below 10% and *** implies significance at below 20% significance levels. The figures in parenthesis below coefficients are t-values.

[2] OE defined as ratio of the difference between inter-bank foreign exchange market determined rates and Bureau rates to

There is no strong empirical evidence that capital flows influence RER. There is also no strong evidence that monetary shocks influence RER. Government expenditure appreciated RER, because apart of the burden of government expenditure falls on domestic prices (which is the denominator in RER) hence appreciating RER. See the full battery of diagnostic tests attached.

LgRER= 1.7331 +0.6083lgrer1 +0.415lgOE - 0.1843lgG + 0.026lgTOT +
(2.017)* (3.61)* (1.11) (-1.83)** (1.063)
0.021lgF+0.136lgIIP - 0.2412E-3MONSHOCK
(0.791) (1.51)*** (-1.16)

Adjusted R-squared = 0.87 F-Stat = 61.9[0.00] Sargan's CHI-SQ = 2.56[0.635]
Serial Correlation CHI-SQ = 5.66[0.932]
Functional form CHI-SQ = 3.31[0.07]
Normality CHI-SQ = 1.086[0.561]
Heteroscedasticity CHI-SQ = 0.608[0.436]

Export equation.

LgX = 10.68 + 0.638lgX1 - 0.1lgtot - 1.48lgrer + 0.253lg(FP/P)
(3.27)* (6.41)* (-0.85) (2.88)* (0.226)

Adjusted R-squared = 0.76 F-stat = 51.99[0.000] Sargan's CHI-SQ = 3.34[0.503]
Serial correlation CHI-SQ = 24.88[0.015]
Functional Form = CHI-SQ = 0.028[0.868]
Normality CHI-SQ = 0.068[0.967]
Heteroscedasticity CHI-SQ = 3.29[0.7]

The index of industrial production was not a good proxy for capacity to produce in the economy. Its exclusion effects could be the one reflected in presence of serial correlation. The fact that RER appreciation took place in Uganda highly reflect the weight attached to domestic price stability rather than export sector competitiveness. Hence the need to resolve this policy dilemma by balancing the two objectives; domestic inflation and export competitiveness. This suggests that RER appreciation has been a cost to the Ugandan economy.

Imports equation.

The specified equation gave poor results. All the coefficients were insignificant. We experimented with lagged values and the results are reported below. IIP and G were introduce to capture domestic expenditure demand.

LgZ = 9.9 + 0.271lgZ1 - 0.775lgrer1 + 0.282lgIIP + 0.025lgG - 1.798lg(FP/P)
(4.77)* (2.29)* (-3.81)* (2.6)* (0.477) (-0.436)

Adjusted R-squared = 0.855 F-Stat = 76.34[0.00] Durbin's h-stat = -2.2845[0.023]
Functional form F = 0.002[0.965]

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the inter-bank foreign exchange market determined rate, was introduced to capture macroeconomic stability and openness of the economy effects on RER.

Normality CHI-SQ = 1.135[0.567]
Heteroscedasticity F = 0.8442[0.362]
It appears that imports are influenced by productivity in the economy and lagged values of RER and Z. However, earlier studies (by Bank of Uganda, Research Department) using annual real GDP data derive import elasticities of about 1.17 which again shows that the index of industrial production is not an adequate proxy for real GDP.

Government expenditure equation.

Experimenting with lagged values appears to give better results than the specified equation. The specified equation gave negative R-squared with insignificant F-stat.

$$LgG = \underset{(-0.783)}{-3.3232} + \underset{(0.298)}{0.037lgG1} - \underset{(-1.018)}{0.495lgreer1} + \underset{(2.97)^*}{0.626lgT1} + \underset{(2.31)^*}{0.246lgDBD} + \underset{(2.25)^*}{0.523lgIIP} + \underset{(2.09)^*}{3.34inf}$$

Adjusted R-squared = 0.75 F-Stat = 33.38[0.00] Durbin's h-stat -4.532[0.000]
Functional form F = 0.601[0.441]
Normality CHI-SQ = 13.85[0.001]
Heteroscedasticity F=0.8879[0.35]
Government spending is significantly influenced by Donor budget support, Index of industrial production as a measure of productivity in the economy, inflation and tax revenue lagged by one period. However, normality appears to be violated. This appears to be confirmed by CUSUM graph[3]. CUSUM test is particularly useful for detecting systematic changes in the regression coefficients..

Tax equation.

The tax equation specified before gave poor results and we have experimented with lagged values which gave better results reported below. Monetarisation of the economy variable and GDP were dropped due to data unavailability. Openness of the economy variable (OE) appeared to be seriously correlated with RER(-1) and was therefore dropped. However, perhaps due to exclusion of these relevant variables normality assumption appears to be violated. This is also detected by CUSUMQ graph. CUSUMQ test is useful in situations where the departure from the constancy of the regression coefficients is haphazard and sudden.

$$LgTax = 9.1 + 0.285Tax(-1) - 1.02lgrer(-1) + 0.434lgIIP + 0.065lgZ(-1) - 0.41inf$$

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[3]Cumulative sum of recursive residuals (CUSUM) and cumulative sum of squares of recursive residuals (CUSUMQ) test structural stability proposed by Brown et al (1975). If either of the lines is crossed, the null hypothesis that the regression equation is correctly specified must be rejected at the 5 per cent level of significance.

(3.24)* (2.34)* (-3.29)* (3.39)* (0.416) (-0.461)

Adjusted R-square = 0.87 F-stat = 85.4[0.00] Durbin's h-stat = -2.25[0.024]
Functional form F = 1.1834[0.281]
Normality CHI-SQ = 182.88[0.000]
Heteroscedasticity F = 2.17[0.146]
The results suggest that depreciation of RER reduces tax revenue with a lag. This tends to confirm the observation earlier made on the relationship between RER and imports. Increase in the productivity measure (IIP) increases tax revenue through the excise duties.

XV. Conclusion.

The relationship between RER and major current account balance variables (X and Z) is significant. Using the Ugandan database, it would seem that the exchange rate policy was not geared towards maintenance or promotion of export sector competitiveness hence the current policy dilemma of balancing the domestic inflation objective and export sector competitiveness objective while simultaneously building up gross and net international reserves and maintaining market stability. This is indeed a delicate "balancing approach". Further analysis of this important observation shows the "jig-saw" nature of Uganda's RER which shows that RER appreciation has been a cost to the Ugandan export sector (see graph attached).There is also a link between fiscal sector developments and RER. Government spending appreciates RER because part of the burden of government expenditure falls on domestic price level (which is a denominator in RER) hence appreciating the RER. Depreciation of RER reduces tax revenue because it reduces imports. Strengthening of the Interaction and linkages of monetary, fiscal, real and external sectors appears will ensure that the economy remains on an even keel and prepare the Ugandan economy for the transition from stabilization to sustainable export-led development.

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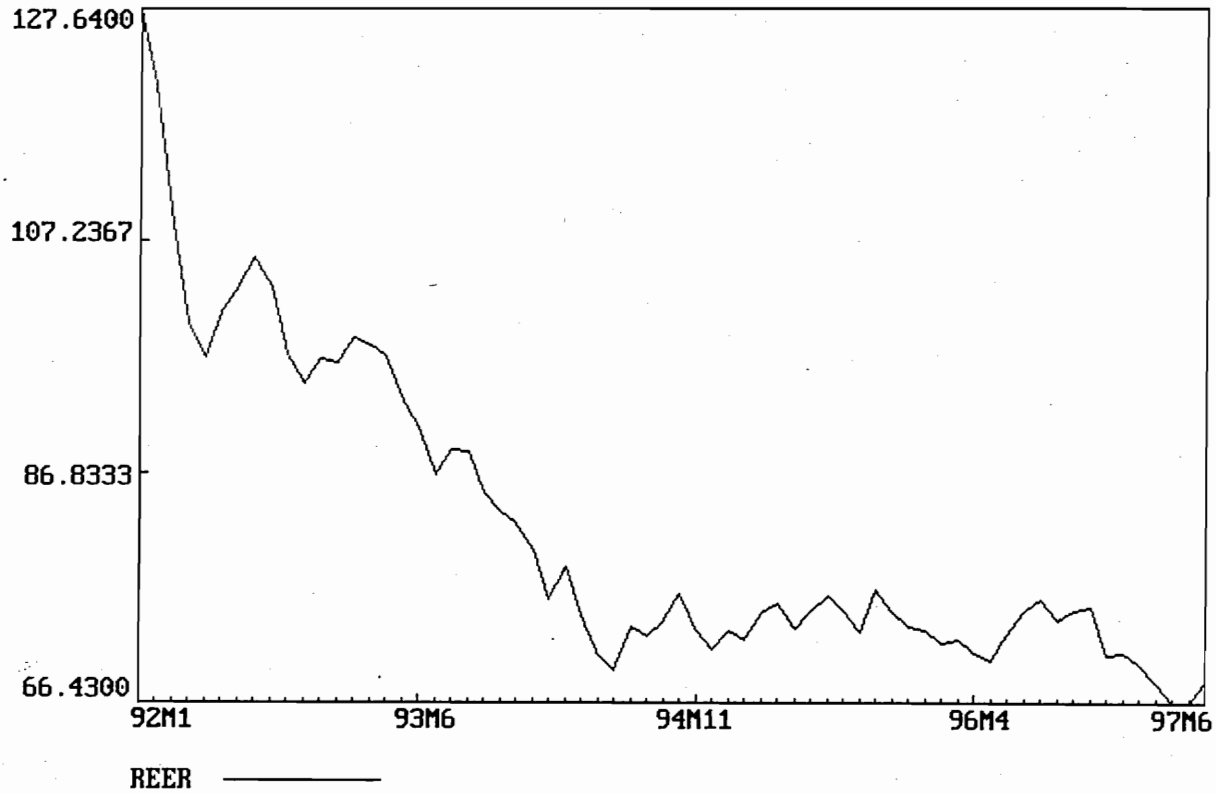
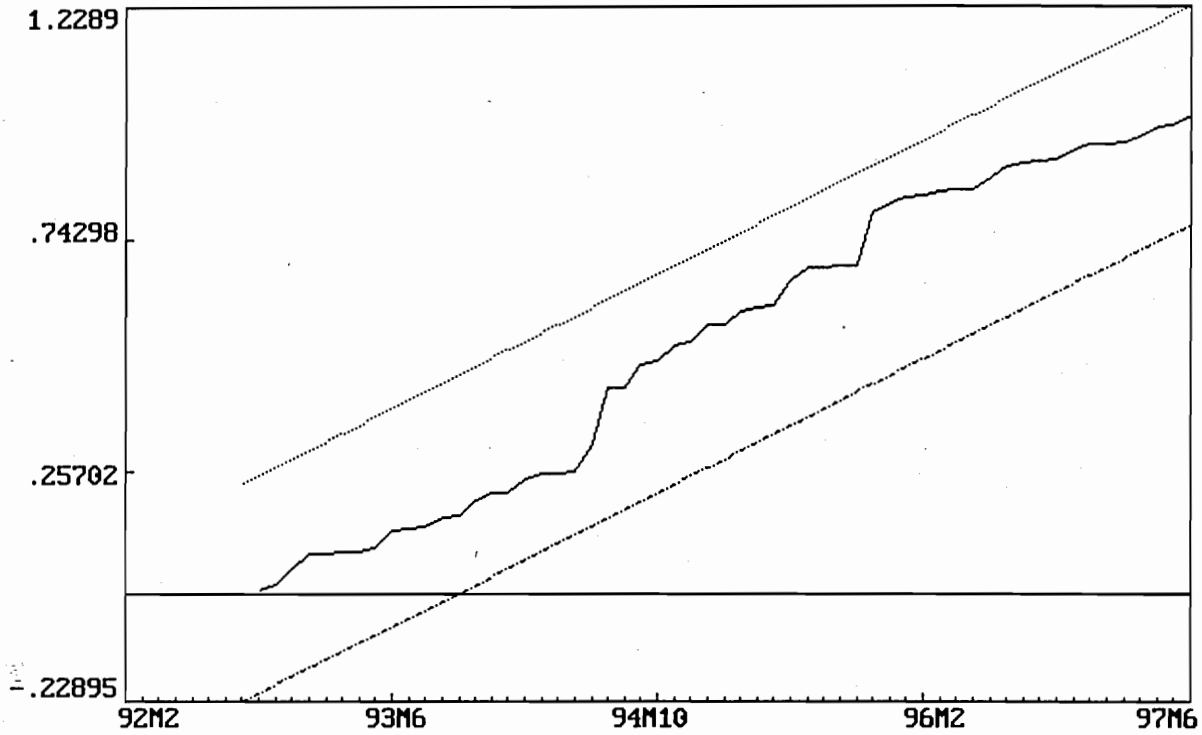


GOV. EXP. Plot of Cumulative Sum of Squares of Recursive Residuals



The straight lines represent critical bounds at 5% significance level

USAID Co-operative Agreement on
Equity and Growth through Economic Research
Trade Regimes and Growth (EAGER/Trade)

MODELING ELECTRICITY TRADE IN SOUTHERN AFRICA

Interim Progress Report

September 1997

F.T.Sparrow, W.A.Masters, Z.Yu, B.H.Bowen
Purdue University

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Equity and Growth through Economic Research
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1.Introduction

This interim progress report details initial results of the EAGER/Trade project on Modeling Electricity Trade in Southern Africa. The project began with the participation of Tom Sparrow and Brian Bowen in the quarterly meeting of the Southern African Power Pool (SAPP) held at Windhoek, Namibia in February 1997 [1-3]. At that meeting priorities for the analysis of electricity trade policies were established, and SAPP members agreed to support development of the regional trade model. Over the past six months SAPP members collaborated with Purdue staff on model development, culminating in a 15-day intensive modeling workshop at Purdue, August 19-Septembe 3, involving nine SAPP delegates from Botswana, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe.

Preliminary results from the models developed at the workshop show that, with more flexible trade contracts and centralized dispatch of electricity in the Southern Africa region, possible savings are in the order of US$75 million per year ($200,000 for a typical winter day). The simulation of alternative policy arrangements continues to be improved through ongoing exchange of generation and transmission data as well as model results. The very high degree of cooperation between staff in SAPP and at Purdue has made it possible to develop increasingly precise models in response to specific policy questions.

The first SAPP debate to which Purdue staff contributed was the question of wheeling charges (payment for transmission of electricity from one country to another over the territory of a third party), which was the subject of a paper presented by Peter Robinson at the quarterly SAPP meeting in Harare, Zimbabwe in May 1997. Purdue staff also contributed to general understanding of the role of SAPP in the region's development at the July U.S.A.-South Africa Binational Commission meeting (in Washington DC, Appendix I) [4].

Modeling Progress and Results

By the end of July effective national trade models had been developed [5,6]. These provide optimal dispatch schedules and minimize costs at a national level. SAPP utilities plan to use these in their planning activities. Significant progress has also been made on the collective model and this will continue into the second six month period.

The greatest appreciation of Purdue's models is seen in the fact that most of the delegates from the SAPP utilities plan to use the Purdue models in their daily operations and long-term planning.

SAPP delegates now have a good understanding of the formulation and operation of the Purdue models. The model's transparency, high effectiveness with low cost and user friendliness make them very attractive to SAPP planners. (Currently available commercial software for this type of utility planning would initially cost hundreds of thousands of dollars.)

With the need for further hourly power demand data as well as wishing to keep model running times to a minimum it was decided that a 24 hour model should be constructed first. July 24, 1997, was the day modeled as this was the peak demand day for South Africa's Eskom. Eskom's peak demand time was agreed upon by the SAPP utilities because it is the most dominant utility in the region with its massive regional capacity being over 80% of the regions total generating capacity.

Over the second six month period it is planned that the model should be developed into a one week (168 hour periods) time frame. This is particularly important for better planning in the use of hydropower resources. GAMS is being used as the modeling language.

The collective SAPP models are showing regional cost savings in the range of about 6% to 9%. These are summarized in Table 1 below:

Table 1. Estimated savings from more flexible trade arrangements within the SAPP (comparison with current bilateral trade contracts).

	Without HCB	With HCB
Without O&M	8.9%	9.3%
With O&M	5.9%	6.9%

Note: HCB=Hydro Cahora Bassa
O&M=Operation and Maintenance costs

The total daily regional cost (including operation and maintenance costs) without power from Cahora Bassa came to over 3.78 million dollars with the existing trade contracts (Appendix II). With more flexible trading this value is reduced (assuming optimal dispatch for the region) to about 3.57 million dollars. Typical daily regional savings of over $200,000 are being indicated.

Later in 1997 the reconnection of Mozambiques' 2075MW Hydro Cahora Bassa Scheme (HCB) comes back onto the regional grid. A comparison of gains between the existing capacity and the enlarged hydro capacity later in the year was considered. The results show that for SAPP there will be more significant gains from optimal trading arrangements when the HCB is back on line.

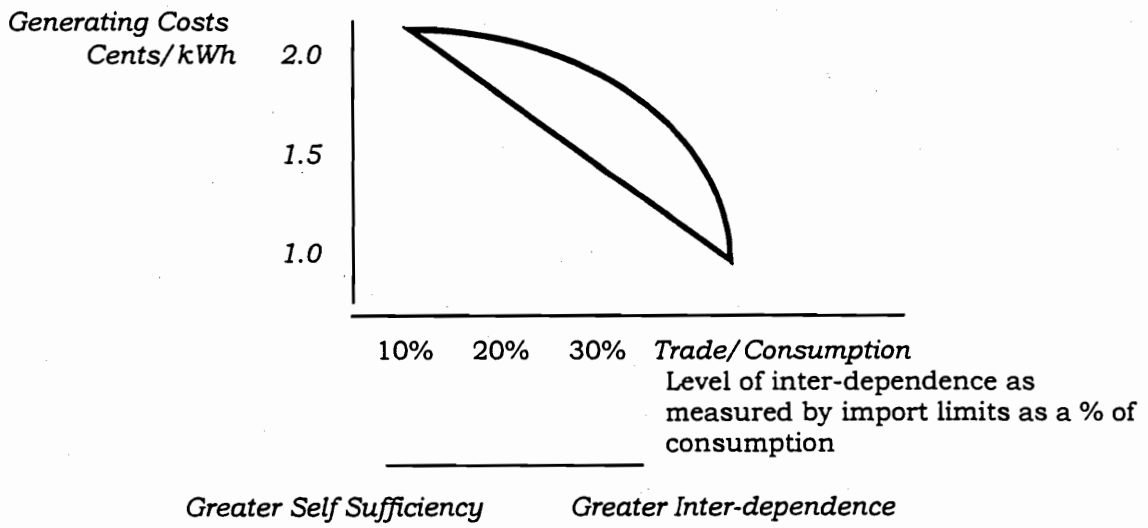
At the modeling workshop the SAPP delegates agreed that the models should use an O&M cost of 0.15 cents per kilowatt-hour for the thermal units. According to some members hydro units' O&M cost could be up to 0.11 c/kWh plus 0.04 c/kWh for water costs, and the total could be as low as 0.05 c/kWh. It could be helpful to the SAPP if Purdue was to conduct a comparative study with U.S. hydro O&M costs.

3. SAPP Trade Policy Formulation

The Purdue models have started to provide SAPP staff with quantitative models that can evaluate the gains that can be made from alternative trade policies.

In particular, the model can develop for each country an "electricity cost/self sufficiency frontier". This relationship in Figure 1 below relates the increasing cost of electricity to increased limits on the amount of electricity which can be imported. Thus it quantifies for each country the economic penalty paid for requiring various levels of self sufficiency.

Figure 1. The Electricity Cost Self Sufficiency Frontier



The models are showing that substantial gains are to be made with alternative trading arrangements. The degree of complexity of implementing future trade policies in SAPP, whether of a technical, economic or political nature, are no more straight forward than parallel issues that are taking place on the US utility scene.

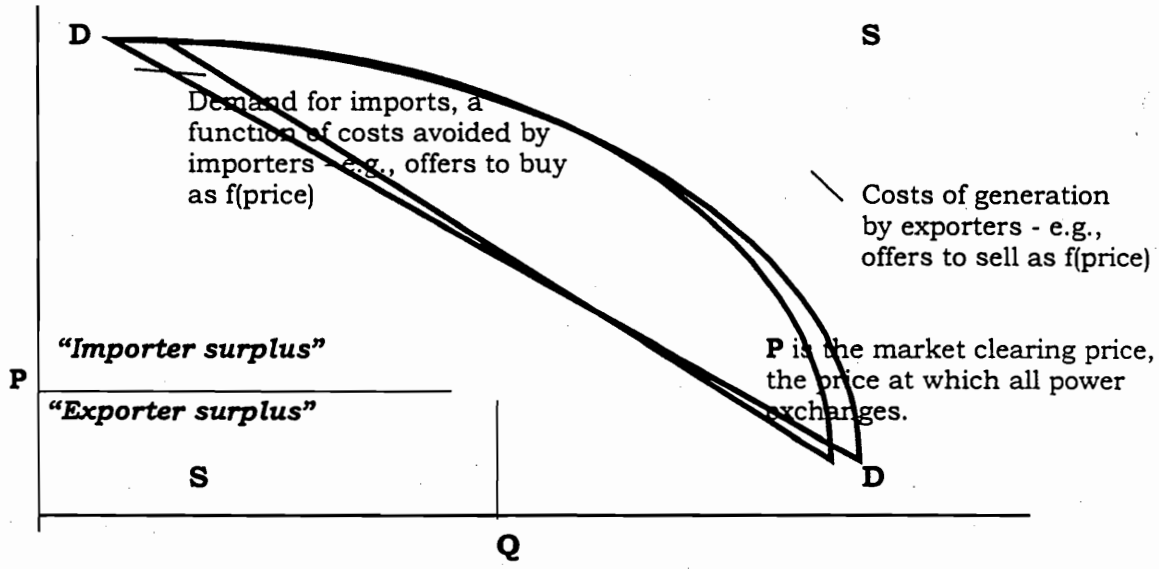
Optimal trading arrangements raise major policy issues for the region's consideration and it will be necessary for more flexibility in drawing up future electricity trade contracts. For cost savings to be made it will be required that new contracts lie somewhere between the two extremes of current bilateral long-term fixed contracts and the most economically

efficient centrally dispatched trading. It is the latter which is modeled in the minimizing of the SAPP regional total costs.

This methodology, in addition to determining the least cost assignment of SAPP generating units to aggregate SAPP demand, also generates a universal market clearing base price for exports. This price, set by the marginal cost of the most expensive unit centrally dispatched by SAPP to meet the load, can be used as a basis for efficient and equitable pricing of traded electricity. Such prices in turn provide a defensible solution to the contentious issue of how to divide the gains from trade between importers, exporters, and wheelers.

The method advocated by many in the U.S. is the power exchange model, where offers to sell (exports) electricity at a given price(s) are sent to a power exchange along with offers to buy (import) electricity. The power exchange determines that equilibrium price which equates the amount offered to sell with the amount offered to buy, and all electricity exchanges at that price. Note the division of the gains from trade into importer gains ("consumer surplus") and exporter gains ("producers surplus").

Figure 2. The Power Exchange Model and the Market Clearing Price



It can be shown that the least cost assignment of aggregate SAPP generating units to aggregate SAPP demand in the centralized collective model is identical to the assignment that would arise from the functioning of a free market power exchange. Thus, efficient operation of the SAPP can be achieved by a decentralized, transparent market mechanism without the need for a centralized command and control dispatch and commitment mechanism.

The case of Botswana could be considered as one example in the discussion as to how efficient the SAPP should become. The one-day models showed that with existing facilities that the Botswana generators should not be switched on at all. The pool would make significant savings if Botswana were to import all of its electricity requirements. The high cost of coal shipment into the country is an important factor. The models also show how

there should be significant increases in the exports of hydropower from Mozambique, Zambia and the Democratic Republic of Congo (6040%, 306% and 150% respectively) in order to maximize regional savings. South Africa is a net exporter with current bilateral contracts and is shown to become a net importer under optimum trade with Cahora Bassa being fully operational.

The radial nature of the SAPP grid eases to some extent the transmission modeling as compared to the alternative electricity flow paths in the massive network of the USA. The significant losses however along Southern Africa's long DC interconnectors together with the uncertainties involved in the regions hydrological predictions (a region of dramatic climatic changes) causes the SAPP models to have their own unique characteristics.

The results from the Purdue electricity trade models will assist Southern African policy makers as they wrestle with the integrating and divisive issue of national independence versus regional interdependence. In the remainder of 1997 Purdue staff will be supplying SAPP with further results from the short-term collective model.

4. The SAPP/Purdue Modeling Workshop

In the workshop delegates from SAPP (names are listed below) worked with Purdue's SUFG (State Utility Forecasting Group) full-time analysts and graduate staff under the supervision of Tom Sparrow. The workshop consisted of analysis of model formulation, discussion of trade policies and national and regional objectives as well as site visits (Appendix III). Thoughtful and detailed presentations were given by the three DOE representatives, Art Baldwin, Frank Stewart and Russell Profozich, on electricity policy planning with regard to Africa.

During the first week of the workshop all of the theory and principles that were essential for the formulation of the models were discussed. Further copies of the lecture notes are freely available from Barbara Beaver at Purdue, (Fax: 765-494-2351 , Email barb@ecn.purdue.edu) [7].

Updating of data, improvements to national models and discussion of initial results from the regional collective model were supplemented by utility visits and discussion forums. Detailed attention was given to the model formulation and in working on the models at the computer terminals. Excellent and valuable discussions took place with US utilities and regulators in Chicago and Indianapolis. Personnel involved in these various activities are all listed below.

Several of the SAPP delegates have noted in their reports the value of the national models for predicting future operating conditions. The realistic simulation of Southern Africa's generating capacity is also noted. SAPP delegates expressed concern over the modeling of line losses in the point model but these are modeled in detail in the spatial model. Significant work has already been done on the transmission spatial models and three of the SAPP countries have their transmission network modeled. Further populating of transmission data however into the remaining country spatial models has yet to be done.

The workshop was valuable to SAPP and Purdue and it was generally agreed that much was to be gained from another similar workshop in a year's time and preferably if based in

Southern Africa. It is now hoped that a more comprehensive follow-up modeling workshop could be held in Southern Africa in July 1998 which would then include both short-term scheduling and long-term capacity expansion modeling. SAPP delegates came from the operating utilities of the power pool, BPC (Botswana Power Corporation), Eskom (South Africa), EDM (Mozambique), ZESCO (Zambia), NamPower (Namibia) and ZESA (Zimbabwe). Each SAPP delegate has summarized his respective national model (Appendix IV).

The Swaziland Electricity Board (SEB) also fully sponsored one of its staff to come to Purdue. It had been hoped that SNEL, the utility of the Democratic Republic of Congo, would also send a delegate to the workshop. It was not possible for this summer but it is hoped that SNEL will be well represented at the workshop proposed for July 1998.

5. Names and Numbers of Interested Participants in the Project Over the Past Six Months

- SAPP delegates at the SAPP/Purdue Modeling Workshop

1. Mr.Modiri Badirwang, Botswana Power Corporation
   Ph:267-3603219, Fax:267-3603254
2. Mr.Alison Chikova, Zimbabwe Electricity Supply Authority
   Ph:263-4-774491/9,774508/35, Fax:263-4-774542/774543/753520
   Email:edward@harare.iafrica.com
3. Mr.Mario Houane, Electricidade de Mozambique
   Ph:258-1-423144, Fax:258-1-431029, Email:edmcadic@zebra.uem.mz
4. Mr.Ferdie Kruger, Eskom
   Ph:27-11-800-5953, Fax:27-11-800-4054, Email:krugerf@mp3nis01.eskom.co.za
5. Mr.Udo H.E.Kleyenstuber, NamPower
   Ph:264-61-2052219, Fax:264-61-2052334, Email:uhek@nampower.com.na
6. Mr.Roland Lwiindi, Zambia Electricity Supply Corporation
   Ph:260-1-237601, Fax:260-1-237601/223970
7. Mr.Bongani Mashwama, Swaziland Electricity Board
   Ph:268-42521/5,48870/4, Fax:268-42335/48274
8. Mr.Bruce RF Moore, Botswana Power Corporation
   Ph:267-3603219, Fax:267-3603254, Email:bmoore@info.bw
9. Dr.Peter Robinson, ZIMCONSULT
   Ph:263-4-335869, Fax:263-4-302496, Email:robinson@icon.co.zw

- Three DOE personnel attended the modeling workshop. We hope to obtain DOE support for a joint SAPP/Purdue/DOE Regional Modeling Workshop, July 1998.

10. Mr.Art Baldwin, DOE Pittsburg
    Ph:412-892-6011, Fax:412-892-4775, Email:Baldwin@orion.fetc.doe.gov
11. Mr.Russell Profozich, DOE Washington DC
    Ph:202-586-2699, Email:russell.profozich@hq.doe.gov
12. Mr.Frank Stewart, DOE Colorado
    Ph:303-275-4778, Fax:303-275-4790

- U.S.-South Africa Binational Commisson & DOE Meeting, July 28, 1997

13. Ms. Andrea Lockwood, DOE Washington DC
    Ph:202-586-6082/2518, Fax:202-586-6148
14. South African Delegation: Minister Penuell Maduna
    Deputy Minister Susan Shabangu

Deputy Director General for Energy Gordon Sibiya

15. U.S.Embassy of South Africa: Counsellor Hennie Du Toit
    Energy Officer Lorraine Wilkinson

- Southern African colleagues who participated in discussion on the project

16. Mr.Arnot Hepburn, SAPP-PSC Secretary
    Ph:27-11-800-2022, Fax:27-11-800-2455
    Email:hepbura@mp3nis01.eskom.co.za
17. Dr.Tony Surridge, DME Pretoria
    Ph:27-12-317-9000, Fax:27-12-322-0810, Email:tonys@mepta.pwv.gov.za
18. Prof. Nico Beute, Cape Technikon
    Ph:27-21-460-3151, Fax:27-21-460-3217, Email:nbeute@norton.ctech.ac.za
19. Mr.W.Goeiemann/Mr.M.Madonsela, SADC Secretariat
    Ph:267-351863, Fax:267-372848

- World Bank interests continue with the SAPP/Purdue modeling. The Bank planned to participate in the August 1997 workshop.

20. Mr.Jean-Pierre Charpentier
    Fax:202-522-3483, Email:jcharpentier@worldbank.org
21. Mr.Kurt Schenk, Email:kschenk@worldbank.org
22. Mr.Donal O'Leary
    Ph:202-458-0408, Fax:202-473-8301, Email:doleary@worldbank.org

- U.S.Utilities

23. Mr Howard Illian/Steve Hoffman, Commonwealth Edison, Ph:630-691-4807
24. Mr.Richard Bulley, Mid America Interconnect Network (MAIN), Ph:630-261-2626
25. Mr.James E.Rogers, Cinergy Corp.,
    Ph:513-287-3330, Fax:513-287-2461, Email c/o sbroaders@cinergy.com
26. Mr.Robert Cooke, Midlands Power International
    Ph:44-121-423-2345, Fax:44-121-422-0261
27. Mr.Art Bell, Landis & Gyr
    Ph: 408-453-5222, Fax:408-452-5246, Email:art.bell@us.landisgyr.com
28. Mr.Jack Stultz/Cliff Keeler, PSI Energy/Destec Energy
    Ph:812-535-2451, Fax:812-535-2480, Email:jstultz1@cinergy.com

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[3] F.T.Sparrow, Brian H.Bowen, "Report to USAID/EAGER Trade on the SAPP (Southern African Power Pool) Meeting held at Windhoek, Namibia 12,13 February 1997."

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[5] Zuwei Yu, "Single Area and Multi-Area Hydrothermal Unit Commitment Models", Departmental paper, Institute for Interdisciplinary Engineering Studies, Purdue University, April 1997.
[6] Zuwei Yu, F.T.Sparrow, Brian H.Bowen, "A New Long-Term Hydro Production Scheduling Method for Maximizing the Profit of Hydroelectric Systems", IEEE Transactions on Power Systems - accepted for publication in 1998, IEEE PES 1997 summer meeting, Paper PE-868-PWAS-0-05-97.
[7] F.T.Sparrow, "SAPP/Purdue Modeling Workshop Lecture Notes", Institute for Interdisciplinary Engineering Studies, Purdue University, August 19-September 3, 1997.

Appendix I

U.S.-South Africa Binational Commission (BNC);
Sustainable Energy Committee Meeting, Monday, July 28, 1997, Washington DC

Summary Report:

(1) The modeling project continues to attract much interest and attention and looks like it could take on more significance among the various interested parties in 1998 (SAPP, DOE, BNC, World Bank).

(2) Personally supplied Dr Gordon Sibiya (South Africa's Deputy Director General and assistant to the Minister of Energy Maduna) with the Purdue Proposal and all the latest information on next month's workshop. Dr Sibiya is very committed to the SAPP project.

[3] Dr Sibiya explained the immense changes taking place within South Africa's electricity distribution industry. Distribution issues and changes were explained. There was no time to discuss generation matters.

(4) Several different agencies presented papers in the morning sub-cabinet working session. These ranged from charitable organizations and small scale renewable interest groups to the presentation from the U.S. Nuclear Regulatory Commission. The Nuclear Regulatory Chair, in the afternoon session of the cabinet level formal meeting (non participants were allowed to sit in), was Dr Shirley Jackson. South Africa's Counsel on Nuclear Safety (CNS) is working with the US counterpart. The U.S - South Africa Ambassador contributed in the morning working session - regarding training and small grants.

(5) US Secretary Pena gave expressions of support to the BNC in his opening address of the cabinet level meeting. USAID's David Hales is the Vice Chairman of the Energy Committee. Andrea Lockwood was the DOE's chairperson of the working session.

(6) DOE is giving full support for a 1998 regional modeling workshop (see p.78,79,81 of BNC Sustainable Energy Committee Progress Report #4). DOE and Purdue will work together to present a 1998 regional modeling workshop in Africa.

(7) At the August 1997 workshop it is recommended that we get SAPP and DOE representatives together to discuss and agree upon the approach for a 1998 regional workshop.

(8) Throughout the morning about 30 people were present at the working session. The afternoon formal cabinet session had about 40 people present. A total of 40 delegates came with the BNC from South Africa but only three of these were from the South African Energy Department.

Brian Bowen
July 30, 1997

Appendix II

Summary of Collective Model Results (September 3, 1997)

1997 Current Contracts and Future Contracts with Cahora Bassa

All demand data from 24 July 1997

		REGIONAL COST ($/day)	TOTAL ENERGY (MWh/day)	AVERAGE COST ($/MWh)
(I)	**Current Contracts (O&M @ 0.15c/kWh)**			
	(a) w/o O&M	2,743,414	694,660	3.949
	(b) w/o O&M+ HCB	2,628,145	700,878	3.750
	(c) w O&M	3,776,191	693,974	5.441
	(d) w O&M+ HCB	3,687,780	700,888	5.262
(II)	**Optimal Contracts (O&M @ 0.15c/kWh**			
	[a] w/o O&M	2,519,446	695,007	3.625
	[b] w/o O&M + HCB	2,402,501	700,387	3.430
	(c) w O&M	3,569,231	694,981	5.136
	(d) w O&M+ HCB	3,452,893	700,313	4.920
(I)	**O&M for Hydro @ 0.05c/kWh and Thermal @ 0.15c/kWh**			
	(a) Current Contract			
	w O&M	3,723,673	693,992	5.366
	(b) Optimal			
	w O&M+ HCB	3,382,635	700,611	4.828

Note: When only O&M there is no HCB

Appendix III

Modeling Workshop Timetable

Institute for Interdisciplinary Engineering Studies Revised - Aug 18

PURDUE UNIVERSITY

SAPP/PURDUE Modeling Workshop, August 19 to September 3, 1997

Sun	Mon	Tues	Weds	Thurs	Fri	Sat
AUG 17 SAPP ***Delegates arrive*** in West Lafayette **Hotels** - University Inn AUG 18-26 Purdue Memorial Union AUG 27-SEPT 3	**AUG 18**	**AUG 19** 9am - 12:30 & 1:30 - 5 pm Goss B-50 Potter **6:30 pm** *Welcome dinner PMU*	**AUG 20** 8:30am Inter. Studs & Scholars 9:30am Laeb B291 ***Model Formulation*** 1:30-5pm Laeb B291 7pm-8:30	**AUG 21** 8:15amTour Purdue INFO Center 10 am Laeb B291 1:30-5pm Laeb B291 7pm-8:30	**AUG 22** **Mid America Interconnect Network** **Commonwealth Edison**	**AUG 23** 9am - 1pm Computer Session *Social 6pm Prof.Sparrow's*
Sun **AUG 24**	Mon **AUG 25** ***National Models*** 9am-12:30 Potter 118 1:30-3pm **Indianapolis Forum/Dinner** 4:00-9:00pm	Tues **AUG 26** 9am-12:30 Potter 118 1:30- 3 pm 3-5pm **DOE**	Weds **AUG 27** 7 am Destec Combined cycle coal gasification 5 pm SCADA Landis & Gyr	Thurs **AUG 28** 9-12:30 Potter 118 1:30-5pm **(R)** 7-8:30pm	Fri **AUG 29** 9-12:30 Potter 118 1:30-5pm 7-8:30pm	Sat **AUG 30** *Chicago Sight Seeing Day Out*
Sun **AUG 31**	Mon **SEPT 1** US Labor Day National Holiday Computer Sessions in Potter	Tues **SEPT 2** ***Collective model*** 9am-12:30 Potter 118 1:30-5 pm **7-pm Panel**	Weds **SEPT 3** 9am-12:30 Potter **(R)** 1:30-5pm **Summing up session**	Thurs **SEPT 4** SAPP ***Delegates depart*** West Lafayette	**(R)** Thursday 4 pm, AUG 28 Compled national model Reports. **(R)**Wednesday 12:30, SEPT 3 Completed regional model Reports.	

Appendix IV

Reports from SAPP/Purdue Workshop Delegates

Reports follow from the nine SAPP delegates who attended the August 1997 Modeling Workshop:

1. Peter B Robinson, Zimconsult, Harare
2. BRF Moore & M.Badirwang, Botswana Power Corporation (BPC), Gaborone
3. Mario Houane, Electricidade de Mocambique (EDM), Maputo
4. Udo Hermann Eberhard Kleyenstüber, NamPower, Windhoek
5. Ferdie Kruger, Eskom, Johannesburg
6. Bongani Mashwama, Swaziland Electricity Board (SEB), Mbabane
7. Roland Lwiindi, Zambia Electricity Supply Corporation (ZESCO), Lusaka
8. A. Chikova, Zimbabwe Electricity Supply Authority (ZESA), Harare

1. THE SOUTHERN AFRICAN POWER POOL (SAPP) AND THE MODELING WORKSHOP

Peter B Robinson
Economist on SAPP-Purdue Modeling Team
Zimconsult, Harare, Zimbabwe

Although the potential benefits of cooperation in the electricity sector in Southern Africa have long been recognised, the Southern African Power Pool was only formed in 1995, and the Operating Agreement signed in December 1996. The objective of that agreement are "for all Operating Members:

(i) to co-ordinate and co-operate in the operation of their systems to minimise costs while maintaining reliability;
(ii) to fully recover their costs; and
(iii) to share equitably in the resulting benefits.

Among the benefits that will be achieved are reductions in required generating capacity, reductions in regional fuel costs and improved use of hydro-electricity".

In the short time of its existence, SAPP has achieved a great deal in terms of establishing the framework for co-operation, including provisions for accredited capacity obligations, emergency energy and wheeling and establishing a set of Operating Guidelines. Through being based on those of the North American Reliability Council (NERC), SAPP internalized decades of NERC experience in successfully operating loose power pool arrangements.

In the present year, two significant agreements have been reached within SAPP. The first will lead to the establishment of a Coordination Centre in Harare by the end of 1997. The second is an interim wheeling charge agreement, which resolved an area of contention which had proved a stumbling block over a number of years to increasing

the level of electricity trade in the region. The Purdue Project, whose main objective is to assist SAPP increase electricity trade in southern Africa, prepared a paper on wheeling and played a catalytic role in the resolution of the wheeling issue at the SAPP meeting held in May 1997. The SAPP Wheeling Working Group has been reconstituted to work on a wheeling arrangement which will apply after the interim agreement expires in April 1999.

The modeling workshop at Purdue

All the operating members were represented at the workshop except SNEL; Swaziland Electricity Board also sent a delegate. The immediate objective was to develop national generation and spatial models, and integrate these into a collective model to derive the benefits of increasing trade to the levels which would apply under least cost centralized dispatch. The time period modeled in this initial phase was 24 hours, with supply having to match demand for the 1997 peak day. The models were set up prior to the arrival of the delegates: the data was checked and refined during the workshop, and refinements made in the treatment of losses, hydro-generation and pump storage.

In several cases, it appears that the stand-alone country models will be useful to their utilities as planning and budgeting tools. One problem to be overcome is the acquisition of the GAMS package to solve the model; consideration is to be given to joint procurement through SAPP. Another problem, relating to the collective model, is the confidentiality requirement which some utilities have imposed on their generator cost data (despite the provisions about disclosure of information in the SAPP Operating Agreement). Only Purdue has a version of the collective model with the full data set. In the fullness of time, perhaps the collective model can be transferred to the Coordination Centre and be maintained by the Centre for the benefit of all SAPP members.

The results of the collective model show savings of the order of 0,05 USc/kWh, equivalent to over US$300 000 on the peak day. It is increased use of hydro that is the main determining factor in reducing overall costs within the region. As shown in Table 2, with the Cahora Bassa interconnectors in operation (1200 MW to South Africa and 500 MW to Zimbabwe) and trade minismising costs across the region, the level of exports from the countries with large hydro capacity (Mozambique, Zambia and Democratic Republic of Congo) increase significantly, while imports increase in the remaining countries, all of which are predominantly thermal producers.

In the case of Botswana, domestic production ceases altogether in the optimal solution. Similarly, in Namibia, it is only the hydro plant (Ruacana) which is used to meet a proportion of domestic demand. In the case of Zimbabwe, net imports almost double. The model does *not* show how the financial gains might be divided, but the results do indicate where the utilities should concentrate their attention in negotiating new trade arrangements. Provided SAPP Principles (ii) and (iii) noted above (cost recovery and equitable sharing of gains) are applied in negotiations, trade should expand significantly.

Short-term trading opportunities

Up to this point, most trade within the region has been on the basis of long-term contracts. Some have an element of flexibility, with import and export levels being adjusted 24 hours in advance, but the prices for such arrangements are fixed in advance. Developing the collective model for a period as short as one day has brought into focus the potential benefits of short-term trading arrangements in a market environment where prices and quantities would be negotiated over a short time period. The implications of this will require a change of thinking within SAPP, which inter alia will require coming to terms with:

Table 2: SAPP - NET EXPORTS (+ve) OR IMPORTS (-ve) OF ENERGY

(MWh traded on ESKOM's peak day during July 1997)

Category	Country	Present Level of Trade	Optimal Trade (Cahora Bassa included)	Increase
Hydro exporters	Mozambique	409	25125	6042%
	Zambia	2904	11794	306%
	Dem Rep Congo	2400	6000	150%
Importers	Lesotho	-432	-1422	229%
	Swaziland	-1800	-2049	14%
	Namibia	-2235	-3187	43%
	Botswana	-1575	-4424	181%
	Zimbabwe	-7652	-14807	94%
	South Africa	7981	-17030	**
Total exports	Moz, Zam, DRC	5713	42919	651%

NOTES:

South Africa is a net exporter under present arrangements, but would be a net importer under optimal trade.

Cahora Bassa interconnectors will only come into operation in November (1400 MW to SA, 540 MW to Zimbabwe)

Under the optimal solution, thermal generation is reduced across the region. Botswana ceases to generate internally.

Through field visits to Indiana utilities and discussions on campus, the delegates were exposed to various aspects of the debates over the regulatory and institutional changes taking place in the US electricity industry. Of particular interest was the opportunity to see short-term trading being effected through the OASIS system, which facilitates

hourly trading arranged 24 hours in advance, plus spot trading to cover any gaps which may arise.

- sales and purchases being made at an operational level within utilities, not requiring the sanction and endorsement of senior management as is the case for long-term formal contracts;
- prices for short-term trade (supply prices and wheeling charges) being much lower than those for long-term contracts (reflecting the underlying economic reality that short-run marginal costs are very much lower than long-run costs, which ultimately include the costs of expanding capacity).

Drawing on perceptions arising from the field visits and the results of the short-term model, the immediate proposal for fostering short-term trade is that the Coordination Centre maintain a bulletin board on the internet documenting offers of supply, wheeling capacity and upcoming demand requirements. The debate over wheeling charges for the more conventional contracts highlights that the transmission aspects of trading arrangements need to be carefully handled. The suggested practical requirements to make this operational are:

- once an offer of wheeling has been contracted by a utility, payment to the utility owning the transmission line should be made;
- if the purchasing utility subsequently does not require the capacity, it can be resold to another utility wanting to purchase power via the transmission network.

Once established, this system could allow traders to operate. The wheeling capacity between exporting and importing utilities. Futures purchases and options could also come to play a role. Finally, these market arrangements need not be limited to wheeling but could also extend to generation and distribution.

Extensions of the model - optimising system expansion

The model developed so far has demonstrated the potential benefits from increasing electricity trade in the region to be tens of millions of dollars per annum. However, the savings from joint optimization of investment planning is expected to be at least an order of magnitude higher (hundreds of millions of dollars per annum). The short-term model is thus not just an end in itself, but a building block towards a long-term model. This ideally would allow optimization of investments over say 25 years, while also minimizing costs of generation commitment over the medium-term (day-to-day) and of dispatch over the short-term (hour-by-hour). Through the State Utilities Forecasting Group and associated academic research, Purdue has developed practical models incorporating these aspects and allowing for the formal treatment of uncertainty.

Taken collectively, SAPP presently has considerable excess capacity, most of which is located in South Africa. In relation to the 1996 maximum demand of 30 785 MW, net available capacity was 41 604 MW, giving a margin of 35%. By the year 2000, if the economic projections made in Tables 3a & 3b materialize, demand will have grown to 38 064 MW. On present plans, capacity will be expanded to a total of 46 000 MW by 2000, giving a margin in that year of 21%. Most of the planned increase is in South African capacity, with plants presently in cold storage or mothballed being revived and brought into production.

Table 3a: SADC & SOUTHERN AFRICA POWER POOL - GDP & CAPACITY GROWTH RATES

1996-2000	Real Growth Rates '91-'95 % p.a.	'96-'00 % p.a.	Improve - ment % p.a.	Real Gwth 95-96 % p.a.
South Africa	0.8%	4.2%	3.4%	3.1%
Zimbabwe	0.6%	5.0%	5.4%	6.6%
Zambia	-0.6%	6.0%	6.6%	6.4%
Tanzania	4.2%	5.0%	0.8%	
Namibia	4.6%	6.0%	1.4%	
Botswana	4.4%	6.0%	1.6%	
Mozambique	5.8%	6.5%	0.7%	6.4%
Angola	-0.4%	5.0%	5.4%	12.5%
Malawi	1.6%	5.0%	3.4%	9.7%
Swaziland	2.5%	6.0%	4.0%	3.2%
Lesotho	6.9%	12.2%	5.3%	14.1%
SADC tot/w av	1.2%	4.5%	3.4%	3.6%
-excluding SA	2.4%	5.6%	3.7%	5.5%

Having a long-term regional investment planning model could well reduce the costs of the present capacity expansion plans up to the year 2000, and certainly into the next century when economic growth is expected to eliminate the excess, including mothballed capacity. The potential to develop economically efficient hydro-generation in countries such as Democratic Republic of the Congo, Zambia, Zimbabwe and Mozambique may even make it attractive for ESKOM to leave some thermal plants mothballed and instead import environmentally benign power from the north in the next millennium.

Emphasizing regional supply options in investment planning shifts the focus from generation to transmission. The results of the short-term model already indicate where transmission investments should be directed, by showing which lines are loaded to capacity under optimal trading arrangements. Significant projects for promoting trade in SAPP are those which increase capacity of key interconnectors at a reasonable cost. The prime case is the D R Congo-Zambia interconnector, where for an estimated US$40 million, the interconnector capacity could be increased from 250 MW to 500 MW, allowing much higher exports of power from Inga on the Congo River to the rest of SAPP at a capital outlay around one seventh the cost of installing new generation capacity.

Table 3b: SADC & SOUTHERN AFRICA POWER POOL - GDP & CAPACITY GROWTH RATES

	Maximum Demand 1996 MW	2000 MW	Annual Average Growth	Elec:GDP Elasticity 1996-2000 Average	Underlying
South Africa	26382	32116	5.0%	1.20	
Zimbabwe	1667	2026	5.0%	1.00	
Zambia	1028	1258	5.2%	0.86	1.20
Tanzania **	412	568	8.4%	1.67	?
Namibia	321	655	19.5%	3.25	1.00
Botswana **	222	296	7.5%	1.25	1.00
Mozambique	192	351	16.3%	2.50	
Angola	181	291	12.6%	2.52	?
Malawi	164	214	6.9%	1.38	?
Swaziland	140	177	6.0%	1.00	
Lesotho	76	112	10.2%	0.83	?
SADC tot/w av	30785	38064	5.4%	1.21	
-excluding SA	4403	5948	7.8%	1.39	

Sources: SADC- FISCU study
Modified with SAPP- PSC

2. THE NATIONAL UNIT COMMITMENT POINT MODEL FOR BOTSWANA

BRF Moore
Corporate Planning Manager
M.Badirwang.
Assistant Engineer Transmission
Botswana Power Corporation (BPC)
PO Box 48, Gaborone, Botswana

1.0 Overview of Practical System Operation

Botswana's one thermal power station generates with a marginal cost of approximately 0.7 US cents per kWh. BPC has negotiated a five-year Agreement with Eskom on a TOU (Time of Use) basis, escalated at the US PPI index rate with a present (1997) average kWh rate of 1.45US cents per kWh. There is also the possibility of importing "Surplus" energy from ZESA or ZESCO at a lower cost than the firm power from Eskom. In 1997, for a two month period, BPC imported approximately 30GWh from ZESA at a unit cost of 1.00 US cents /kWh. BPC simply optimizes its operation by base loading Morupule and importing the balance from Eskom to meet the demand. In actual practice, because the import from Eskom is TOU, and TOP (Take or Pay), on a 24 hour advance Commitment, the power station actually alters its output to assist in smoothing out the ramp rates before and after the change periods. These periods are (a) 0000-0600, 2001-2399, and (b) 0601-2000 hours.

2.0 Model Representation

The model accommodates the 4x 33MW units and has now been extended to allow for another two 120MW units, in order to allow comparisons to be made between further imports or expanding the generation facilities at Morupule. The model uses the heat rates of the units and the coal cost for determining the generation costs. The original models generation figures have been changed to reflect generation sent out figures. (Changing from 33MW to 29.5MW). A second interconnector has been added to allow for two incomers, one from Eskom and the other from ZESA. Later, when Phokoje is commissioned it will be necessary to extend the model and incorporate another interconnection. (For the 24-hour model, which was for the peak load period in 1997, there was no surplus power imported, hence the 2nd interconnector carries no load. The model uses two figures for losses: The losses over the interconnector and the internal transmission losses. The loadings given originally included the transmission losses. These have been adjusted to reflect the load, as a combination of actual consumer demand plus distribution losses, only. The model's load figures have also been modified to reflect the 24 hour period in which the 1997 peak load occurred.

3.0 Concerns with the model that need addressing

1. At present losses are assumed to be a constant linear percentage for any level of generation or import. As losses vary as the square of the load, it will be necessary to build in a quadratic function to vary the losses depending on the actual load level in any particular hour.

2. Depending on the mix of the load that is fed from the internal generation source at Morupule, or the Eskom import, or the ZESA import (the 2nd import that we have added), the internal transmission losses will be different. The model therefore needs to have a different internal transmission loss value associated with each of the interconnectors, as well as different internal transmission loss values for each generation

condition. Ideally there should be integration with a load flow program to ascertain the true system transmission losses, for any case that the model may select.

3. The generation is assumed to be constant over the 24-hour period, i.e. a 100% load factor is implied. In practice the load factor over an average month is about 80%. In order to reflect this condition in the model it has been suggested that the average monthly output of any unit should not exceed 80%, but, for an individual 24-hour period, the unit may operate at full load.

4. In a 24 hour model it is not possible to build in the necessary off times for maintenance schedules, and it would not be accurate to merely multiply the figures obtained by 365 get the annual performance.

5. As a check on the cost parameter for generation at Morupule, a run was made with the load level such that there was no need to import. This resulted in a unit price of generation of 0.5013 US cents/kWh. In actual practice the marginal cost at Morupule is 0.68 US cents/kWh. The difference is accounted for by the fact that the model, in this case, only considers the coal cost whereas the short run marginal cost used by BPC also includes the fuel oil, chemicals, water, 10% labor and 20% maintenance costs.

Other issues not associated with country model

It would be very useful, if not essential, for the SAPP collaborators to have a short conversion course on the software to be used back in Southern Africa. It is important that everyone is shown how to integrate the UNIX edited data documents with the DOS based software that has been provided for the GAMS, so that no problems are encountered later. It is appreciated that for the larger systems it was probably necessary to use UNIX, but it appears now that the GAMS demo software is not sufficient to handle the combined model and this will need to be run at Purdue.

1. Some utilities have not yet refined their models to reflect the actual cases of multiple interconnections. Averaging of losses must lead to inaccurate results when considering the combined model.

2. All Country models should consistently exclude all distribution and generation losses from the stated loads.

3. The model should be able to permit each country to ascertain the practical advantages of maximizing power exchanges and this should encourage the operation of the power pool. BPC is, at present, fully utilizing the advantages of the pool by importing over 60% of its requirements instead of expanding its generation facilities. This relaxation of self-sufficiency allows BPC to provide the cheapest possible power to its consumers. BPC can only improve use of the pool by importing from sources other than Eskom, at a lower cost.

4. Summary of changes made to original model

1. File: Bots.gms and Botsdata.inc
   Loadings changed to exclude transmission losses.
2. Generator outputs changed to exclude generation losses.
3. Loadings all changed to reflect 24-hour period in which the 1997 peak load occurred.

4. Second interconnector added. (Including loss coefficients)
5. Costs of 2nd Interconnector (from ZESA) assumed to be the same as the Eskom cost.
6. Losses on 2nd Interconnector increased above Eskom interconnector to simulate 1997 open line condition.
7. Future Generators No 5 and 6 added

5. Result of cost of operation of country model

Over the 24 hour period in which the 1997 peak load occurred the operational cost for the Botswana model was:

COST = $44,090.147

3. THE NATIONAL UNIT COMMITMENT POINT MODEL FOR MOZAMBIQUE

Mario Houane
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The modeling of SAPP electricity trade is done by a software called gams. In this software we first define the involved parameters so that they are compatible with the system configuration we want to analyze.

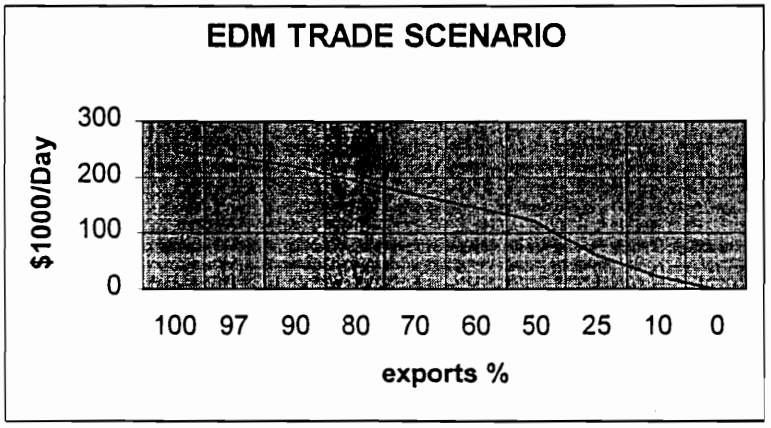
In the EDM model, to approximately meet the existing system facilities the following changes were introduced:

In the thermal generation units, Nacala is no longer existent. The fifth unit at Mavuzi hydro power plant is out of service. The Minimum up & down time in hours for thermal and hydro power plants are lowered. Start-up & shut-down costs of hydros are kept down and for thermal due to fuel cost are high. The water inflows in the reservoirs are the average figures. The main assumption in the model is that in the short time horizon, EDM, through HCB will export about 1500 MW of power to neighbors at a price of $9.4/MWh, and will import a maximum of 200MW at a price of $20.8 /MWh. The results of this scenario are illustrated on the graph below.

It's obvious that all the power export is from hydro power plants. The results achieved to by running the gam model, are clear on how to operate the system; how much water is needed, which power plant and respective unit in an hourly basis.

Future developments

The model simulates real situations of electric systems taking in account physical constraints, likelihood of lake inflows, marginal cost of production and quantifies the benefits/losses each utility (country) may acquire from trading with neighbors. Nevertheless, the fact that the results are only referred to one day is a serious challenge to "decision makers" to effectively plan the trade. For instances, hydro conditions cannot at any case be looked at in one day, there have to be 20 to 30 years of time series, to model (especially in countries where drought and floods can happen in short periods of time). The growth in demand is a function of diversified variables such as GDP, Population, etc, which can also not be measured for only one day, this is to say that the model should be further developed to meet those details. Specifically for EDM the future model should be split in "three models", divided according to the existing grid. This would enable evaluating not only the benefits in trading but also to foresee the Least Cost Expansion Plan, to effectively use the abundant natural resources friendly to the environment



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Conclusions

This electricity trade modeling workshop is a great lesson to us SAPP members. It created the sensibility of urging the effectiveness of interconnections, fair and acceptable prices. We now know how far can the welfare be brought about to our countries by simply sharing our resources. We very much thank Purdue University and all the staff to make this workshop possible and profitable.

4. THE NATIONAL UNIT COMMITMENTPOINT MODEL FOR NAMIBIA

Udo Hermann Eberhard Kleyenstüber
Chief Engineer System Planning
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1. Introduction

The National Economic Dispatch Model for Namibia was set up by personnel of the Purdue University prior to the visit of the SAPP delegates. Data forwarded to the Purdue University via email and facsimile was entered into a mathematical linear programming model which has the ability to schedule generating units within a domain in such manner as to arrive at minimum running costs over a period of time. The quality of the data provided as well as the "closeness to reality" of operating parameters, constraints and actual contract parameters for imports and/or exports determined greatly the behavior of the model.

2. Correction of Input Parameters

Some input parameters such as the cost function of Namibia's thermal power plant had to be corrected. After correction the model gave outputs which were closer to reality than during its first run.

3. The Hydro Model

Ruacana being a "run-of the-river" station has a very small upstream reservoir from which it can only be operated on a weekly cyclic basis. In the model only the 24 hour maximum peak day for 1997 was used. Starting and ending lake levels had to be calculated and used as input in order to force the model to behave as if a normal weekday in say the middle of the week was taken as its input. The model then scheduled the Hydro generators another step closer to reality. Originally the model was drawn up such that the starting level was halfway between the Full Supply Level and the Minimum Operating Level of the lake. This was modified to be rather a fixed input with enough margin left between starting level and Full Supply Level. The lake level at the end of the day was then determined from the average inflow of the day. Ultimately this calculation was automated by introducing a function of ending lake level versus total inflow of the day.

4. The Import/Export contract with Eskom

Originally an average Eskom import price was forwarded to Purdue. This resulted in a rather arbitrary way of the scheduling of the Hydro generators by the model as the model had not to take any variation of price into account and the only factor which could force scheduling into peak periods were the losses being calculated. It was thus imperative to vary the import price according to a Time Of Use schedule. The next problem to solve and introduce into the model was the fact that the import (and export) schedules with Eskom are determined according to a rather more complex system than only Time Of Use (in fact the contract has been built around the principles set out by SAPP). The Eskom Import contract consists of a number of components of which the two main components are firstly Firm Power and its associated Firm Energy and secondly System Energy. System Energy is effectively surplus thermal energy sold by Eskom at a somewhat cheaper rate than Firm Power such that the client (NamPower) can avoid running own high cost thermal plant. Rather than to develop complex import cost functions the import were treated as if consisting of two separate imports representing Firm Power and System Energy. Firm Power, once scheduled for a specific hour, would then be constant and at the same level throughout the 24 hour period whereas in the case of System Energy the energy rate would vary according to a Time

Of Use schedule. These modifications then finally gave the right signals to the model to schedule the generators very close to reality.

5. Line Losses

Line Losses have still to be modeled as a quadratic function with respect to the import and export levels.

6. General Observations

Too little time was left to "play around" with the operating parameters. Hence no graphs etc. have been attached to this report.

The national model can be used to accurately predict future operating conditions on the NamPower network. It will be used for budget purposes to predict the cost of Eskom imports under various operating conditions more accurately. The model thus provides NamPower with an excellent and very useful tool for the operation of the network as a whole and, as already stated above for budget purposes.

It must be said here that the initial incorrect functioning of the model was due to the fact that some cost parameters had been misinterpreted. Only after understanding the mathematical concepts behind the cost function the cost parameters could be corrected. This emphasizes the fact that each delegate had to understand the exact functioning of the model, which sometimes was a somewhat daunting task for persons not having been exposed to a theoretical and mathematical environment for a long time. This hurdle, however, could be overcome with the excellent tuition and guidance by the Purdue graduates who led the workshop. At this point I wish to complement the Purdue staff for its achievements on the economic modeling of the electrical power network of the SAPP region.

5. THE NATIONAL UNIT COMMITMENT POINT MODEL FOR SOUTH AFRICA

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Background to the model

The Eskom system is modeled for the Eskom peak 1997 week, showing 17 separate sources of electrical power. Eleven coal fired power stations are modeled, with 59 generators and a total installed capacity of 29 404 MW available. Two hydro power stations with a total of six generators and 540 MW are present, and so are the two pump storage plants with six generators and 1 400 MW. One nuclear plant with two generators and 1 840 MW, and imports from Cahora Bassa worth 1 080 MW complete the picture. For the sake of simplicity the imports from Cahora Bassa are modeled as a thermal power station at Apollo substation, where in reality the inverter station at the end of the DC line between Cahora Bassa power station in Mocambique and South Africa is feeding the power into the Eskom network.

Installed capacities

This shows a total installed capacity of 33 184 MW, and a take or pay import contract with Cahora Bassa of 1 080 MW, giving availability of 34 264 MW for dispatch to meet load in 1997. A peak load of 28 301 MW is modeled with exports of 750 MW on top of that, with losses included, indicating peak generation of 29 051 MW or 85% of available capacity was needed during the peak hour (19:00 on Wednesday the 23rd of July).

Cost of generation

The coal fired power stations were modeled with average cost curves due to lack of better information. Fuel cost of the most expensive station is almost double that of the cheapest station. The nuclear station's fuel cost is just about equal to the cheapest coal fired power station, and so is the cost of the imports from Cahora Bassa. The efficiency of the pump storage plants is estimated to be about 74%. The hydro stations form part of a river system with low flow during the winter season, and because the flow of water from the dams are controlled by the South African Department of Water Affairs, the generators were modeled as run of the river generators with fixed generation levels over the study period of 24 hours.

Pump storage modeling

With the added benefit that a substantial amount of learning was done in the process, the pump storage plants were modeled in such a way that pumping would occur from after 22:00 until 05:00 the next morning for a continuous case. Generation from these facilities occurred during peak load conditions, from after 08:00 up to 10:00 in the morning, and from 18:00 up to 20:00 in the evening. At present it is not possible to model the water levels in the upper and lower reservoirs for a weekly cycle, since specifying a lower level at the end of the period compared with the start of the 24 hour period, the model considers pumping to be a waste of resources. Quite clearly more learning is needed.

Average cost of production

The use of the pump storage scheme to do a peak shaving function allows the Eskom system to do without the two most expensive coal fired stations. The objective function, giving the optimized total cost of production for the 24 hour period indicates an average rate of just below 0.4 c/kWh in 1997 money. This

is an optimistic figure because in reality the two most expensive station are used due to maintenance programs and system security considerations that are not modeled at present. Total cost is just short of $2.2 million for the day according to the model at present.

Marginal power station

One point of interest from the results of the study so far is to track the marginal power station for each hour. From midnight to 05:00 the pumping load follows the external load, but the most expensive station on line is Lethabo power station. From 05:00 until 06:00 it is Duvha who is most expensive and who also follows the load. From 06:00 for the rest of the day Kendal power station remains the marginal power station, except for the periods 08:00 - 10:00 and 18:00 - 20:00, when the pump storage generators do peak shaving. The marginal cost of the system in isolation increases from its lowest value by 50% during the peak of the day, which is contained through the use of the pump storage plants. More studies are needed to calculate the financial impact of these plants on the Eskom system with the 15% over capacity situation at present influencing the picture.

Gas turbine back-up power stations

Eskom also posesses two small gas turbine power stations in the southern regions of South Africa. Port Rex power station used to supply the city of East London before the transmission system reached there, and Acacia power station did the same for Cape Town. These two power stations are not modelled at present due to the extremely high cost of fuel for the two stations, the old age of the installations, and the over capacity of generation facilities both in South Africa and the rest of the Southern African region.

Conclusions

In general the scheduling of generators done by the model for the Eskom network is fairly realistic. The nuclear power station is scheduled to produce at full output for the 24 hour period covered by the model. Likewise for the take or pay contract with Cahora Bassa which is delivering full output for the period. The hydro power stations are generating at a constant rate corresponding with the flow of water in the river, since the South African department of Water Affairs determine the outflow and thus the generation of the hydro units. The pump storage plants generate during peak load conditions and pump during the night when demand is low, even though the effect of a weekly water cycle could not be modelled. Some transmission constraints might push up the total cost for a 24 hour period since rescheduling of generating facilities are done to improve system stability and control.

6. THE NATIONAL UNIT COMMITMENT POINT MODEL FOR SWAZILAND

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Introduction

The modeling of the electricity trade in Southern Africa has been a challenging exercise. Purdue University, who have experience in the Operational Research field have provided the SAPP initiative with a wonderful opportunity of optimizing the regional resources by effectively modeling optimal pool operating scenarios for the individual countries.

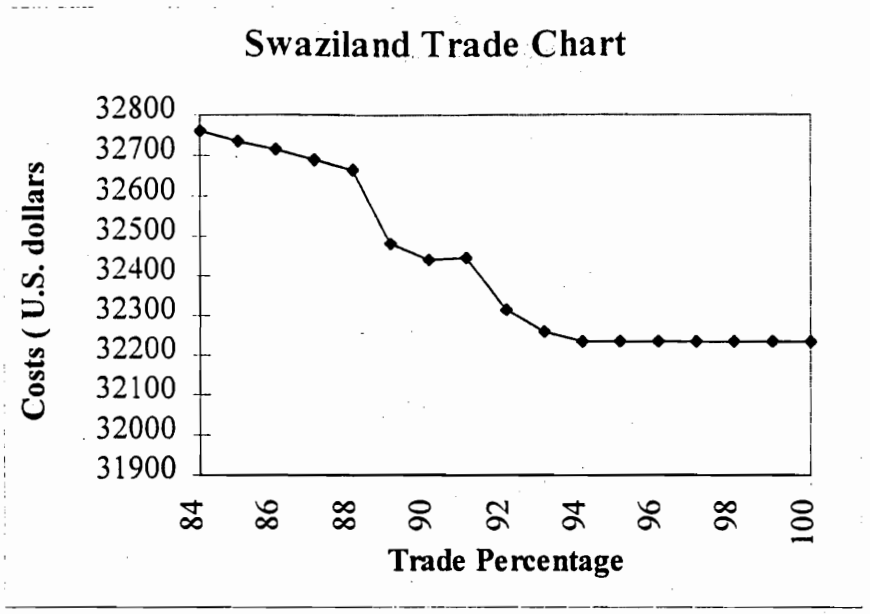
Swaziland's involvement in this modeling exercise has been necessitated by the country's unique position of increasing unsatisfied demand. The size of the load means that Swaziland cannot develop generation plant economically as the realities of scale is against small plant development. The load of 140MW requires an optimal plant of 200MW which has to be competitive enough to produce energy at a unit cost lower than the Eskom average tariff of $0.024/Kwh. Eskom is able to meet this low rate because of the availability of cheap coal and the sizeable generators (typically 600MW)which are more economic to run than would be a 200MW. This therefore puts the country in a position whereby the best way forward for energy development is to import competitive power. The objective of the pool facilitates Swaziland's policy development in the energy scene.

It is therefore in this respect that, although SEB is not an operating member of the pool, it was found of paramount importance to participate in this workshop at all cost. This brief report highlights the progress of the modeling exercise and what was beneficial from SEB's point of view. The modeling was carried out using software called GAMS.

The modeling

GAMS is a powerful tool which optimizes generation dispatch. From the exercise the Swaziland model was the smallest and was relatively simple to model as the country's supply is predominantly from imports with firm generation capacity from the hydro units limited to about 25MW. It was noted that for Swaziland the thermal capability was limited to 9MW which comprises two 4.5MW diesel generators. In the model the optimized solution seemed to include the running of these units. This was picked up and on investigation it was discovered that the fuel cost was not right which meant when the model ran it saw the units as low cost units and dispatched them.

To further the model an hourly cost element was introduced into the model to try and establish the highest cost hour. The obvious solution showed that the highest cost was experienced during the peak hour period. A sensitivity analysis on the energy trade quantities yielded what justified Swaziland's participation in the pool. The graph below shows cost behavior as the import was increased. This highlighted the need for SEB to plan appropriately its future trading strategy.



Future development of model

The 24 hour window used for modeling trade will need to be increased to enable longer term scheduling. The development of a spatial model is also critical in order to establish optimal transmission line dispatch and to minimize losses. The period that has been chosen for further modeling is a week, specifically the week of the 20th to 26th July. Specifically this period was chosen coincide with the Eskom maximum demand.

Finally a collective model would be necessary to produce an overall picture of the region. This collective model will also need to be modeled over 7 days (168 hours) which will require more work to be put in this part of the exercise.

Conclusion

In conclusion it is appropriate to thank the staff and students that assisted in this initial phase of the exercise. This is only the beginning of this project as one can see far reaching benefits of such a study.

7. THE NATIONAL UNIT COMMITMENT POINT MODEL FOR ZAMBIA

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1 The ZESCO model

Based on the ZESCO system data provided before the workshop, Purdue University developed an economic dispatch model for the ZESCO system. The model outputs the least cost generation dispatch schedule over any twenty-four hour period from the following inputs :

(i) Forecast Load Profile for the period,
(ii) Start-up and shut-down costs,
(iii) Cost of imports per Mwh
(iv) Revenue from exports per Mwh
(v) Limits on exports and imports
(vi) Minimum Spinning Reserve required
(vii) Reservoir parameters

The model was modified during the workshop as follows :

(i) The cost of water was added to the generation cost. This was necessary to prevent the model from over dispatching hydro units, which would result due to the fact that the twenty-four hour period modeled is too short for reservoir constraints to be effective. Values used in the model are shown in table 1 below, and are still to be confirmed.

Table 1: Estimated Cost of Water for the ZESCO System

POWER STATION	COST OF WATER	COMMENTS
Kafue Gorge	4 $/MWh	1 year storage reservoir
Kariba North Bank	5 $/MWh	3 year storage reservoir
Victoria Falls	0 $/MWh	Run of River

(ii) The Operation and Maintenance cost dependent on the up-time of each machine was included in the model. These costs were estimated at $146/hour, $154/hour and $40/hour for machines at Kafue Gorge, Kariba North Bank and Victoria Falls respectively.

2 Results

The model was used to assess the impact that alternative trade arrangements with other utilities would have had on ZESCO's generation costs on 23 July 199 (being the date of SAPP's maximum demand) . Results obtained are shown in Table 2 below. However, it must be emphasized that these results are only indicative since some parameters used in the model have to be confirmed.

Table 2: Effect of Alternative Trade Arrangements for 23 July 1997

Trading Scenario*	Generation Cost (USD)	Total Exports (MWh)	Total Imports (MWh)
Optimum Imports	64,085	6,000	820
Present Arrangement**	74,107	6,000	2,400
No Trade	115,039	0	0

* Price of Exports: 16.5$/Mwh, Cost of Imports: 14.0$/Mwh,
* Export Limit: 250MW, Import Limit: 250MW for all scenarios .
** Import level must be 100MW and export level must be 250MW

3 Applications of the model

ZESCO's transactions with other utilities are based on long term contracts whose durations range from six months to several years. Because of their long duration, uncertainties in hydrology and load forecast most likely tend to make these contracts conservative with trade levels below optimum levels. There is therefore a possibility that ZESCO foregoes potential benefits possible with higher trade volumes. The formation of the SAPP has put in place a framework for short term transactions among utilities. This model is highly valuable in that it will enable ZESCO to participate effectively in these short term transactions (on top of its long term contracts) by evaluating opportunities that arise in the short term, when there is a higher degree of certainty on hydrology and load forecast. The restructuring of the power sector in Zambia and the possibility of ZESCO's participation in the Eskom Pool will introduce further competition to ZESCO, for which this model will therefore be very useful.

As a spin-off economic modeling of the system will give the utility a better understanding of its cost structure, and bring out opportunities for further improvement in efficiency.

8. THE NATIONAL UNIT COMMITMENT POINT MODEL FOR ZIMBABWE

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Introduction

The power station and load data have been built into the model. The coal characteristics and heat rate values have also been incorporated including the inflow data for Kariba power station. The model to date has been done for only one day of the year , which is the peak day. The hourly load data for this particular day has been entered. The equations for the economic dispatch and unit commitment have been formulated.

Progress to date

The modeling started off with an in depth understanding of the theory behind system dispatch modeling and unit commitment. Each utility has a model set up independently for each utility and not interconnected with the rest of other SAPP utilities but only interconnected to the importing /exporting utility. A lot of time has been spent on debugging to get reasonable results.

Changes made to the ZESA model

- Introduction of some constraints have been built in to limit the energy production at Kariba Hydro Power Station to 2000 GWh per annum. This is due to the operating restrictions due to the hydrological conditions of the Zambezi basin.
- Imports have been modeled to be from 3 sources during the short term planning period (1 day).

1. Matimba import set to a maximum of 400 MW
2. HCB import set to a maximum of 500MW. (Set at zero in July 1997)
3. ZESCO import set to a maximum of 250 MW.

ZESA is importing up to 250 MW from ZESCO and 300 MW from ESKOM up to October 1997.
ZESA is importing up to 500 MW from HCB and 150 MW from ESKOM from November 1997.

All local power stations are included and would be dispatched due to merit order dispatch.

- The load forecast has been taken to be the generation sent out figures including transmission losses. The 1997 load forecast has been used.
- The coal prices for the thermal plants have been set different to reveal the actual coal price for each particular plant. (different relative to distance delivered).
- The objective cost function for the fuel has no scalar (1055) to convert the figures to MBTU as the figures supplied are already in $ per MBTU.

Analysis of the results from the model

- Hwange is being dispatched as a base load station , with ZESCO being dispatched at full contractual capacity. ESKOM is contributing the remaining energy requirements varying from 47 MWh to 300 MWh

every hour. In certain hours (during the night) there is no energy supply from ESKOM. Kariba is being dispatched as a load following plant increasing production during the morning and evening peaks.

- The model shows that the energy constraint at Kariba costs ZESA approximately 24% more daily in operating and dispatch costs.
- The program is dispatching the units after a number of iterations and then arriving at the objective value which shows the minimum production costs. Sensitivities on import costs dispatches HCB, ZESCO and Matimba in that order if there are no limitations on the imports. Since long tern contracts are already committed there is little variance in the dispatch order of the units.
- The total marginal costs for the thermal plants are also calculate

Recommendations and expectations from the modeling

1. To come up with a regional electricity trading model quantifying the benefits of trade.
2. To carry out simulations for a longer period beginning from one week, one year, and a long term (5 to 20 years) model showing the benefits of trade during the time of modeling.
3. To incorporate forced outages and maintenance scheduling in the model.
4. To assess the benefits of delayed investments on the construction of power plants.
5. To be able to use the model for load flow studies and assess the impact of trading on transmission congestion and costing.

NEW TRADE OPPORTUNITIES FOR AFRICA

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WHAT ARE NEW TRADE OPPORTUNITIES?[2]

African economic progress over the last twenty years has been bleak. Severe policy distortions at both the macroeconomic and sectoral levels led to economic stagnation. Industrial import substitution strategies failed to contribute to vitality in the manufacturing sector, while extensive intervention in agricultural price and trade regimes led in many countries to a retreat of the food sector into production of nontradables. Exports suffered from traditional sectors of comparative advantage (land-intensive commodity production) and failed to be realized in nontraditional sectors. In addition, diversification of African economies away from primary commodities failed to be realized, and external terms of trade declined for Africa's traditional exports. One result of this bleak record has been a virtually complete marginalization of Africa from the world trade scene.

By the mid-1990s, however, guarded optimism has returned. Many countries have undertaken difficult structural adjustment programs whose objectives have been restoration of macroeconomic and sectoral equilibrium. Thanks to changes in fiscal and monetary policy, exchange rate regimes, and pricing and trade policy in individual sectors of the economies, externally oriented private sectors are emerging in several Sub-Saharan African (SSA) countries. They are ready to take advantage of new trade and investment opportunities.

What are these "new trade and investment opportunities"? How can they be identified and evaluated? What kinds of trade and investment promotion mechanisms have been employed by other countries and trade blocs? What has been their record of success to date? What is the expected effect of recently negotiated international trade agreements on Africa's opportunities for expanded trade? What future topics for research suggest themselves?

In this paper, "new trade opportunities" are defined in three ways. The first is with regard to *new products*. As marketing researchers increasingly nuance their consumer targets, new products, comprising both goods and services, are constantly being identified to satisfy niche markets. The biggest surge in international trade today comes from non-traditional exports, as opposed to bulk commodities. In agriculture, this means a wide range of fresh and processed specialty products, while within manufacturing, office and telecommunications equipment represents the most dynamic trade category.

The second definition of new trade opportunities is from the perspective of *new markets* for traditional and non-traditional exports. Sub-Saharan Africa has traditionally sent its exports to Western Europe, and to a lesser extent, North America. Today, other markets beckon, both far and near. African exporters are developing commercial links to markets around the world. At the same time, they are being encouraged to seek new commercial links in markets just across domestic borders, in neighboring countries, within Sub-Saharan Africa.

Finally, "new trade opportunities" also refers to *new modes of trade*. Trade does not come about simply because one country sells a product on the international market which is bought by another. Today, it is increasingly nurtured via subsidiary, partner, strategic alliance, and other off-shore contracting relationships between sellers and buyers around the world. It is being led by new modes of contracting for primary and processed materials,

technology sharing, marketing, and delivery of products and services. And it is being shaped by firms competing on the basis not just of traditional comparative advantage (i.e. lowest factor cost), but also of other dimensions of competitiveness such as product quality in the broadest sense of the word.

These are the new trade challenges for SSA. Their identification is a task to which the private sector is much more aptly suited than the public sector. Keesing and Singer (1991a) identify several reasons why this is so. First, public servants adapt poorly to the tasks of supplying services to commercial enterprises and promoting business. Second, their fundamental focus is administration, not commercial success. Third, the low status of most trade and industry ministries makes it difficult to recruit the best staff. Fourth, rigid bureaucratic procedures in the public sector make it less conducive to the initiation of timely actions in response to private sector needs. Fifth, in part because public sector officials need to show immediate results of their work, they tend to focus on trade fair participation, sales missions, and the like, rather than the vital preparatory stages of market research and adaptation of firms' production to international market needs.

Both economists and business managers are trained in a range of market analysis techniques to evaluate the financial and economic profitability, internal rates of return, and net present values of alternative projects, ventures, or investments. These techniques include the following components: (1) *descriptive analysis*, to identify the relevant stages in production and marketing; (2) *supply analysis*, to assess issues relating to domestic production and competing imports; (3) *market analysis*, to identify buyers and sellers of raw material, inputs, and final goods, and the networks that link them; (4) *demand analysis*, to assess issues relating to consumption; (5) *institutional analysis*, to identify the jurisdictions and policies of public

sector agencies which may have an effect on the activity; (6) *cost and revenue analyses*, to assess unit margins under alternative price and cost scenarios, expected revenue streams under alternative volume scenarios, and net cash flow under alternative investment and business development scenarios; the estimation of financial and economic profitability, nominal and effective protection, and comparative advantage indicators is done as part of this stage of the analysis; and (7) *constraints analysis*, to identify bottlenecks along the chain and strategies for remedying them.

In the mid-1980s, in response to the general perception that the United States had lost its edge in the international marketplace, a large intellectual effort, referred to here as "the competitiveness school," was mounted in the States to ascertain the pathology of the phenomenon (Siggel and Cockburn ????; Alavi 1990; Porter 1990; ul Haque 1991; World Bank and USAID 1991; Wen and Sengupta 1991; Biggs et al. 1994; Cockburn and Dostie 1994; Cockburn 1995). This school argues that globalization of firms and factor markets (labor and, increasingly, capital) has decoupled the firm from the factor endowment of a single nation. Low wage rates no longer determine trade flows, as sophisticated modes of production and marketing sustain market share for increasingly differentiated products and services (Porter 1990). In fact, the direct labor content of most products is decreasing rapidly as automated technologies are used to produce them, and an increasing share of cost derives from research and development, design, marketing, and distribution (Dahlman 1991). In the words of competitiveness analysts, comparative advantage "has to be *created* [italics added] and must [continuously] respond to the changing world environment" (ul Haq 1991).

Many competitiveness authors focus on several layers of competitiveness determinants:

- the first encompasses a nation's **macroeconomic** (fiscal, monetary, and trade) and **incentives/regulatory policies**, which provide a base for domestic industries to pursue competitiveness;
- the second is the **infrastructure** (physical, institutional, socio-political, human) with which organizations develop and exploit technology; and
- the third covers many aspects of **firm management**, which is ultimately responsible for pursuing dynamic strategies for improvements in labor productivity; creative product/service development; quality of product and associated services; technology research, development, and commercialization; worker motivation/flexibility; internal organization; and relationships with suppliers and customers, by which competitiveness is achieved.

"Man-made brainpower industries," which are now in ascendance (compared with resource-based industries, which are said to be in descendance), can be located anywhere (Thurow 1996). What is needed are entrepreneurial vision and, most importantly, organizational skills. Thurow notes that it is *process*, not product, that is the key to comparative advantage: "To be masters of process technologies a successful business must be managed so that there is a seamless web among invention, design, manufacturing, sales, logistics, and services that competitors cannot match" (p. 69).

Cost, the classic measure of comparative advantage, no longer weighs as predominantly in a firm's ability to compete. Porter (1990) observes that many companies in high wage countries compete successfully on the basis of product design, sales, and service to clients. If a product's distinguishing characteristic is cost, its manufacture can and will be moved nimbly around the world in search of the lowest cost base of manufacture. For Porter, the challenge

is not to be the country with the greatest export volume, but the country with the highest share of home bases of multinational companies.

In an evaluation of "best practices in trade policy reform," the provision of a stable macroeconomic environment is consistently cited as the basic requirement for successful development of exports (Thomas, Nash, et al., 1991; Olson, 1996). This must include facile access both to foreign exchange and to short and long term capital. A second requirement for success is political stability and the existence of a legal system which protects private firms from expropriation or excessive interference by government. A third requirement is an efficient system for importing inputs in a timely fashion and without trade or indirect tax burdens, quantitative restrictions, etc. Fourth is well-functioning telecommunications, power, ports, transport, and industrial estates infrastructures. The ability to attract foreign direct investment is also essential. Domestic business regulations should also be reviewed, to ensure a minimum of red tape with regard *inter alia* to business registration, labor relations, industrial siting, and regional development. Finally, support services, including high-quality accounting, management, production engineering, design, packaging, processing, quality control, warehousing and storage, transport, publications, market research and analysis, advertising, and sales and marketing services, are also critical to exporter survival.

While the government's role in the first determinant is clear, much of the debate in the discussion regarding new trade opportunities has focused on the appropriate degree of government involvement in the second and third determinants. These are discussed below.

TRADE AND INVESTMENT PROMOTION MECHANISMS

Today, the global economy is increasingly becoming an integrated market place. As countries have undergone structural adjustment, they have shifted from an emphasis on import-substitution and directed markets to increased exports and liberalized markets. However, Sub-Saharan Africa (SSA) has not had the same success as other developing regions in the realization of new trade opportunities. In SSA anti-export biases have resulted from several decades of high tariff protection, pervasive quantitative restrictions, export taxes, the domination of commodity marketing boards, and currency overvaluation. Many of these policy constraints have been overcome, yet the institutional environment within which trade takes place is still far from ideal. This section explores some of the institutional reforms which have been introduced, outside of SSA and to a more limited extent within the region, to promote trade and investment and thus the realization of new opportunities.

Where "pro-trade" policy reforms to stabilize the macroeconomy and reform exchange rate, trade, and marketing policies have successfully been implemented, it is expected that economic growth and expansion of trade will accelerate without specific export promotion actions.[3] However, in many instances, reforms have been either partial or ineffective. In response, governments around the world, particularly outside of Sub-Saharan Africa, have introduced a variety of institutional mechanisms or interventions to enhance exports. These include:

- development of **infrastructure, production, or export processing zones** (sea-/airport development; storage, cold storage, and sorting/packaging facility development; free trade or export processing zones), often seen as a way of

providing improved infrastructure most efficiently to a concentration of export activities;

- **modification of trade tariff schemes** to exempt exporters from tariffs on imported inputs (duty drawbacks, waivers, exemptions, and rebates; temporary admission; bonded manufacturing warehouses), regardless of their physical site;
- **foreign direct investment promotion** (tax rebates or holidays, agreements to avoid double taxation, exemption from trade duties, preferential interest rates, unrestricted investment licensing, favorable tax codes, liberal capital repatriation schemes, liberalization of equity capital ownership guidelines, preferential treatment for location in strategic regions);
- **export promotion schemes** (streamlining of export procedures, export market development projects, export promotion boards, trade fairs, exporter training programs, market information systems, establishment of international market information centers, improvement of domestic quality/standards/ packaging/labeling practices to match international market requirements, and preferential financing arrangements such as export incentive schemes, export credit guarantees, directed credits, availability of export financing at preferential interest rates, export foundations to support export technology and market research and development); and
- more indirectly, **entrepreneurship or private sector development projects** often include export promotion among their strategic objectives; **labor market reforms** may facilitate private sector development by permitting greater flexibility for movements by firms in and out of the labor market; and **domestic market reforms**

(removal of parastatal marketing boards, domestic pricing controls) may be an important precondition to the expansion of primary sector exports.

The advantages and disadvantages of the most significant of these are discussed below.

Export Promotion Zones

In countries where streamlined procedures for intermediate input and raw material imports are unavailable and physical infrastructure is underdeveloped, the creation of export-oriented industrial parks may provide a next-best solution. Export processing zones (EPZs), also referred to as export promotion zones or free trade zones (FTZs), involve physically separate facilities with their own customs office to facilitate access to duty-free trade and quick customs clearance.

FTZs are often implemented in the early stage of a country's development to promote export and foreign investment. This has been the case for Malaysia (known as the most successful FTZ regime for export and investment promotion), Indonesia, Mauritius, Sri Lanka, and the Dominican Republic. Korea, China, and Taiwan are the best examples of countries where FTZs were established for the purpose of giving an equal footing to export activities that already existed. In addition, FTZs developed in Costa Rica, the Dominican Republic, and Honduras have successfully promoted investments and expanded manufactured exports (McKean and Fox 1994, Louis Berger 1990).

Developed in at least thirty developing countries, EPZs are an integrated (and GATT-legal) option for the provision of "equal footing" export policies (Rhee, Katterbach, and White 1990) to exporters in developing countries who are disadvantaged by anti-export biases. In the mid-1980s, 95% of EPZ employment worldwide (mostly unskilled or semi-skilled jobs) was

concentrated in 12 countries (Mexico, with close to 20%, Korea, Malaysia, Taiwan, Brazil, Macau, Mauritius, Tunisia, Philippines, the Dominican Republic, Sri Lanka, and Egypt). An additional 33 countries (including Ghana and Senegal) represent the remaining 5% of global EPZ employment (Rhee and Belot 1990).

Hill (1994) observes that many EPZ investors in Southeast Asia are in fact textile exporters from East Asia, for whom the Multifibre Arrangement (MFA) quotas on textile and clothing trade have already proven binding. In search of countries with underexploited quotas, these exporters have moved aggressively into Bangladesh, Sri Lanka, the Philippines, Indonesia, and Mauritius to establish new export platforms. Whether the continuation of such a phenomenon will bring textile and clothing-related FDI into SSA is explored later in this paper and is a research topic for a number of EAGER/Trade field activities in Tanzania, South Africa, and Madagascar.

In general, many of these zones have proven to be poor investments (Thomas and Nash 1991; Hill 1994), due to some combination of unfavorable location, high investment costs, mediocre management, or uncooperative customs officials. They also tend to remain isolated from the rest of the economy, thus preventing the very demonstration and spillover effects hoped for as a country enters an export expansion phase.

One alternative to the physical siting of an EPZ, pursued by Mauritius and Madagascar, is the application of a streamlined duty exemption scheme to any approved export enterprise, regardless of location. Referred to in Thomas and Nash (1991) as an EPZ, this is really another version of a bonded warehouse scheme, providing EPZ-like benefits to firms physically located outside of an EPZ. Only about one-third of Mauritian EPZ enterprises are actually located in public or private industrial estates. In Madagascar this "virtual EPZ"

concept has proven more popular than the physically sited EPZ. The latter is located on the coast, yet most firms prefer to locate in and around the inland capital city where labor and infrastructure are more developed. Other African countries including Senegal, Liberia, Kenya, Togo, and Cameroon have tried but failed to follow the Mauritian example.

Duty and Indirect Tax Exemption, Drawback, and Rebate Schemes

Duty exemption and drawback schemes ensure that local exporters enjoy access to imported inputs on equal footing to foreign competitors, i.e. at world prices. A simple duty and indirect tax exemption scheme allows exporters to pay partial or zero duties and indirect taxes on their input imports. Rebate or drawback systems provide exporters with refunds ex-post for the duties and indirect taxes they pay on their imported inputs. Asian countries have effected these refunds in one of two ways (Harrold et al. 1996) – either on a case-by-case basis, based on actual duties and indirect taxes paid, or on a fixed coefficient basis, according to a preset schedule derived from pre-tabulated technical input-output coefficients.

Duty exemption, drawback, and rebate schemes may present several disadvantages. First, they can discourage domestic production of inputs supplied at higher prices. The local industrial sector may be reduced, leading to even greater dependence on foreign suppliers. Second, unless import procedures for these inputs are efficient, reduced production of export goods may ensue.

For these schemes to be most successful, the export sector should generate backward linkages in the economy. This requires not only that direct exporters receive duty and indirect tax exemptions or rebates but also that domestic suppliers of exporting firms receive the same

incentives. In some Asian countries. local producers have in this way been able to provide inputs at world prices to exporters.

In Korea, indirect exporters. including producers of commodities used as inputs in production of export goods and suppliers of export goods to direct exporters, received the same incentives as direct exporters. This was facilitated by the processing of rebate claims on the basis of letters of credit furnished by domestic commercial banks. In China and Taiwan, on the other hand, the existence of less sophisticated banking systems meant that letters of credit were less commonly used (trade partners were the most important source of export credit, extended through the use of post-dated checks). The end result is that customs documents were required to verify duty and indirect tax expenditures for imported inputs, resulting in a more protracted duty reimbursement procedure. Outside of Asia, systems of rebates based on actual exporters' declarations are found *inter alia* in Morocco, Senegal, Malawi, Tanzania, Uganda, Zambia, and Nigeria. Verification by customs officials is supposed to take place within six months, however, common complaints regarding such schemes are the delays in receipt of duty rebates. Thomas and Nash (1991) also note that such schemes need to ensure both that sufficient quantities of inputs can be imported to satisfy exporter demand and that these imports will not be re-sold (at higher prices) on the domestic market.

Yet another alternative to facilitating access to imported inputs by firms specializing in exports is the bonded warehouse scheme. This involves bringing imported inputs in and shipping products out under customs seal. Thomas and Nash (1991) report that modern, streamlined in-bond schemes involve only minimal bonding and customs expenses for enterprises, in contrast to antiquated procedures, still widely used, involving the physical presence of customs officers in warehouses and expensive bonds for every shipment.

Hill (1994) describes Kenya's Export Compensation Scheme. This compensates exporters for government taxes on inputs after export, and also includes a Manufacturing Under Bond program in which imported inputs and exports are transacted duty free, and other import duty and VAT remission schemes to encourage exports. However, in part because the anti-export bias is simply too great, in part because the overall policy preference is to protect domestic import-substituting production, and in part because the negative revenue effect was too high, the export promotion policies were not well supported within government and simply did not work.

Foreign Direct Investment Promotion

Export pessimism and rejection of foreign capital characterized many developing country positions in the 1960s and 1970s. Today it is recognized that access to capital is essential to economic development. Yet capital availability is often a constraining variable. To overcome domestic capital constraints, countries are increasingly turning to international markets for financing. While international portfolio capital transactions are well known for their volatility since the Mexican peso crisis of December 1994 and the Asian crises of 1997-98, movements in foreign direct investment (FDI) are considered somewhat less volatile. On the global market, private capital flows now far outdistance public capital flows, although this is not true in SSA, where public transfers still outpace private by a factor of over 4 to 1 (average, 1991-94) (Jasperson et al., 1995)

Average annual FDI flows to the private sector in developing countries have more than doubled in the period 1990-94, compared with the 1980s, *not including* 1994 FDI flows to China, a major FDI recipient (IFC, 1995; World Bank, 1996). The bulk of FDI has gone to

just a few countries, however. Over the period 1993 to 1995, just two countries (China and Mexico) accounted for almost 50 percent of FDI to developing economies, while Malaysia, Argentina, Indonesia, Brazil, and Thailand accounted for another 20 percent.

Of the $90 billion in FDI flows for 1995, only $2 billion has been received in SSA. The main SSA recipients from 1986 to the present have been Nigeria and Angola, with lesser amounts received by Botswana, Zambia, Namibia, Guinea, and Ghana. South Africa reverted in 1994 to net positive inflows for the first time since 1989; anti-Rand speculation in the first half of 1996, however, may have curtailed this. Moreover, a large part of the FDI directed to SSA to date has been concentrated in natural resource extraction industries, rather than in manufacturing. What manufacturing FDI has come in has focused on production for local consumption (agribusinesses such as breweries and dairies, for example, or consumer products such as shoes). However, in many instances, the local market in Africa is of a much more modest dimension than in Asia, given much smaller populations (except for Nigeria) and lower per capita income.

Wells (1994) suggests that Asian experiences with FDI offer complex lessons for African countries, explaining that "some of the hopes with respect to foreign investment are probably too high; that the new legislation in Africa favoring foreign investment must be accompanied by more difficult macroeconomic reforms to generate significant inflows of FDI; and that certain of the successes of Asia cannot be repeated because of changes in the structures of the world industries involved" (p. 337).

Wells and Wint (1990) categorize three kinds of promotional efforts which can be used to attract foreign investment to local economies. In early stages of outward orientation, a country needs to promote its image as an optimal investment climate for international capital.

Once a favorable external image has been acquired, promotional efforts are much more specific as countries, in a manner similar to states in the United States, attempt to offer the most attractive incentives packages to specific firms to woo them, their capital, and their job opportunities. Finally, once acquired, services need to be provided to investors. The challenge for SSA countries is still to make some inroad into the first level of promotion.

FDI used to mean American or European capital. East and Southeast Asia certainly understand it means Japanese capital. Increasingly, the sources of FDI are diversifying, coming from the newly industrializing countries of Asia, the Middle East, and Latin America. South African investors are exploring opportunities throughout SSA, especially in minerals and consumer products sectors. It may be that investors from other developing countries have a different risk tolerance profile than industrial country investors, making them more attractive FDI candidates for SSA. Investors from NICs may also have a better sense of how to get around many of the institutional constraints still posed in SSA. Recognition of this may help to explain the recent Government of Ghana trade and investment mission to Southeast Asia led by the normally reclusive President Jerry Rawlings.

Export and Investment Promotion Support Services

A synthesis of USAID experiences with export and investment promotion support services in Asia and Latin America is available in McKean and Fox (1994). Their review indicates that such services have had a high payoff in some countries. While detailed cost-benefit analysis of export and investment support service projects is not feasible, Bremer and Bell (1993) argue that foreign exchange earnings, employment creation, and return to local capital may result as "direct benefits". "Indirect benefits," including new or stronger

institutions to promote investment and exports, improved policy environment, and externalities, could be significant.

A joint World Bank-USAID study of competitiveness in Sub-Saharan Africa (1991) suggests that African exporters value the following three government interventions most highly: 1) promotion of foreign/domestic collaboration, 2) export policy instruments, and 3) investments in physical trade infrastructure. Great frustration was voiced by exporters in this survey regarding their demand for foreign collaboration which goes unrealized. While foreign governments and donor agencies prefer to send in consultants to "promote exports", SSA's private sector would prefer to receive technical/ marketing/ management experts provided via actual commercial agreements. Yet foreign suppliers of such collaboration are not forthcoming, due in part to a negative image of Africa overseas. This study also recommended that private match-making mechanisms and export-oriented foreign/domestic enterprise collaboration risk-coverage schemes be explored for bridging the gap between SSA and foreign small- and medium-size enterprises.

Lyakurwa (1991) describes the experiences of a number of Sub-Saharan African countries (Mauritius, Côte d'Ivoire, Tanzania) with these mechanisms as premature. Most countries do not succeed in their export promotion efforts until they offer a stable macroeconomic environment to their economic agents. He also cautions that structural factors, in addition to the enabling environment, can also determine export success or failure. Part of SSA's lack of export success to date is also attributed to a lack of entrepreneurship tradition in SSA.

In Botswana, on the other hand, the extreme outward orientation of the economy has prevented the emergence of anti-export policy biases (Hill, 1994). Botswana is also an active

member of the Southern African Customs Union, promoting free trade among member countries. Manufacturing growth, as a result, has been significant, and while the economy is strongly dependent on traditional exports (meat, diamonds, copper), nontraditional exports have maintained a small but steady share of total exports.

Entrepreneurship or Private Sector Development Projects

In recent years, some donor aid has also been directed to the support of private sector associations, with the objectives of building business skills, promoting networking among business men and women both domestically and within a multi-country region, and giving them access to outside advice regarding production, marketing, and international trade issues. Keesing and Singer (1991a) stress that these services should be procured from private sources to be most effective to actual export businesses.

Aid officials have had to develop creative ways to circumvent the restrictions placed on aid eligibility.[4] In some countries, this aid has taken the form of funding of a private sector foundation, which distributes funds to private individuals or firms on request. Such an institutional arrangement is credited with the launching of Chilean agribusiness in the 1970s (Barriga 1990). FIDE, a private export promotion organization in Honduras funded with USAID support, is another example of AID's private sector largesse during the 1980s. The International Trade Centre, under the GATT (and now, presumably, the World Trade Organization), has also shifted to an "enterprise-oriented approach" in extending assistance (particularly technical production advise and market research/marketing assistance) directly to selected firms in selected industries in client countries. Few systematic, cross-country

evaluations of the impacts of such grant funds have been made. Keesing and Singer (1991b) suggest guidelines for detailed design of a grant fund as part of a donor-funded effort.

In other instances, the aid has been in the form of direct assistance to a private sector association. This has been the case in West Africa, where USAID and other aid partners have given partial support to the West Africa Enterprise Network (WAEN) since 1993.[5] The WAEN is an association of national networks of commercial and financial service providers and manufacturers in eleven countries (both anglophone and francophone). With USAID assistance, the Network has also trained local network members in international market analysis (AIRD, 1995), identified and researched constraints to regional trade integration (Salinger and Barry 1996), and is pursuing a lobbying program to sensitive local government officials to these constraints and promote regional integration-related policy reforms. Keesing and Singer (1991a) note that in successful exporting nations, such feedback is channeled through a well-developed structure of private representative associations or chambers that continuously and aggressively promote the business community's viewpoint to the government.

To sum up, most evaluations of trade and investment promotion activities find them to be complements rather than substitutes for structural adjustment. Trade and investment promotion can only work if the political, macroeconomic, and trade policy environment is conducive to it. Many institutional mechanisms described above by themselves entail fiscal and economic costs, could result in rent seeking, and may yield minimal benefits. There is little evidence to date that these programs have increased trade for African countries, still such a minor source of world supply of traded products and services. In addition, export subsidies could incur aggressive trade counterpractices by importing countries.

A far more effective way to promote trade and investment in Sub-Saharan Africa, most observers agree, would be the pursuit of a twin strategy: continuing along the process of adjustment upon which many countries have already embarked, coupled with demonstrating commitment to it from the highest policy-making levels through trade and investment promotion efforts.

EFFECT OF INTERNATIONAL TRADE AGREEMENTS ON SSA'S NEW TRADE OPPORTUNITIES

The global trading regime has changed dramatically over the last decade. The Uruguay Round (UR) of the GATT, the most significant modification to the multilateral trading system undertaken since its initiation in 1948, was completed and formalized in April 1994 in Marrakesh. In another development, regional trade agreements have proliferated throughout the world as trading partners have grouped together to exploit existing economic and political commonalities with the objective of improving economic welfare. International trade agreements, both global and regional, are the major multilateral vehicle by which the world's economies seek to create or expand trade opportunities in new products, markets, and modes of trade.

Sub-Saharan Africa is party to a number of important international trade agreements. The Lomé Convention and the Generalized System of Preferences (GSP) are two non-reciprocal international arrangements of which SSA countries have been members since the 1970s. The non-reciprocal nature of these two accords signifies that, in each case, the countries of SSA are not required to offer to their trading partners the same benefits offered to them as beneficiaries. Whereas Lomé is a convention with one standard set of internationally

recognized rules and disciplines, the GSP programs are unique to each country offering trade preferences and, therefore, there are differences among the trading regimes facing each recipient country.

The majority of SSA countries have become parties to the recently implemented UR agreements, thus signifying their desire to take a more active role in the global trading system and its institutions. While it is true that a number of SSA countries have been members of the GATT since its inception, the UR represents the first time that developing countries maximized the opportunity to participate actively in an integrated fashion in the shaping of the new system. However, the SSA countries' participation in the UR has been mixed, often varying by level of commitment to trade liberalization and success with unilateral economic reforms.

Expected Overall Impact of the Uruguay Round

There is growing general consensus that the impact of the UR on SSA will be relatively modest from an overall welfare perspective as well as from a more narrow trade outlook (Sorsa 1995; Goldin, Knudsen, and van der Mensbrugghe 1993; Goldin and van der Mensbrugghe 1995; Harrold 1995; François, McDonald, and Nordstrom 1995; Yeats 1994). Some studies conclude that SSA will gain more in the immediate term from the continued pursuit of structural adjustment reforms. One study argues that changing patterns of comparative advantage, due to changes in relative land and labor costs between Asia and Africa, combined with elimination of trade quotas and preferences, will lead to an increase in agricultural export opportunities for Africa (Hertel, Masters, Elbehri, forthcoming). There is

consensus on the fact that *in order* to maximize gains from the UR, the domestic economic environment must be reasonably open.

The argument has also been made that SSA lost the opportunity to benefit from the UR by not locking its own domestic reforms to an international anchor. This was partly a result of the nature of the agreements concluded, in that many of the trade liberalizing measures were more applicable to the industrialized countries. More importantly, however, the majority of the region's governments opted not to make substantial liberalization commitments on border protection. The countries of the South African Customs Union (SACU, including Botswana, Namibia, South Africa, Swaziland, and Lesotho) provided the exception in that they used the UR to consolidate ongoing domestic reform programs. In terms of their own commitments, the majority of SSA countries, like many other developing countries, opted to bind their tariff lines at prohibitive levels, ranging upwards of 100 percent to 300 percent, rather than at the more modest rates actually being applied.[6]

Several explanations might be advanced for why SSA countries as a whole did not undertake meaningful commitments in the UR. First, trade liberalization necessarily results in greater competition in the local market as foreign goods compete with what is often a relatively undeveloped and uncompetitive domestic industry. Second, many SSA countries, not unlike other negotiators during the UR, were looking to maintain future policy flexibility by setting their bound rates at high levels. Despite applied rates that often are significantly lower than bound rates, a high tariff ceiling gives each government some room to maneuver in case of unanticipated events which have an impact on trade flows. Third, many SSA countries rely on tariffs and other trade taxes as an integral component of central government revenues. The reduction of border protection, therefore, would have a direct effect on government

accounts. Finally, most of the prevalent pre-UR border measures in SSA (including export taxes and import subsidies) were not disciplined under the UR.

Impact with Regard to New Products

One potential strategy for SSA exporters considering new trade product opportunities is to bias their exports towards those products which experienced large reductions in protection as a result of the UR. Most product opportunities due to changes in the trade regime are likely to be found in the manufactured products sector since most SSA agricultural exports already face relatively few tariff barriers.

Several SSA countries should also benefit from the reduction of non-tariff barriers, such as the internal support mechanisms prevalent in the EU Common Agricultural Policy (CAP), and the resulting upward pressure on world market prices. Mauritius and Swaziland (sugar) and Botswana and Zimbabwe (beef and veal) are among the SSA countries expected to gain from EU agricultural reforms (Harrold 1995). While these products may not represent new trade opportunities, per se, they are products for which SSA already has a comparative advantage and is well-placed to reap the benefits of reduced protection in the OECD countries. Continued liberalization of manufactures trade is also extremely important for SSA's new trade opportunity prospects.

Reduction of tariff escalation, whereby rates of import protection increase with the degree of value-added of a product), will also stimulate the creation of new export opportunities for SSA. Tariff escalation reinforces the role of developing countries as raw material exporters and maintains higher valued-added processing activities in the industrial countries (Harrold 1995). The UR is expected to reduce tariff escalation, particularly given

that tariffs on raw materials are already close to zero. Reduction of tariff escalation should create the incentive for existing raw material exporters to move along the processing chain toward those activities which require greater value added and for which the terms of trade may be more stable.

The elimination of non-tariff barriers, such as voluntary export restraints, import surveillance, and other so-called "gray area measures", will also increase export opportunities for SSA producers by improving market access to industrial country markets. In 1992 it was estimated that 10.8 percent of OECD country imports from SSA (excluding fuel) faced non-tariff barriers, while the post-UR non-tariff barrier coverage will fall to 3.3 percent (Amjadi and Yeats 1995). Among product categories, it is SSA food exports, of which 23 percent are covered by NTBs, that are the most seriously affected. Fish and fish products are the group most often hit by restrictions, as well as footwear, iron and steel, consumer electronics, textiles and clothing, and agriculture.

The elimination of the MFA has been heralded as one of the chief accomplishments of the UR (Amjadi and Yeats 1995; Hamilton 1990; Smeets 1995; Yang 1994). The Agreement on Textiles and Clothing (hereinafter, the Agreement) establishes clear and transparent new disciplines for trade in this sector over a ten-year transition period, at the end of which tariffs, rather than bilateral product-specific quotas, will be the main instrument of border protection. The Agreement will help to restore the price mechanism as the principal guide in consumption and production decisions, which will allow trade and investment patterns to better reflect the comparative advantage of producers and contribute to greater economic efficiency (Smeets 1995).

The Agreement is expected to create new export opportunities for developing countries due to the elimination of quantitative restrictions, since a key effect of the MFA has been to restrain developing country textile and clothing exports. In fact, most studies have found the decline in export opportunities due to the MFA restrictions to be substantial. UNCTAD (1986) estimated that complete, non-discriminatory liberalization of the textile and clothing sectors could increase developing country exports by 78 and 135 percent, respectively. Since industrial country demand has been suppressed due to the imposition of import quotas under the MFA, global demand is expected to increase and prices are expected to rise for previously-restricted and unrestricted products as a result of the UR (Yang 1994). It should be noted, however, that the Agreement is heavily backloaded, in that restrictions on 49 percent of the reference import volumes will not be eliminated until the last day of the transition period in 2005. This implies that trade gains will be spread out over the transition period, with the bulk of the benefits accruing in the medium term.

The impact of the MFA's elimination on SSA producers will vary. Mauritius, Kenya, and Lesotho have been the only SSA countries facing MFA quotas, so these countries' textile and apparel exports should increase under the Agreement as their market shares become less restricted. The impact on SSA producers who have not faced MFA constraints is likely, however, to be more mixed. Amjadi and Yeats (1995) suggest that the MFA actually has had positive implications for African exporters in that they have been shielded from direct competition with competitive countries due to the latters' MFA restrictions. ITC (1996) appears to confirm this in data which show that U.S. textile and apparel imports from SSA grew by 118 percent over the 1990-94 period, with more than 50 percent of 1994 imports originating in non-MFA countries. In fact, Amjadi and Yeats suggest that at the end of the

Agreement's transition period, textile and apparel trade will become subject to *aggressive international competition* [authors' emphasis]. Further, the reduction of preferences in the EU for SSA textile and apparel imports will stimulate greater competition with Asian producers. Under the Lomé Convention, SSA textile and apparel producers have not faced MFA restrictions in EU markets. In addition, foreign investment in SSA countries in the textile and apparel industry, which in the past may have been motivated by quota-shopping producers, may be reduced with the elimination of the MFA. Yet since the Agreement has a relatively long transition period, SSA producers could be expected to improve their competitiveness enough to compete evenly with existing suppliers and attract foreign investment on their own merit. In fact, ITC (1996) suggests that several SSA countries are increasingly strong competitors, including South Africa, Mauritius, and Madagascar.

Impact with Regard to New Markets

The case of SSA is relatively unique in the developing world in that the overwhelming majority of its exports go to OECD markets. Developing countries represent a small proportion of SSA's export markets, and it is relatively unlikely that SSA's trade patterns with the remainder of the developing world will change as a specific result of the UR.

One of the major forces which might encourage SSA exporters to locate new markets for their goods is the erosion of preferences which is expected to occur as the industrialized countries lower their MFN tariff rates. Since Europe still absorbs more than half of SSA's exports and is the market that offers the greatest tariff preferences, SSA producers have the most to lose in the EU due to eroding trade preferences. Average tariffs for the least developed SSA countries have been 0.23 percent in the EU compared with 3.29 percent for the

United States and 1.94 percent for Japan. European preferences, offered primarily via the Lomé Agreement, have been more than three times as large as those granted from the region's other major trading powers. This translates into a potential decline in SSA export volumes of up to 1.9 percent in the EU as a result of the UR (Yeats 1994).

The expected, and perhaps preferred, outcome is that the reduction of preferences, notwithstanding other important market forces, will encourage SSA producers to search out alternative export markets within both the industrialized and developing worlds. Harrold (1995) posits that Africa's eventual outcome of winner or loser may depend critically on its ability to react to new market opportunities and diversify away from Europe. ITC (1996) also suggests that the erosion of preferences may encourage the growth of trade between SSA, on one hand, and the United States and Japan, on the other.

Impact with Regard to New Modes of Trade

As discussed above, new modes of trade are, in large part, responsible for the tremendous boom in international trade volumes. In fact, it remains a foregone conclusion that if Sub-Saharan Africa wants to participate actively in the global trading system it must make itself attractive to firms and other investors anticipating new trade opportunities.

One of the achievements of the UR was the completion of the Agreement on Trade-Related Investment Measures (TRIMs), which seeks to limit the use of discriminatory FDI measures. The TRIMs Agreement applies only to investment measures directly related to trade in goods, thereby excluding investment incentives and other performance requirements, including technology transfer and licensing. The former include such tools as local content rules, foreign exchange or trade balancing requirements, or domestic sales requirements,

which many SSA countries utilize in their dealings with foreign investors. These measures are to be prohibited when they are found to be trade distorting, affecting importation or exportation, and/or their application discriminates against imports relative to domestic production (Morrissey and Rai 1995).

How does the TRIMs Agreement affect SSA's ability to attract FDI with the ultimate goal of creating new trade opportunities? On one hand, it may be viewed as a positive obligation which does not require a considerable compliance effort. Sorsa (1995) indicates that the Agreement mainly enforces existing GATT disciplines, and the long transition period for developing countries and the possibility of extension puts few immediate obligations on SSA countries. Furthermore, Sorsa argues for fuller SSA participation in the Agreement since the elimination of many of the indicated policy measures would realize efficiency gains. Finally, SSA compliance provides an indication to foreign investors of a more stable and predictable investment environment.

On the other hand, Morrissey and Rai argue that the prohibition on the use of TRIMs effectively limits the policy options available to developing countries in their dealings with multinational corporations (MNCs). The authors argue that some developing countries resort to these measures as a response to restrictive business practices on the part of the MNCs, and not necessarily as a means to generate greater domestic resource gains. Finally, Morrissey and Rai contend that developing countries need to retain the ability to utilize TRIMs as bargaining tools in their negotiations with foreign investors.

Another UR agreement that could have an impact on SSA's ability to attract foreign investment is the Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement. The TRIPs Agreement provides for MFN treatment of intellectual property rights, minimum

standards of protection, and the need for appropriate enforcement in the following areas: copyrights, trademarks, industrial designs, patents, and trade secrets. Harrold (1995) submits that the expected benefits of the TRIPs agreement are higher returns to innovation, increased foreign investment, and greater transfer of technology, because of patent protection. At the same time, he acknowledges that the potential gains for SSA are indeed small, at least in the short run. In the longer term, Sorsa (1995) expects that the benefits of technology transfer, investment, and higher returns to local research will benefit all of SSA, but especially the more advanced countries.

SURVEY CONCLUSIONS AND AREAS FOR FUTURE RESEARCH

This survey has explored trends in global trade and trade practices relative to Africa. What emerges is the image of a "trade experience learning curve" on which other countries or regions of the world stand higher than Sub-Saharan Africa. World trade is no longer commodity focused, yet in Africa there is still talk of how to regain global market share in commodities for which Africa has a comparative advantage. Trade is not in most cases initiated by suppliers with a surplus to sell, but by purchasers with a need to procure low cost, reliable goods. World trade is impersonally transacted to a decreasing extent. Rather it is increasingly arranged across borders within the firm, or among subsidiary, joint venture, or partner firms across countries. Trade in finished products, such as footwear and clothing, is growing less quickly than trade in sophisticated component manufacturing for office and telecommunications equipment; the value of trade in higher value food products is superceding the value of base commodity trade. Finally, trade *without* investment is almost unthinkable, especially when investment is interpreted at its broadest to include the development of

commercial and human resource linkages across borders. Furthermore, trade and investment opportunities for Africa are increasingly going to come from middle income, newly industrializing economies, and from private business sources rather than from the traditional OECD countries and public aid sources.

Trade policy reform helps to set the stage for Sub-Saharan Africa to embark on the learning curve of modern trade. It is not a sufficient condition, however. Political and social conditions must be stable in order for sufficiently attractive economic conditions to lead to increased foreign direct investment. If a country can offer reasonable conditions on all three planes – political, social, and economic – then a directed promotional campaign with targeted efforts in a small number of potential investor countries can aspire to attract new investment, contract orders, and trade-related employment opportunities.

Many issues remain. For instance, with regard to ameliorating differences in labor productivity between SSA and other developing countries, research needs to focus on the kinds of training and management strategies to be developed to increase firm competitiveness and worker productivity, and whether those already applied in Asia can be adapted with similar effect on African labor productivity. Incentives structures should be evaluated as to whether they encourage increasing capital or labor intensity of production.

Attention should also be focused on downstream issues. Researchers need to examine the effect on growth, employment, incomes, distribution of incomes, consumption, nutrition, the environment (water and air quality, urban transport infrastructure), worker health and safety, etc. of expanded recourse by SSA to new trade opportunities. Countries at different levels of per capita income may have different preference functions regarding "social issues" such as child labor and the environment, implying that a simple pass-through of standard

OECD regulations is probably inappropriate. However, at the extreme, research needs to consider what kind of regulatory structures should be anticipated to "guide" growth in trade and investments without restricting it, i.e. to avoid the most egregious abuses (*inter alia*, worker safety, environmental degradation) which have accompanied similar growth in Asia.

With regard to assessing the impact of international and regional trade agreements on SSA, there are a number of areas which have been relatively understudied. For starters, with but one or two exceptions, there appears to be a dearth of country-specific case studies on the impact of the UR on trade, investment, and growth. Moreover, what analyses have been done have tended to focus on the impact of goods-related trade measures. No model simulates the effects of non-goods related measures adopted during the UR on trade flows. More importantly, foreign investment flows have remained either an exogenous variable or outside the scope of the models (including CGE) built to evaluate UR scenarios. Research on the relationship between foreign investment (both direct and portfolio) and trade is required. There is also a need to understand the dynamic implications of UR effects on trade patterns and flows, particularly with regard to labor markets, as changing trade opportunities imply changes in the demand for labor and thus in wages, which in turn implies changes in patterns of comparative advantage.

SSA countries will have to implement a variety of institutional reforms to ensure compliance with UR disciplines (TRIPs, TRIMs). Research is required to evaluate their potential effect – for example, whether they will be sufficient, on an institutional basis, to attract investment. Evaluation should also be made of the potential costs of these agreements and whether they can be expected to generate sufficient returns.

As with any new body of regulation, attention will have to be paid by researchers to monitoring the emergence of new forms of protection; i.e. GATT-accepted loopholes designed to thwart unwanted protection. For example, with regard to textiles and apparel (assumed to be important to SSA as a potential new export opportunity), will industrialized producers find alternative means of protection, i.e. developing safeguard or social clauses with regard to environmental or social issues which will act as new non-tariff barriers against imports from developing countries.

Finally, little is known about "the private sector" in SSA and its ability to pursue new global trade opportunities. Who comprises the entrepreneurial sector in Sub-Saharan Africa today? What motivates these business men and women to explore commercial relations with a foreign country, and vice versa, what motivates foreign investors to pursue relations in Africa? Are investors from South Africa or Southeast Asia less resistant to the riskiness of the African investment climate than investors from OECD countries? Are African entrepreneurs experienced and capitalized at a sufficient level to reassure foreign investors that they can deliver on order? Are African entrepreneurs able to undertake the required market analysis, strategizing for the medium and long term as opposed to traders who tend to think short term, in order to target foreign commercial relations for new products, markets, and modes of business? How effective are existing trade and investment promotion mechanisms in SSA countries where the underlying fundamentals (economic liberalization *cum* political and social stability) may still be lacking? How can better *targeted* promotion mechanisms be introduced which respond to the real needs of African entrepreneurs and foreign entrepreneurs in Africa? And finally, what systematic criteria can be developed for measuring these in a timely fashion in order to provide rapid, informed assessments to policy makers?

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[3] In countries where significant macroeconomic distortions still exist, other compensatory mechanisms have been introduced, though "results are generally disappointing" (Thomas, Nash, et al., 1991). Moreover, these mechanisms often become redundant once structural adjustment has been implemented. The mechanisms include foreign exchange access facilitation, including exporter retention of foreign exchange earnings and "own funds" import schemes; as well as relief from high rates of taxation.

[4] Normally, only public sector agencies are eligible for ODA. One exception is the International Finance Corporation, a subsidiary of the World Bank, which lends at world market interest rates specifically to private firms. In certain countries where penetration of global capital flows is still limited, the IFC remains an important borrowing option for private companies.

[5] Donor support covers minimal outside technical assistance to establish networks, organize the coordination of the national networks at the regional level, and interact with the external environment. Network members increasingly finance Network activities via membership dues, and all members pay their own travel and miscellaneous expenses related to meetings participation. By 1997, it is the goal of donors to make the WAEN a self-supporting membership association.

[6] Under the 1994 GATT Agreement on Agriculture, all border interventions have been converted into tariff equivalents ("tariffication"). The levels at which these have been set (the "bindings") represents tariff *ceilings*, from which developing countries are to descend by 24 percent over ten years. However, *actual* tariffs rates applied to imports may be set at any level below this ceiling. The practice of "dirty tariffication," as this dual tariff structure is known, is not unique to Sub-Saharan African countries. In SSA, the only bindings made below 50 percent were by Congo (30 percent ceiling), Central African Republic (46 percent ceiling), and four of the five countries of the South African Customs Union (Botswana, Namibia, South Africa, Swaziland), where bound duties will decline on average to about 40 percent over six years.

EQUITY AND GROWTH THROUGH ECONOMIC RESEARCH
TRADE REGIMES AND GROWTH

PURSUING THE *AFRICA GROWTH AND OPPORTUNITY ACT:*

COUNTERING THE THREAT OF TEXTILE AND APPAREL TRANSSHIPMENT THROUGH AFRICA

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Executive Summary

The *Africa Growth and Opportunity Act* (hereafter *AGOA*), now before the U.S. Congress, asserts the intention of the U.S. government to establish a free trade area with Sub-Saharan Africa (SSA). Among the measures proposed in the bill is the removal of import tariffs and quotas currently applied on imports of African textile and apparel into the U.S. and the promise not to reinstate the same through January 2007. This preferential treatment would be available to SSA countries that strongly commit to economic reform programs aimed at their integration with the world trading community.

It is the position of the EAGER/Trade project[1] that this bill offers significant market opportunities to African manufacturer/exporters of textiles and apparel, and thus could be an important catalyst for investment, trade, economic growth, and ultimately, employment expansion and poverty reduction in the region. Overcoming U.S. industry opposition to the bill, stemming from its fears of rising illegal transshipments from Asia, is key to the success of the bill.

Today it is recognized that diversification of an economy into manufacturing activities is an important component of sound economic growth strategies for developing countries. Low-skill manufacturing based on low wage labor comparative advantages, such as is found in the textile and especially in the apparel sectors, is commonly the starting point toward such industrialization. Experience gained from standardized manufacture for export can be parlayed over time into increasingly more sophisticated, higher valued, competitive exports.

Opposition in the U.S. to the *AGOA* bill is voiced by certain subsectors of the American textile and apparel industry. U.S. textile and apparel manufacturers take a protectionist stance against the *AGOA*. They argue that U.S. textile and apparel employment would suffer due to a rise in legitimate imports from Africa and illegal imports from Asia, transshipped through leaky African customs regimes. *However, U.S. textile and apparel industry opposition to the bill is not uniform.* Textile and apparel importers and retailers are on record supporting the *AGOA*. Moreover, U.S. manufacturers already accept the "managed trade" concept of outward processing traffic (OPT), and some have informally indicated their willingness to consider such an arrangement vis-à-vis Africa.

This paper argues that the U.S. Congress could enhance likelihood of passage of the *Africa Growth and Opportunity Act* by requiring third party verification by internationally reputable preshipment inspection firms of country of origin prior to shipment of textiles and apparel from Africa to the U.S. Both export visa and independent country of origin verification would be required for entry into U.S. ports. Strengthening this requirement should help to appease *AGOA* opponents in the industry and insure that African countries alone benefit from the *Africa Growth and Opportunity Act*.

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[1] Equity and Growth through Economic Research (EAGER)/Trade Regimes and Growth is a collaborative agreement funded by the U.S. Agency for International Development. For further information, see www.aird.com/ssahara.htm or www.eagerproject.com.

Pursuing the *Africa Growth and Opportunity Act:* Countering the Threat of Textile and Apparel Transshipment through Africa

Introduction

The *Africa Growth and Opportunity Act* is currently being debated in the U.S. Congress. Its purpose is to promote market-led economic growth in Sub-Saharan African countries in order to assist them to achieve economic self-reliance. An important component of the bill is preferential treatment of African textile and apparel exports to the U.S. until 2007.

This paper is written with two objectives. The first is to propose an additional measure in order to strengthen assurances that the trade preferences offered vis-à-vis textile and apparel exports to the U.S. would benefit African exporters and not illegal transshippers from outside of Africa who would seek to exploit these preferences for their own gain. The second is to summarize recent events leading up to the current Congressional debate for the African policy making and business community audience in order to advise and alert them to the actions required on their part in order for the bill to have a meaningful impact on African textile and apparel exports to the U.S. over the next ten years.

The paper is presented in four main sections. The first presents background information on the bill and summarizes approaches to managing international and regional textile and apparel trade which have been in effect in recent years. The second section describes arguments made in opposition to the bill by U.S. interest groups. The third section addresses two issues raised by the bill, i.e. the potential economic impact on the U.S. economy of removal of trade barriers on African textile and apparel exports to the U.S. and the need to minimize the risk of transshipment. Section four identifies the two-pronged approach required to strengthen African customs regimes with regard to textile and apparel exports. The paper concludes with a proposal for Congressional action.

1. Background

The *Africa Growth and Opportunity Act* (H.R. 1432, S. 778, hereafter *AGOA*; for text, see Appendix A) was introduced in the U.S. House Ways and Means and the U.S. Senate Agriculture Committees at hearings in April/May 1997. It was referred to subcommittees and independent agencies for study. The results of the study of the International Trade Commission requested by the U.S House Ways and Means Committee's Subcommittee on Trade were presented September 2, 1997 to Congress.[2] The Subcommittee on Trade reported it without opposition to the full House Ways and Means Committee on October 23, 1997.

[2] U.S. International Trade Commission, *Likely Impact of Providing Quota-Free and Duty-Free Entry to Textiles and Apparel from Sub-Saharan Africa,* Publication 3056 (September 1997).

In addition to its specific promotion of textiles and apparel exports to the U.S., the bill calls for (1) strengthening and expanding the private sector in Sub-Saharan Africa, especially women-owned businesses; (2) encouraging increased trade and investment between the United States and Sub-Saharan Africa; (3) reducing tariff and nontariff barriers and other trade obstacles; (4) expanding United States assistance to Sub-Saharan Africa's regional integration efforts; (5) negotiating free trade areas; (6) establishing a United States-Sub-Saharan Africa Trade and Investment Partnership; (7) focusing on countries committed to accountable government, economic reform, and the eradication of poverty; (8) establishing a United States-Sub-Saharan Africa Economic Cooperation Forum; and (9) continuing to support development assistance for those countries in Sub-Saharan Africa attempting to build civil societies. The bill also authorizes the naming of a senior Assistant Trade Representative for Africa, and provides for multilateral financial institutions to continue to work on debt relief and policy reform.

The bill's provisions to eliminate trade barriers and encourage exports (*AGOA*, Section 8) are of particular interest to the EAGER/Trade project, which believes that economic diversification of African economies is essential for growth and job creation. Attraction of foreign direct investment for manufacturing, particularly in footloose industries with low capital start-up requirements such as apparel manufacture, is an economic growth model which worked well in other previously low-income countries such as South Korea, Taiwan, Malaysia, and Mauritius. This same model is currently helping to transform the economies of Bangladesh, Indonesia, Thailand, Viet Nam, the Philippines, and now Madagascar.

Prior to conclusion in 1994 of the Uruguay Round, textile and apparel trade had been managed by bilateral quota agreements under the MultiFibre Arrangement (MFA) and had also been subject to tariff barriers. The MFA's textile and apparel quota regime was replaced by the Agreement on Textiles and Clothing[3] (ATC), signed as part of the GATT 1994 Final Act. The ATC formalizes textile and apparel quota phase-out schedules. The quota elimination will take place in three stages over ten years, from 1995 (when MFA expired) to 2005. On January 1, 1995, stage one stipulated that members were required to integrate products into their quota-free list representing no less than 16% of the total volume of their imports of all products in 1990. On January 1, 1998, another 17% is to be integrated, and on January 1, 2002, another 18% is to be integrated. On December 31, 2004, the remaining 49% will automatically be integrated and the ATC will terminate. Each member can decide for itself which products to integrate when. The only stipulation is that in each stage, products must be represented from each of four groupings, covering tops and yarns, fabrics, made up textile products, clothing.

After 2005, when all remaining trade quotas on textiles and apparel are to be eliminated, the value of quota-free access to the U.S. market will no longer exist. In the meantime, the *AGOA* calls for elimination of existing textile and apparel quotas between the U.S. and Kenya and Mauritius and promises not to apply or reinstate quotas on African textile and apparel exports to the U.S. through 2007. Kenya and Mauritius are the only two SSA countries on which calls on household goods and apparel exports to the U.S. presently apply. These are in specific

[3] While "clothing," "apparel," and "garments" are all interchangeable terms, this paper will adhere to the use of "apparel," following the preferred nomenclature of the *AGOA*. However, specific reference to the Agreement on Textiles and *Clothing* will use its correct title, obviously.

product lines, and theoretically do not affect exports to the U.S. of other products. However, they have been quite injurious to development of the sector in Kenya, where export orders dropped markedly when U.S. buyers feared additional interventions. Mauritius has a far greater developed industry with broader market share in non-U.S. markets and appears to be less affected. The U.S. had previously put a call on Lesotho as well, through which Chinese apparel was allegedly being transshipped.[4]

Aside from quotas, tariffs apply to textile and apparel imports. The *AGOA* would authorize Generalized System of Preferences (GSP) for Africa through 2007 and extend the coverage list to include products currently under statutory exclusion, such as textiles and apparel. Currently, trade-weighted tariffs of 8.7% and 17.6% are applied on African textiles and apparel imports into the U.S, respectively. Thus, this *AGOA* provision to eliminate duties offers an additional 17 percent (trade-weighted average for both textile and apparel) price advantage, relative to present levels of import prices inclusive of duties. This would more than compensate for the higher average cost of shipping forty-foot containers from Africa compared with Asia, inclusive of African port charges.[5]

Evidence of the beneficial effects of trade liberalization can be found in similar efforts undertaken by the U.S. in the Western Hemisphere. Since the launching of NAFTA, Canada and Mexico have become the two most important single-country suppliers of apparel to the U.S. market, replacing China which dropped to fourth place.[6] One provision of NAFTA allows for duty-free apparel imports into the U.S., subject to "outward processing" or off-shore value-added activities (apparel manufacture) using pre-fabricated (i.e. pre-cut) U.S. fabric. The Caribbean Basin Initiative (CBI) has provided Caribbean countries with similar privileged access into the U.S. market, although a low rate of duty is assessed on the value of the Caribbean off-shore value-added activity.

As a result of these agreements, Mexico's apparel exports to the U.S. have increased as much as 50% per year over the last three or four years, while apparel exports from the Caribbean

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[4] A *call* means that the U.S. deems that the percentage increase in exports to the U.S. from a given country and for a specific apparel definition is now threatening the U.S. industry, which puts in place a quota negotiation process. Article 6 of the Agreement on Textiles and Clothing specifies twelve different factors which can be taken into account in determining when material injury has been experienced and thus when a call is to be made. Interpretation of these factors is not necessarily transparent or straightforward, and nascent exporting countries may experience a good deal of confusion in monitoring such trends. Moreover, as was apparently the case in Kenya, open lines of communications may not be developed between an exporting country's ministry of trade and its commercial exporters, thereby complicating coordination between international trade policy and international traders, with possible injurious effect to those traders.

[5] The World Bank estimated these costs to be, on average, 5% higher for containers coming from Africa than for those coming from Sri Lanka and Bangladesh. Port charges are five times as high in Africa as in Asia. Tyler Biggs et al., *Africa Can Compete! Export Opportunities and Challenges in Garments and Home Products in the U.S. Market* (Washington: The World Bank), p. 44.

[6] The Caribbean Basin Initiative countries, as a group, in 1996 eclipsed Mexico for first rank. However, if China's and Hong Kong's textiles and apparel exports are considered together, their volumes shipped exceed those of the CBI countries.

to the U.S. are also expanding by 20% per year. The industry is currently pressing the U.S. Government for "CBI parity," i.e. equivalent import duty status between CBI and NAFTA countries. Also, the agreement has led to a surge in U.S. fabric production, and is having an interesting industrial re-organization effect in that American *textile* companies are now becoming agents for apparel manufacture, selling directly to U.S. apparel wholesalers/retailers. They already manufacture the required fabrics, but now in many instances also work in a direct commercial relationship with apparel buyers to arrange for off-shore processing of apparel ranges, thus competing directly with U.S. apparel manufacturers and imports from the Far East.[7]

It is clear that the preferential treatment offered on CBI and NAFTA countries' textile and apparel exports to the U.S. has led to significant increases in their exports to the U.S., bringing downstream benefits such as increased employment and foreign exchange earnings to exporting nations. This same impact is sought by the *AGOA* for African textile and apparel exports to the U.S.

A confirmed ten-year window of quota-free, duty-free treatment of these goods into the U.S. would give SSA countries an extra bargaining chip as they compete against other developing countries for commercial supply relations with U.S. buyers. These buyers are currently constrained from buying from traditional suppliers by quota ceilings on many products, especially from Asia. Until these quotas are eliminated on a worldwide basis at the end of the Agreement on Textiles and Clothing in 2005, the promise of quota-free status for African exports removes buyers' concerns about interventions in African supply due to the sudden imposition of a quota by the U.S. Moreover, duty-free status through 2007 reduces the import price of African goods in U.S. markets by 17%, more than compensating for higher transport costs relative to Asian and Western Hemisphere suppliers. These advantages represent important impetuses for export-led growth in Sub-Saharan Africa.

2. Opposition to the *AGOA*

The main opposition to the *AGOA* is brought by U.S. manufacturers of textiles and apparel. Their concerns include the potential rise in legitimate imports from SSA and the negative effect of this on U.S. production and thus employment in the sectors. These concerns are addressed below (see "*Potential Economic Impact of* AGOA *on the U.S.*").

Opponents' chief concern, however, is that removal of trade barriers on African exports to the U.S. will result in an increase in illegal transshipments of textiles and apparel from Asian countries which have exhausted their own export quotas to the U.S. Before ATC quotas are eliminated in 2005, U.S. industries are eager to avoid additional competition with Asian goods in the U.S. market. Since transshipment has proven difficult to control and given the limited capacity of African countries to increase rapidly their production and export capacity, U.S.

[7] According to the international trade analysts of the American Textile Manufacturers' Institute (ATMI), few U.S. textile mills are actually in the process of globalizing their production capacity. However, in certain instances U.S. mills may set up joint venture relations off-shore in response to local protection schemes in order to expand market share in important overseas markets (for example, India and Pakistan, and Mexico, which enjoys privileged access into other South American markets).

manufacturers argue that *AGOA* gains would not be captured by the intended beneficiary (Sub-Saharan Africa), but rather by a third party (Asia).

However, U.S. textile and apparel industry opposition to the bill is not uniform. Textile and apparel importers and retailers are on record in support of the *AGOA*. They support the development of commercial trade relations with African suppliers, particularly with respect to two market segments. Afrocentric home furnishings and apparel represent a growing market in the U.S. Moreover, African manufacturers already supply low- to moderately-priced goods competitively relative to Asian suppliers. Trade preferences for Africa would help U.S. importers expand their sources of supply in order to provide U.S. consumers with goods at the best possible quality/price.

Moreover, U.S. manufacturers already accept the "managed trade" concept of outward processing traffic (OPT) (see page 5).[8] Outward processing traffic is not unique to United States commercial and trade relations with its NAFTA and Caribbean partners. France imports apparel under similar arrangements with apparel manufacturers in North Africa, while Germany utilizes similar arrangements with Eastern European clients. It remains to be seen whether this is a realistic commercial opportunity, or whether structural impediments to trade with Africa (related to distance/transport costs and barriers to doing business in Africa) would discourage U.S. commercial interests from pursuing the same kinds of off-shore value-added activity which has been so growth-conducive in Canada, Mexico, and the Caribbean.

3. Issues Raised by the *AGOA*

Given the arguments outlined above, two main issues raised by the *AGOA* need to be addressed:

1. What is the potential economic impact on the U.S. economy of the removal of import barriers involving African textile and apparel exports to the U.S.?

2. How can the *AGOA* be structured so that transshipment risks are minimized?

Potential Economic Impact of AGOA *on the U.S.*

This first issue is addressed by the already mentioned ITC report, which covers 48 Sub-Saharan African (SSA) countries. Country profiles of the textile and apparel sectors in Kenya, Lesotho, Mauritius, South Africa, and Zimbabwe are presented. Data for the research are drawn from World Bank studies, the U.S. Commerce Department, the U.S. State Department, and UNIDO. In addition, individual countries and U.S. textile and apparel interests were asked for additional information during hearings before the ITC. Representatives of the ITC also traveled to some of the countries involved in the study in order to collect or verify data.

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[8] A representative of the textile industry stated privately that if the *AGOA* were rewritten to link quota and duty preferences to outward processing arrangements with Africa's apparel manufacturers, it would not express significant opposition to the bill. Interview by L. Salinger with Mr. Cas Johnson, ATMI, May, 1997.

Three main issues are addressed by the ITC research:

1. textile and apparel production projections for SSA countries;
2. analysis of regional patterns of supply and demand as well as export capacity; and
3. analysis of U.S. patterns of demand and supply

ITC's figures show that most of Africa's textile and apparel industries are starting from a very small production base. Of the total value of textiles and apparel imports to the U.S. from SSA in 1994-96, four-fifths has been supplied by just three countries (Mauritius, South Africa, and Lesotho). However, it is important to understand the relative importance today of overall African textile and apparel trade with the U.S. As seen below, total SSA exports represent less than one percent of total U.S. imports:

U.S. Apparel Trade and Consumption (million $)

Year	U.S. Production	U.S. Exports	U.S. Imports				Apparent Consumption
			From SSA	*%*	*From Rest of World*	*Total*	
1991	48000	3222	161.6	0.5%	29708.4	29870	74648
1992	51600	4102	217.5	0.6%	34966.5	35184	82682
1993	53700	4817	309.6	0.8%	37246.4	37556	86439
1994	55000	5468	386.2	0.9%	40385.8	40772	90304
1995	55200	6488	412.8	0.9%	43355.2	43768	92480
1996	54400	7293	383.1	0.8%	45212.9	45596	92703

Source: International Trade Commission, *Likely Impact...*, pp. 1-5, 1-11.

In assessing patterns of SSA supply, demand, and export capacity relative to U.S. demand and supply, the ITC study developed a demand and supply model. The study's findings are summarized in the matrix below:

Removal of:	***Impact on:***			
	U.S. Imports	**Exports from elsewhere**	**U.S. Production**	**U.S. Workers**
Quotas	↑ 0.4-0.6% (*a*)	negl.	negl.	negl.
Quotas+Import duties	↑ 10.5-16.8% (*t*) ↑ 26.4-45.9% (*a*)	negl. ↓ ≤ 0.3%	negl. ↓ 0.1%	↓ negl.

Source: International Trade Commission, *Likely Impact...*, p. 3-10.

Notes: (*a*) denotes apparel; (*t*) denotes textiles; "negl." denotes change of less than 0.05 %.Ranges reflect upper- and lower-bound estimates

The first policy change scenario, that of "no quotas", has minimal impact on U.S. imports, production, and jobs because their current incidence is so low. However, when the policy scenario of "no quotas-no import duties" is evaluated, the potential effect is to raise textile imports into the U.S. from SSA by 10.5 to 16.8 percent and to raise apparel imports (especially shirts and blouses, and trousers, the categories in which SSA exports are currently most pronounced) by 26 to almost 50 percent. Yet U.S. production, which no longer specializes in these basic commodities, would barely be affected (decrease of 0.1 percent), and U.S. jobs would be reduced by 676 full-time equivalents, compared with total textile and apparel industry employment in 1996 of nearly 1.5 million jobs.[9]

In addition to those impacts summarized in the chart, there would be an effect on the U.S. budget. Elimination of quotas only on SSA apparel imports would have a small but positive effect on U.S. tariff revenues. However, elimination of quotas *and* import duties would result in a net loss of U.S. tariff revenues on the order of $72 to $77 million dollars. While these sums are quite small relative to total customs duties receipts of the U.S. Government, nevertheless any legislative proposal which implies a negative revenue effect for the U.S. budget must include a proposal for a balancing budget offset elsewhere.[10] These offsets are to be defined by the House Subcommittee on Trade prior to consideration of the bill by the full House Ways and Means Committee.

It is clear from the ITC analysis that the overall economic impact in the U.S. of textile and apparel trade liberalization with Sub-Saharan Africa is minor insofar as SSA exports to the U.S. are concerned.

Threat of Textile/Apparel Transshipment

Yet unless the U.S. industry fear of illegal transshipments is addressed, the *Africa Growth and Opportunity Act* may remain stalled in Congress. This, despite the fact that the Clinton Administration now showcases its own Africa Trade and Investment Initiative for restarting economic growth in Africa as part of its foreign affairs agenda this year. Led by the United States, Africa was one of the most important topics of conversation at the last Heads of State summit, the G-8 meeting in Denver, held in June 1997. The Africa Trade and Investment Initiative features three tiers of incentives to promote U.S. trade with and investment in African countries, whose eligibility for participation will be judged according to their own progress on economic liberalization and integration with the world economy. Yet this initiative does not include any provision for trade preferences for Africa related to textiles and apparel. In fact, according to the Office for Africa of the U.S. Department of Commerce, the key policy distinction between the U.S. House of Representatives and the Clinton Administration on Africa is precisely the area of trade preferences for African textiles and apparel exports.[11] In effect,

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[9] ITC, *Likely Impact...*, p. 1-11, citing employment data from the U.S. Bureau of Labor Statistics.

[10] $77 million compares with $19 billion in customs duties revenues in the 1995 Federal Government budget, the latter itself but 1% of total budget revenues. U.S. Department of Commerce, *A Citizen's Guide to the Federal Budget* (http://cher.eda.doc.gov/BudgetFY97/guide2.html, no date).

[11] *Advantage Global Africa '97!*, conference held by the Massachusetts Export Center in Boston, October 17, 1997.

efforts to promote U.S.-African trade have become hostage to the U.S.' larger trade battle with China.

The EAGER/Trade project has worked extensively on customs regimes and trade incentives in SSA. It has learned that various mechanisms are available by which a "functioning and efficient visa system" can be put in place "to guard against unlawful transshipment of textile and apparel goods" (*AGOA*, Sec. 8(c)(2)). For example, third-party verification of customs value and country of origin is regularly assured today on a fee-for-service basis by private professional preshipment inspection (PSI) firms in Africa and around the world today.

The rest of this report focuses on the issue of transshipment from Asia to the U.S. via Sub-Saharan Africa and a feasible strategy for countering it. The ITC does not specifically address the issue of transshipment in its report, although it acknowledges the existence of the phenomenon. The problem of transshipment is mainly a question of the enforceability of customs regulations by importing and exporting governments. According to the U.S. Customs Office and the World Customs Organization, transshipment volumes are very difficult to quantify. The U.S. Department of Commerce estimates the amount of total value of transshipments to the U.S. in the neighborhood of $2 billion per year. U.S. officials acknowledge that the amount of disputed trade value brought yearly to U.S. courts of law as a result of identified transshipment incidents represents a small fraction of the total phenomenon.

Interviews with officers of the U.S. Customs Service and the Customs Cooperation Council suggest that there are many different ways in which transshipment takes place. Let's assume three regions: A (Asia), the region of origin of the product; B (Africa), the region through which the product passes; and C (U.S.), the region of destination of the product.

a) Transshipment may occur directly from A to C, with the product marked as made in B. Another type of transshipment is that the good produced in A may be imported into B and then re-exported to country C, while marked as produced in country B.

b) Sometimes this operation takes place with a minimal value-added provided by region B. For example, labels for textiles may be sewn onto already finished products. In this case some monitoring can take place if tariffs on imports are in place in region B or imports are recorded in some other way.

c) Finally, goods produced in region A may be shipped to region B, stocked in bonded warehouses (and thus officially not imported), and then shipped to region C as products originating from region B.

According to the U.S. Customs Service and the Customs Cooperation Council, there are many variations of these types of transshipment, which makes the monitoring process significantly difficult unless foreign governments cooperate through a number of mechanisms.

One such mechanism is certification of "country of origin" made by the exporting countries. This certificate may be verified by foreign offices of the U.S. Customs Service.[12] While overall assessment of trends, quotas, visas, and policies, as well as monitoring, are the responsibility of the U.S. Customs Service in Washington D.C., U.S. Customs Service offices abroad are staffed mainly by criminal investigators.

Investigations are initiated where there is suspicion of transshipment, i.e. when there is suspicion of a possible infringement of the law on the part of a particular importer or exporter, or when a particular port is suspect. Knowledge of such infringements is acquired in different ways. In some cases, verifications of trade are made on the basis of Major Shipment Reports issued by the Department of Commerce, as well as data from U.N reports and various U.S. embassies. These verification reports examine indicators such as sudden increases in exports not justified by corresponding increases in production. In other cases, verifications are made on examination of visas issued by exporting countries to show quota compliance. Investigators also look at the routing of imported goods, searching for anomalies such as African goods shipped to the U.S. via the Pacific Ocean. Another indicator of transshipment is the way in which the packaging of the goods has been done. Anomalies in use of country-specific tape, cardboard, rope, etc. allow Customs inspectors to recognize the actual country of origin of a shipment. Even the type of thread used to sew a label, if different in color or quality from the one used in the garment, can raise a red flag.

In other cases investigations may be prompted by importers themselves who are financially hurt by transshipment. Importers that receive goods from "legal" exporters subject to quotas pay the price of the goods plus the costs of the quota. Importers who, instead, receive goods from transshipping countries do not pay the costs of the quota and are able to sell at much lower prices on U.S. markets.[13] The former may log an official complaint when they are being undersold by the latter. In other cases importers may report buying agents (which could be located in developing countries, or in Europe or the U.S. as well) or freight-forwarders if they are suspected of dealing with transshipped goods.

Investigations are usually conducted by an official of the U.S. Customs Service from Washington, accompanied by other criminal investigators. These teams survey the suspected factories, verifying, for example in the case of apparel, the number of workers, sewing machines,

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[12] The U.S. Customs Service in Rome especially monitors the following SSA countries which have been identified as being major transshipment venues in the region: Kenya, Lesotho, Madagascar, Mauritius, Mozambique, South Africa, Togo, and Zimbabwe. These countries are characterized by two factors: 1) all already have some textile and garment manufacturing capacity, so exports of these goods do not raise immediate suspicion, and 2) their governments allow for legal regulation of transshipments.

[13] One example is the case of a U.S. importer of surgical towels from India, a country that is subject to a quota imposed by the U.S. on imports of those particular goods. The U.S. importer was paying the price of the good plus. the "cost" of the quota that the Indian manufacturer was passing onto the export price (costs such as license, access to quota, bribes, etc.). A second U.S. importer, instead, imported the same Indian made surgical towels from Pakistan, a country that did not have a quota or had not exhausted its quota, through which the goods where being transshipped. This second importer, which was not charged the "cost" of the quota, was able to buy the same good at a lower price, and thus was more cost competitive on the U.S. market.

cutting tables, fabrics in stock, etc. Although these investigations are quite thorough, customs officials agree that in a significant number of cases it is very hard to prove the existence of transshipment.

While cooperation on the part of the authorities of the exporting countries is essential to monitoring illegal trade, U.S. Customs Service officials indicate that there are two main reasons why such cooperation seldom takes place. On the economic side, many developing countries have limited production capacity and rely instead on indirect taxation of trade for an important percentage of their revenues. In many cases exports transshipped through country B but originating in country A will provide to country B more revenues in export taxes than country B could generate by exporting its original products, even in the absence of trade barriers in importing country C. On the political side, investigations from foreign customs authorities are often seen as infringements of the sovereignty of the exporting countries, and thus are not welcome.

4. Countering the Transshipment Threat

The key issue putting a stranglehold on the *AGOA* is the following: How can African countries interested in exporting textile and apparel to the U.S. put in place a functioning and efficient visa system to guard against unlawful transshipment from third countries in order to assure the U.S. textile and apparel industry that the problem can be controlled?

Such a system would normally involve a two-pronged effort:

- improved overall customs regime management by domestic authorities, and
- use of private third-party preshipment inspection vendors paid for by exporters to assure the highest quality of country of origin inspection and visa approval.

In addition, bilateral cooperation between domestic and U.S. customs services is essential.

Improving customs regime management. In many developing countries, customs regimes suffer from a combination of myopic policy objectives, lack of commitment by political authorities to the fiscal and management independence of the customs agency, staffing by ill-trained professionals, and availability of outmoded hard-/software.

Recognizing that these deficiencies are hindering the flow of legal trade, the United Nations Conference on Trade and Development (UNCTAD) developed an automated system for customs data collection, aggregation, and reporting which it has installed in many developing countries. ASYCUDA, as the system is known, has been introduced in more than seventy developing countries. However, only a very limited number of countries have really implemented ASYCUDA so as to reap its full potential.

Because of the many inefficiencies of African customs regimes, U.S. opponents of the *AGOA* do not believe the export visa proposal to be a viable solution to the transshipment

problem. Thus, it is proposed here that independent, private, third-party inspection services be engaged to assure country of origin before an export visa is granted.

Use of private third-party inspection for country of origin inspection and visa approval. Since the monitoring of customs fraud such as transshipment is currently dependent on an exporting country's customs authority, which may for a variety of reasons not be willing or able to comply with international or bilateral regulations, an alternative might be to require the use of independent, private, third-party PSI firms to manage textile/apparel export visas from SSA.

Preshipment inspection is the government contracted or mandated employment of specialized private companies to verify shipment details of goods ordered from overseas. Some thirty developing country governments already use PSI firms to control over- or under-invoicing of imports, misclassification of imports, under-collection of trade taxes, and misappropriation of donor funds provided for import support.[14] U.S. exporters had been concerned that the lack of transparency and confidentiality of PSI firms' practices constituted an impediment to international trade. Under the Agreement on Preshipment Inspection of GATT 1994, PSI services are now regulated and disputes between exporters and PSI companies are monitored by the WTO Independent Entity,[15] established in May, 1996.

In the case of the *AGOA*, PSI firms could be hired to monitor and control illegal textile and apparel transshipments in Africa. For example, a PSI firm could be hired to certify the country of origin on behalf of an exporters' association in a specific African country. This would be carried out by investigators who would assess the capability, capacity, and quality of exporters in Africa and their respective textile and apparel lines. The PSI firm would make it its business to know the production and export capacities of countries and individual firms, as well as the latter's product lines and qualities. It could even gather samples of quality and labeling which would be used to verify country of origin and troubleshoot when problematic shipments come into U.S. ports.

PSI services are normally rendered in exchange for payment of fees. PSI firms typically charge 1% of total value inspected, done on any shipment over $5000. These are normally assessed on the importer. The service in this instance would be paid for by the local Government, the export board, or the private exporter. It is clear that it would be far more effective for the African exporter to pay a 1% fee rather than bear a 17% import duty at the U.S. border.

If the *AGOA* is to pass muster with the U.S. textile and apparel industries, as well as with African exporters, it could be specified that quota-free, duty-free access to US markets would be offered to exporting countries *subject to* the use of an independent third party verification company acceptable to both the U.S. and the African country. Both the visa and the independent country of origin seal *per shipment* would be required for presentation upon arrival in U.S. ports.

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[14] Patrick Low, *Preshipment Inspection Services*, World Bank Discussion Paper no. 278 (Washington: The World Bank, 1995).

[15] Constituted jointly by the WTO, the International Chamber of Commerce, and the International Federation of Inspection Agencies, and administered by the WTO.

The service could be paid for by the local private exporters or export board on their behalf, for whom it would still be cheaper to pay for the service than to bear the burden of import duties upon arrival in the U.S.

5. Conclusion

The *Africa Growth and Opportunity Act* offers tangible benefits to Sub-Saharan African countries seeking to jump start their economies with the help of financial and technical assistance from the American government and expanded commercial relations with U.S. private businesses.

In particular, the bill's provisions with regard to trade preferences for SSA textile and apparel exports to the U.S. offer the opportunity for African countries to mimic recent successes enjoyed by Caribbean and NAFTA partners of the U.S.

It is clear that extension of these preferences to SSA textile and apparel exports would have a minor impact on U.S. trade, domestic production, and jobs in the textile and apparel industries. It is also clear that the budget offset required to compensate for the lost customs duty revenues on African textile and apparel imports into the U.S. is small.

U.S. industry opposition to the bill is not focused on African imports, *per se*, but rather on the goods which might find their way to the U.S. from Asia, via African ports. It is essential, therefore, to provide a strong control mechanism in which the U.S. private sector has confidence to confirm country of origin and minimize the threat of transshipment.

The U.S. House of Representatives is therefore urged to consider requiring third party verification by internationally reputable preshipment inspection firms of country of origin *in addition to* an export visa issued by the exporting country. Both an export visa and independent country of origin verification by a PSI firm would be required for entry of African textiles and apparel into the U.S. This reinforcement of import requirements will help to insure that African countries alone benefit from the *Africa Growth and Opportunity Act*.

APPENDIX A

Text of the African Growth and Opportunity Act

HR 1432 IH, 105th CONGRESS, 1st Session

To authorize a new trade and investment policy for Sub-Saharan Africa

IN THE HOUSE OF REPRESENTATIVES

April 24, 1997

Mr. CRANE (for himself, Mr. RANGEL, Mr. MCDERMOTT, Mr. HOUGHTON, Mr. JEFFERSON, Mr. MANZULLO, Mr. EHLERS, Mr. KOLBE, Mr. DREIER, Ms. CHRISTIAN-GREEN, Mr. TOWNS, Mr. MCNULTY, Mrs. MEEK of Florida, Ms. CARSON, Mr. PAYNE, Ms. FURSE, Ms. MCKINNEY, Ms. JACKSON-LEE of Texas, Mr. FALEOMAVAEGA, Ms. NORTON, Mr. RUSH, Mr. HASTINGS of Florida, Mr. HALL of Ohio, Mr. DELLUMS, Mr. FORD, Mr. FOGLIETTA, Mr. FATTAH, Mr. BISHOP, Mr. HILLIARD, Mrs. CLAYTON, Mr. OWENS, Mr. SCOTT, Mr. HINCHEY, and Mr. BEREUTER)

introduced the following bill; which was referred to the Committee on International Relations, and in addition to the Committee on Ways and Means, and Banking and Financial Services, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To authorize a new trade and investment policy for Sub-Saharan Africa

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.
This Act may be cited as the `African Growth and Opportunity Act'.

SECTION 2. FINDINGS.

The Congress finds that it is in the mutual economic interest of the United States and Sub-Saharan Africa to promote stable and sustainable economic growth and development in Sub-Saharan Africa. To that end, the United States seeks to facilitate the social and economic development of the countries of Sub-Saharan Africa in a manner which strengthens and expands market-led economic growth consistent with equitable and efficient development and which reduces poverty and increases employment among the poor. In particular, the United States seeks to assist Sub-Saharan African countries to achieve economic self-reliance by—

(1) strengthening and expanding the private sector in Sub-Saharan Africa, especially women-owned businesses;
(2) encouraging increased trade and investment between the United States and Sub-Saharan Africa;
(3) reducing tariff and nontariff barriers and other trade obstacles;
(4) expanding United States assistance to Sub-Saharan Africa's regional integration efforts;
(5) negotiating free trade areas;
(6) establishing a United States-Sub-Saharan Africa Trade and Investment Partnership;
(7) focusing on countries committed to accountable government, economic reform, and the eradication of poverty;
(8) establishing a United States-Sub-Saharan Africa Economic Cooperation Forum; and
(9) continuing to support development assistance for those countries in Sub-Saharan Africa attempting to build civil societies.

SECTION 3. STATEMENT OF POLICY.

The Congress supports economic self-reliance for Sub-Saharan African countries, particularly those committed to--

(1) economic and political reform;
(2) market incentives and private sector growth;
(3) the eradication of poverty; and
(4) the importance of women to economic growth and development.

SECTION 4. ELIGIBILITY REQUIREMENTS.

(a) IN GENERAL- A Sub-Saharan African country shall be eligible to participate in programs, projects, or activities, or receive assistance or other benefits under this Act for a fiscal year only if the President determines that the country has established, or is making continual progress toward establishing, a market-based economy, such as the establishment and enforcement of appropriate policies relating to--

(1) promoting free movement of goods and services and factors of production between the United States and Sub-Saharan Africa;
(2) promoting the expansion of the production base and the transformation of commodities and nontraditional products for exports through joint venture projects between African and United States companies;
(3) trade issues, such as protection of intellectual property rights, improvements in standards, testing, labeling and certification, and government procurement;
(4) the protection of property rights, such as protection against expropriation and a functioning and fair judicial system;
(5) tax issues, such as reducing high import and corporate taxes, controlling government consumption, participation in bilateral investment treaties, and the harmonization of such treaties to avoid double taxation;
(6) foreign investment issues, such as the provision of national treatment for foreign investors and other measures to attract foreign investors;
(7) supporting the growth of regional markets within a free trade area framework;
(8) regulatory issues, such as eliminating government corruption, minimizing government intervention in the market, monitoring the fiscal and monetary policies of the government, and supporting the growth of the private sector, in

particular by promoting the emergence of a new generation of African entrepreneurs;

(9) encouraging the private ownership of government-controlled economic enterprises through divestiture programs;

(10) removing restrictions on investment; and

(11) the reduction of poverty, such as the provision of basic health and education for poor citizens, the expansion of physical infrastructure in a manner designed to maximize accessibility, increased access to market and credit facilities for small farmers and producers, and improved economic opportunities for women as entrepreneurs and employees.

(b) ADDITIONAL FACTORS- In determining whether a Sub-Saharan African country is eligible under subsection (a), the President shall take into account the following factors:

(1) An expression by such country of its desire to be an eligible country under subsection (a).

(2) The extent to which such country has made substantial progress toward--

(A) reducing tariff levels;

(B) binding its tariffs in the World Trade Organization and assuming meaningful binding obligations in other sectors of trade; and

(C) eliminating nontariff barriers to trade.

(3) Whether such country, if not already a member of the World Trade Organization, is actively pursuing membership in that Organization.

(4) The extent to which such country is in material compliance with its programs with and its obligation to the International Monetary Fund and other international financial institutions.

(c) CONTINUING COMPLIANCE-

(1) MONITORING AND REVIEW OF CERTAIN COUNTRIES- The President shall monitor and review the progress of those Sub-Saharan African countries that have been determined to be eligible under subsection (a) but are in need of making continual progress in meeting one or more of the requirements of such subsection.

(2) INELIGIBILITY OF CERTAIN COUNTRIES- A Sub-Saharan African country described in paragraph (1) that has not made continual progress in meeting the requirements with which it is not in compliance shall be ineligible to participate in programs, projects, or activities, or receive assistance or other benefits, under this Act.

SECTION 5. ADDITIONAL AUTHORITIES AND INCREASED FLEXIBILITY TO PROVIDE ASSISTANCE UNDER THE DEVELOPMENT FUND FOR AFRICA.

(a) USE OF SUSTAINABLE DEVELOPMENT ASSISTANCE TO SUPPORT FURTHER ECONOMIC GROWTH- It is the sense of the Congress that sustained economic growth in Sub-Saharan Africa depends in large measure upon the development of a receptive environment for trade and investment, and that to achieve this objective the United States Agency for International Development should continue to support programs which help to create this environment. Investments in human resources, development, and implementation of free market policies, including policies to liberalize agricultural markets and improve food security, and the support for the rule of law and

democratic governance should continue to be encouraged and enhanced on a bilateral and regional basis.

(b) DECLARATIONS OF POLICY- The Congress makes the following declarations:

(1) The Development Fund for Africa established under chapter 10 of part I of the Foreign Assistance Act of 1961 (22 U.S.C. 2293 et seq.) has been an effective tool in providing development assistance to Sub-Saharan Africa since 1988.

(2) The Development Fund for Africa will complement the other provisions of this Act and lay a foundation for increased trade and investment opportunities between the United States and Sub-Saharan Africa.

(3) Assistance provided through the Development Fund for Africa will continue to support programs and activities that promote the long term economic development of Sub-Saharan Africa, such as programs and activities relating to the following:

(A) Strengthening primary and vocational education systems, especially the acquisition of middle-level technical skills for operating modern private businesses and the introduction of college level business education, including the study of international business, finance, and stock exchanges.

(B) Strengthening health care systems.

(C) Strengthening family planning service delivery systems.

(D) Supporting democratization, good governance and civil society and conflict resolution efforts.

(E) Increasing food security by promoting the expansion of agricultural and agriculture-based industrial production and productivity and increasing real incomes for poor individuals.

(F) Promoting an enabling environment for private sector-led growth through sustained economic reform, privatization programs, and market-led economic activities.

(G) Promoting decentralization and local participation in the development process, especially linking the rural production sectors and the industrial and market centers throughout Africa.

(H) Increasing the technical and managerial capacity of Sub-Saharan African individuals to manage the economy of Sub-Saharan Africa.

(I) Ensuring sustainable economic growth through environmental protection.

(4) The African Development Foundation has a unique congressional mandate to empower the poor to participate fully in development and to increase opportunities for gainful employment, poverty alleviation, and more equitable income distribution in Sub-Saharan Africa. The African Development Foundation has worked successfully to enhance the role of women as agents of change, strengthen the informal sector with an emphasis on supporting micro and small sized enterprises, indigenous technologies, and mobilizing local financing. The African Development Foundation should develop and implement strategies for promoting participation in the socioeconomic development process of grassroots and informal sector groups such as nongovernmental organizations, cooperatives, artisans, and traders into the programs and initiatives established under this Act.

(c) ADDITIONAL AUTHORITIES-

(1) IN GENERAL- Section 496(h) of the Foreign Assistance Act of 1961 (22 U.S.C. 2293(h)) is amended--

(A) by redesignating paragraph (3) as paragraph (4): and

(B) by inserting after paragraph (2) the following:

`(3) DEMOCRATIZATION AND CONFLICT RESOLUTION CAPABILITIES- Assistance under this section may also include program assistance--

`(A) to promote democratization, good governance, and strong civil societies in Sub-Saharan Africa; and

`(B) to strengthen conflict resolution capabilities of governmental, intergovernmental, and nongovernmental entities in Sub-Saharan Africa.'.

(2) CONFORMING AMENDMENT- Section 496(h)(4) of such Act, as amended by paragraph (1), is further amended by striking `paragraphs (1) and (2)' in the first sentence and inserting `paragraphs (1), (2), and (3)'.

(d) WAIVER AUTHORITY- Section 496 of the Foreign Assistance Act of 1961 (22 U.S.C. 2293) is amended by adding at the end the following: `(p) WAIVER AUTHORITY-

`(1) IN GENERAL- Except as provided in paragraph (2), the President may waive any provision of law that earmarks, for a specified country, organization, or purpose, funds made available to carry out this chapter if the President determines that the waiver of such provision of law would provide increased flexibility in carrying out this chapter.

`(2) EXCEPTIONS-

`(A) CHILD SURVIVAL ACTIVITIES- The authority contained in paragraph (1) may not be used to waive a provision of law that earmarks funds made available to carry out this chapter for the following purposes:

`(i) Immunization programs.

`(ii) Oral rehydration programs.

`(iii) Health and nutrition programs, and related education programs, which address the needs of mothers and children.

`(iv) Water and sanitation programs.

`(v) Assistance for displaced and orphaned children.

`(vi) Programs for the prevention, treatment, and control of, and research on, tuberculosis, HIV/AIDS, polio, malaria, and other diseases.

`(vii) Basic education programs for children.

`(viii) Contribution on a grant basis to the United Nations Children's Fund (UNICEF) pursuant to section 301 of this Act.

`(B) REQUIREMENT TO SUPERSEDE WAIVER AUTHORITY- The provisions of this subsection shall not be superseded except by a provision of law enacted after the date of the enactment of the African Growth and Opportunity Act which specifically repeals, modifies, or supersedes such provisions.'.

SECTION 6. UNITED STATES-SUB-SAHARAN AFRICA TRADE AND ECONOMIC COOPERATION FORUM.

(a) DECLARATION OF POLICY- The President shall convene annual high-level meetings between appropriate officials of the United States Government and officials of

the governments of Sub-Saharan African countries in order to foster close economic ties between the United States and Sub-Saharan Africa.

(b) ESTABLISHMENT- Not later than 12 months after the date of the enactment of this Act, the President, after consulting with the governments concerned, shall establish a United States-Sub-Saharan Africa Trade and Economic Cooperation Forum (hereafter in this section referred to as the 'Forum').

(c) REQUIREMENTS- In creating the Forum, the President shall meet the following requirements:

(1) The President shall direct the Secretary of Commerce, the Secretary of the Treasury, the Secretary of State, and the United States Trade Representative to host the first annual meeting with the counterparts of such Secretaries from the governments of Sub-Saharan African countries eligible under section 4, the Secretary General of the Organization of African Unity, and government officials from other appropriate countries in Africa, to discuss expanding trade and investment relations between the United States and Sub-Saharan Africa and the implementation of this Act.

(2)

(A) The President, in consultation with the Congress, shall encourage United States nongovernmental organizations to host annual meetings with nongovernmental organizations from Sub-Saharan Africa in conjunction with the annual meetings of the Forum for the purpose of discussing the issues described in paragraph (1).

(B) The President, in consultation with the Congress, shall encourage United States representatives of the private sector to host annual meetings with representatives of the private sector from Sub-Saharan Africa in conjunction with the annual meetings of the Forum for the purpose of discussing the issues described in paragraph (1).

(3) The President shall, to the extent practicable, meet with the heads of governments of Sub-Saharan African countries eligible under section 4 not less than once every two years for the purpose of discussing the issues described in paragraph (1). The first such meeting should take place not later than twelve months after the date of the enactment of this Act.

(d) AUTHORIZATION OF APPROPRIATIONS- There are authorized to be appropriated such sums as may be necessary to carry out this section.

SECTION 7. UNITED STATES-SUB-SAHARAN AFRICA FREE TRADE AREA.

(a) DECLARATION OF POLICY- The Congress declares that a United States-Sub-Saharan Africa Free Trade Area should be established, or free trade agreements should be entered into, in order to serve as the catalyst for increasing trade between the United States and Sub-Saharan Africa and increasing private sector development in Sub-Saharan Africa.

(b) PLAN REQUIREMENT-

(1) IN GENERAL- The President, taking into account the provisions of the treaty establishing the African Economic Community and the willingness of the governments of Sub-Saharan African countries to engage in negotiations to enter into free trade agreements, shall develop a plan for the purpose of entering into one or more trade agreements with Sub-Saharan African countries eligible under

section 4 in order to establish a United States-Sub-Saharan Africa Free Trade Area (hereafter in this section referred to as the 'Free Trade Area').

(2) ELEMENTS OF PLAN- The plan shall include the following:

(A) The specific objectives of the United States with respect to the establishment of the Free Trade Area and a suggested timetable for achieving those objectives.

(B) The benefits to both the United States and Sub-Saharan Africa with respect to the Free Trade Area.

(C) A mutually agreed-upon timetable for establishing the Free Trade Area.

(D) The implications for and the role of regional and sub-regional organizations in Sub-Saharan Africa with respect to the Free Trade Area.

(E) Subject matter anticipated to be covered by the agreement for establishing the Free Trade Area and United States laws, programs, and policies, as well as the laws of participating eligible African countries and existing bilateral and multilateral and economic cooperation and trade agreements, that may be affected by the agreement or agreements.

(F) Procedures to ensure the following:

(i) Adequate consultation with the Congress and the private sector during the negotiation of the agreement or agreements for establishing the Free Trade Area.

(ii) Consultation with the Congress regarding all matters relating to implementation of the agreement or agreements.

(iii) Approval by the Congress of the agreement or agreements.

(iv) Adequate consultations with the relevant African governments and African regional and subregional intergovernmental organizations during the negotiations of the agreement or agreements.

(c) REPORTING REQUIREMENT- Not later than 12 months after the date of the enactment of this Act, the President shall prepare and transmit to the Congress a report containing the plan developed pursuant to subsection (b).

SECTION 8. ELIMINATING TRADE BARRIERS AND ENCOURAGING EXPORTS.

(a) FINDINGS- The Congress makes the following findings:

(1) The lack of competitiveness of Sub-Saharan Africa in the global market, especially in the manufacturing sector, make it a limited threat to market disruption and no threat to United States jobs.

(2) Annual textile and apparel exports to the United States from Sub-Saharan Africa represent less than 1 percent of all textile and apparel exports to the United States, which totaled $45,932,000,000 in 1996.

(3) Sub-Saharan Africa has limited textile manufacturing capacity. During 1998 and the succeeding 4 years, this limited capacity to manufacture textiles and apparel is projected to grow at a modest rate. Given this limited capacity to export textiles and apparel, it will be very difficult for these exports from Sub-Saharan Africa, during 1998 and the succeeding 9 years, to exceed 3 percent annually of total imports of textile and apparel to the United States. If these exports from Sub-Saharan Africa remain around 3 percent of total imports, they will not represent a threat to United States workers, consumers, or manufacturers.

(b) SENSE OF THE CONGRESS- It is the sense of the Congress that—

(1) it would be to the mutual benefit of the countries in Sub-Saharan Africa and the United States to ensure that the commitments of the World Trade Organization and associated agreements are faithfully implemented in each of the member countries, so as to lay the groundwork for sustained growth in textile and apparel exports and trade under agreed rules and disciplines;

(2) reform of trade policies in Sub-Saharan Africa with the objective of removing structural impediments to trade, consistent with obligations under the World Trade Organization, can assist the countries of the region in achieving greater and greater diversification of textile and apparel export commodities and products and export markets; and

(3) the President should support textile and apparel trade reform in Sub-Saharan Africa by, among other measures, providing technical assistance, sharing of information to expand basic knowledge of how to trade with the United States, and encouraging business-to-business contacts with the region.

(c) TREATMENT OF QUOTAS-

(1) KENYA AND MAURITIUS- Pursuant to the Agreement on Textiles and Clothing, the United States shall eliminate the existing quotas on textile and apparel exports to the United States--

(A) from Kenya within 30 days after that country adopts a cost-effective and efficient visa system to guard against unlawful transshipment of textile and apparel goods; and

(B) from Mauritius within 30 days after that country adopts such a visa system. The Customs Service shall provide the necessary assistance to Kenya and Mauritius in the development and implementation of those visa systems. The Customs Service shall monitor and the Commissioner of Customs shall submit to the Congress, not later than March 31 of each year, a report on the effectiveness of those visa systems during the preceding calendar year.

(2) OTHER SUB-SAHARAN COUNTRIES- The President shall continue the existing no quota policy for countries in Sub-Saharan Africa. The President shall submit to the Congress, not later than March 31 of each year, a report on the growth in textiles and apparel exports to the United States from countries in Sub-Saharan Africa in order to protect United States consumers, workers, and textile manufacturers from economic injury on account of the no quota policy. The President should ensure that any country in Sub-Saharan Africa that intends to export substantial textile and apparel goods to the United States has in place a functioning and efficient visa system to guard against unlawful transshipment of textile and apparel goods.

(d) DEFINITION- For purposes of this section, the term 'Agreement on Textiles and Clothing' means the Agreement on Textiles and Clothing referred to in section 101(d)(4) of the Uruguay Round Agreements Act (19 U.S.C. 3511(d)(4)).

SECTION 9. GENERALIZED SYSTEM OF PREFERENCES.

(a) PREFERENTIAL TARIFF TREATMENT FOR CERTAIN ARTICLES- Section 503(a)(1) of the Trade Act of 1974 (19 U.S.C. 2463(a)) is amended--

(1) by redesignating subparagraph (C) as subparagraph (D); and

(2) by inserting after subparagraph (B) the following:

`(C) ELIGIBLE COUNTRIES IN SUB-SAHARAN AFRICA- The President may provide duty-free treatment for any article set forth in paragraph (1) of subsection (b) that is the growth, product, or manufacture of an eligible country in Sub-Saharan Africa that is a beneficiary developing country, if, after receiving the advice of the International Trade Commission in accordance with subsection (e), the President determines that such article is not import-sensitive in the context of imports from eligible countries in Sub-Saharan Africa. This subparagraph shall not affect the designation of eligible articles under subparagraph (B).'.

(b) RULES OF ORIGIN- Section 503(a)(2) of the Trade Act of 1974 (19 U.S.C. 2463(a)(2)) is amended by adding at the end the following:

`(C) ELIGIBLE COUNTRIES IN SUB-SAHARAN AFRICA- For purposes of determining the percentage referred to in subparagraph (A) in the case of an article of an eligible country in Sub-Saharan Africa that is a beneficiary developing country

`(i) if the cost or value of materials produced in the customs territory of the United States is included with respect to that article, an amount not to exceed 15 percent of the appraised value of the article at the time it is entered that is attributed to such United States cost or value may be applied toward determining the percentage referred to in subparagraph (A); and

`(ii) the cost or value of the materials included with respect to that article that are produced in any beneficiary developing country that is an eligible country in Sub-Saharan Africa shall be applied in determining such percentage.'.

(c) WAIVER OF COMPETITIVE NEED LIMITATION- Section 503(c)(2)(D) of the Trade Act of 1974 (19 U.S.C. 2463(c)(2)(D)) is amended to read as follows:

`(D) LEAST-DEVELOPED BENEFICIARY DEVELOPING COUNTRIES AND ELIGIBLE COUNTRIES IN SUB-SAHARAN AFRICA- Subparagraph (A) shall not apply to any least-developed beneficiary developing country or any eligible country in Sub-Saharan Africa.'.

(c) EXTENSION OF PROGRAM- Section 505 of the Trade Act of 1974 (19 U.S.C. 2465) is amended to read as follows:

`SEC. 505. DATE OF TERMINATION.

`(a) COUNTRIES IN SUB-SAHARAN AFRICA- No duty-free treatment provided under this title shall remain in effect after May 31, 2007, with respect to beneficiary developing countries that are eligible countries in Sub-Saharan Africa.

`(b) OTHER COUNTRIES- No duty-free treatment provided under this title shall remain in effect after May 31, 1997, with respect to beneficiary developing countries other than those provided for in subsection (a).'.

(d) DEFINITION- Section 507 of the Trade Act of 1974 (19 U.S.C. 2467) is amended by adding at the end the following:

`(6) ELIGIBLE COUNTRY IN SUB-SAHARAN AFRICA- The terms `eligible country in Sub-Saharan Africa' and `eligible countries in Sub-Saharan Africa' means a country or countries that the President has determined to be eligible under section 4 of the African Growth and Opportunity Act.'.

SECTION 10. INTERNATIONAL FINANCIAL INSTITUTIONS AND DEBT REDUCTION.

(a) INTERNATIONAL FINANCIAL INSTITUTIONS-

(1) It is the sense of the Congress that international financial institutions and improved application of programs such as those of the International Development

Association, the African Development Bank, the African Development Fund, and the Enhanced Structural Adjustment Facility of the International Monetary Fund are vital to achieving the purposes of this Act.

(2) The Congress supports the efforts of the executive branch to encourage international financial institutions to develop enhanced mechanisms for providing financing for countries eligible under section 4, consistent with the purposes of this Act.

(b) DEBT REDUCTION-

(1) It is the sense of the Congress that the executive branch should extinguish concessional debt owed to the United States by the poorest countries in Sub-Saharan Africa that are heavily indebted and pursuing bold growth-oriented policies, and that the executive branch should seek comparable action by other creditors of such countries.

(2) The Congress supports the efforts of the executive branch to secure agreement from international financial institutions on maximum debt reduction for Sub-Saharan Africa as part of the multilateral initiative referred to as the Heavily Indebted Poor Countries (HIPC) initiative.

(c) EXECUTIVE BRANCH INITIATIVES- The Congress supports and encourages the implementation of the following initiatives of the executive branch:

(1) AMERICAN-AFRICAN BUSINESS PARTNERSHIP- The Agency for International Development devoting up to $1,000,000 annually to help catalyze relationships between United States firms and firms in Sub-Saharan Africa through a variety of business associations and networks.

(2) TECHNICAL ASSISTANCE TO PROMOTE REFORMS- The Agency for International Development providing up to $5,000,000 annually in short-term technical assistance programs to help the governments of Sub-Saharan African countries to--

(A) liberalize trade and promote exports;

(B) bring their legal regimes into compliance with the standards of the World Trade Organization in conjunction with membership in that Organization; and

(C) make financial and fiscal reforms, as well as the United States Department of Agriculture providing support to promote greater agribusiness linkages.

(3) AGRICULTURAL MARKET LIBERALIZATION- The Agency for International Development devoting up to $15,000,000 annually as part of the multi-year Africa Food Security Initiative to help address such critical agricultural policy issues as market liberalization, agricultural export development, and agribusiness investment in processing and transporting agricultural commodities.

(4) TRADE PROMOTION- The Trade Development Agency increasing the number of reverse trade missions to growth-oriented countries in Sub-Saharan Africa.

(5) TRADE IN SERVICES- Efforts by United States embassies in the countries in Sub-Saharan Africa to encourage their host governments--

(A) to participate in the ongoing negotiations on financial services in the World Trade Organization;

(B) to revise their existing schedules to the General Agreement on Trade in Services of the World Trade Organization in light of the successful conclusion of negotiations on basic telecommunications services; and
(C) to make further commitments in their schedules to the General Agreement on Trade in Services in order to encourage the removal of tariff and nontariff barriers and to foster competition in the services sector in those countries.

SECTION 11. SUB-SAHARAN AFRICA EQUITY AND INFRASTRUCTURE FUNDS.

(a) INITIATION OF FUNDS- It is the sense of the Congress that the Overseas Private Investment Corporation should, within 12 months after the date of the enactment of this Act, exercise the authorities it has to initiate 2 or more equity funds in support of projects in the countries in Sub-Saharan Africa.

(b) STRUCTURE AND TYPES OF FUNDS-

(1) STRUCTURE- Each fund initiated under subsection (a) should be structured as a partnership managed by professional private sector fund managers and monitored on a continuing basis by the Corporation.

(2) CAPITALIZATION- Each fund should be capitalized with a combination of private equity capital, which is not guaranteed by the Corporation, and debt for which the Corporation provides guaranties.

(3) TYPES OF FUNDS-

(A) EQUITY FUND FOR SUB-SAHARAN AFRICA- One of the funds should be an equity fund, with assets of up to $150,000,000, the primary purpose of which is to achieve long-term capital appreciation through equity investments in support of projects in countries in Sub-Saharan Africa.

(B) INFRASTRUCTURE FUND- One or more of the funds, with combined assets of up to $500,000,000, should be used in support of infrastructure projects in countries of Sub-Saharan Africa. The primary purpose of any such fund would be to achieve long-term capital appreciation through investing in financing for infrastructure projects in Sub-Saharan Africa, including for the expansion of businesses in Sub-Saharan Africa, restructurings, management buyouts and buyins, businesses with local ownership, and privatizations.

(4) EMPHASIS- The Corporation shall ensure that the funds are used to provide support in particular to women entrepreneurs and to innovative investments that expand opportunities for women and maximize employment opportunities for poor individuals.

SECTION 12. OVERSEAS PRIVATE INVESTMENT CORPORATION AND EXPORT-IMPORT BANK INITIATIVES.

(a) OVERSEAS PRIVATE INVESTMENT CORPORATION-

(1) BOARD OF DIRECTORS TO INCLUDE MEMBER WITH PRIVATE SECTOR EXPERIENCE IN SUB-SAHARAN AFRICA- Section 233(b) of the Foreign Assistance Act of 1961 (22 U.S.C. 2193(b)) is amended in the first paragraph by inserting after the fourth sentence the following: 'At least one of the eight Directors appointed under the third sentence shall have extensive private sector experience in Sub-Saharan Africa.'.

(2) ADVISORY BOARD-

(A) IN GENERAL- Section 233 of the Foreign Assistance Act f 1961 is amended by adding at the end the following:

`(e) ADVISORY BOARD- The Board shall take prompt measures to increase the loan, guarantee, and insurance programs, and financial commitments, of the Corporation in Sub-Saharan Africa, including through the establishment and use of an advisory committee to assist the Board in developing and implementing policies, programs, and financial instruments designed to support the expansion of, and increase in, the provision of loans, guarantees, and insurance with respect to Sub-Saharan Africa. In addition, the advisory board shall make recommendations to the Board on how the Corporation can facilitate greater support by the United States for trade and investment with and in Sub-Saharan Africa.'.

(B) REPORTS TO THE CONGRESS- Within 6 months after the date of the enactment of this Act, and annually for each of the 4 years thereafter, the Board of Directors of the Overseas Private Investment Corporation shall submit to the Congress a report on the steps that the Board has taken to implement section 233(e) of the Foreign Assistance Act of 1961 and any recommendations of the advisory board established pursuant to such section.

(b) EXPORT-IMPORT BANK-

(1) BOARD OF DIRECTORS TO INCLUDE MEMBER WITH PRIVATE SECTOR EXPERIENCE IN SUB-SAHARAN AFRICA- Section 3(c)(8)(B) of the Export-Import Bank Act of 1945 (12 U.S.C. 635a(c)(8)(B)) is amended by inserting `, and one such member shall be selected from among persons who have extensive private sector experience in Sub-Saharan Africa' before the period.

(2) ADVISORY BOARD-

(A) IN GENERAL- Section 3 of such Act (12 U.S.C. 635a) is amended by adding at the end the following:

`(f) The Board of Directors shall take prompt measures to increase the loan, guarantee, and insurance programs, and financial commitments, of the Bank in Sub-Saharan Africa, including through the establishment and use of an advisory committee to assist the Board of Directors in developing and implementing policies, programs, and financial instruments designed to support the expansion of, and increase in, the provision of loans, guarantees, and insurance with respect to Sub-Saharan Africa. In addition, the advisory board shall make recommendations to the Board of Directors on how the Bank can facilitate greater support by United States commercial banks for trade and investment with and in Sub-Saharan Africa.'.

(B) REPORTS TO THE CONGRESS- Within 6 months after the date of the enactment of this Act, and annually for each of the 4 years thereafter, the Board of Directors of the Export-Import Bank shall submit to the Congress a report on the steps that the Board has taken to implement section 3(f) of the Export-Import Bank Act of 1945 and any recommendations of the advisory board established pursuant to such section.

SECTION 13. ESTABLISHMENT OF ASSISTANT UNITED STATES TRADE REPRESENTATIVE FOR SUB-SAHARAN AFRICA.

(a) ESTABLISHMENT- The President shall establish a position of Assistant United States Trade Representative within the Office of the United States Trade Representative to focus on trade issues relating to Sub-Saharan Africa.

(b) FUNDING AND STAFF- The President shall ensure that the Assistant United States Trade Representative appointed pursuant to paragraph (1) has adequate funding and staff to carry out the duties described in paragraph (1).

SECTION 14. REPORTING REQUIREMENT.

The President shall submit to the Congress, not later than 1 year after the date of the enactment of this Act, and not later than the end of each of the next 4 1-year periods thereafter, a report on the implementation of this Act.

SECTION 15. SUB-SAHARAN AFRICA DEFINED.

For purposes of this Act, the terms `Sub-Saharan Africa', `Sub-Saharan African country', `country in Sub-Saharan Africa', and `countries in Sub-Saharan Africa' refer to the following:

1 Republic of Angola (Angola)
2 Republic of Botswana (Botswana)
3 Republic of Burundi (Burundi)
4 Republic of Cape Verde (Cape Verde)
5 Republic of Chad (Chad)
6 Republic of the Congo (Congo)
7 Republic of Djibouti (Djibouti)
8 State of Eritrea (Eritrea)
9 Gabonese Republic (Gabon)
10 Republic of Ghana (Ghana)
11 Republic of Guinea-Bissau (Guinea-Bissau)
12 Kingdom of Lesotho (Lesotho)
13 Republic of Madagascar (Madagascar)
14 Republic of Mali (Mali)
15 Republic of Mauritius (Mauritius)
16 Republic of Namibia (Namibia)
17 Federal Republic of Nigeria (Nigeria)
18 Democratic Republic of Sao Tome and Principe (Sao Tome and Principe)
19 Republic of Sierra Leone (Sierra Leone)
20 Somalia
21 Kingdom of Swaziland (Swaziland)
22 Republic of Togo (Togo)
23 Republic of Zaire (Zaire)
24 Republic of Zimbabwe (Zimbabwe)
25 Republic of Benin (Benin)
26 Burkina Faso (Burkina)
27 Republic of Cameroon (Cameroon)
28 Central African Republic
29 Federal Islamic Republic of the Comoros (Comoros)
30 Republic of Cote d'Ivoire (Cote d'Ivoire)

31 Republic of Equatorial Guinea (Equatorial Guinea)
32 Ethiopia
33 Republic of the Gambia (Gambia)
34 Republic of Guinea (Guinea)
35 Republic of Kenya (Kenya)
36 Republic of Liberia (Liberia)
37 Republic of Malawi (Malawi)
38 Islamic Republic of Mauritania (Mauritania)
39 Republic of Mozambique (Mozambique)
40 Republic of Niger (Niger)
41 Republic of Rwanda (Rwanda)
42 Republic of Senegal (Senegal)
43 Republic of Seychelles (Seychelles)
44 Republic of South Africa (South Africa)
45 Republic of Sudan (Sudan)
46 United Republic of Tanzania (Tanzania)
47 Republic of Uganda (Uganda)
48 Republic of Zambia (Zambia)

THE POLITICAL ECONOMY OF TRADE POLICY REFORM

EXPLORING AN AFRICAN PARADIGM

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Development.

ABSTRACT

This paper offers a new theory of the political economy of trade reform in Africa, based on an analysis of transition in economic and political culture. Economic culture, as defined here, includes: (1) mental paradigms about how an economy operates; (2) goals of economic management; (3) the process of decision-making. African policy-makers, it is argued, operate in highly corporatist socioeconomic structures, derived from the logic of an historically agrarian mode of production and strongly hierarchical political structures. African statist economies practiced a modern version of administered trade, once common worldwide. Monetization of economies entails a paradigm shift, which imposes a new way of thinking about economies.

Meanwhile, African leaders still operate in cultures in which most people view economic management quite differently from economic reformers. The goals of market-oriented economic management focus on four points: (1) make GDP grow; (2) keep inflation low; (3) maintain a favorable current account balance; and (4) keep unemployment low.

In contrast, African economic management goals focus on: (1) achieving growth in the loyal community of followers, (2) ensuring that all members work and produce sufficient food, (3) producing a food surplus and local specialties that funnel to the top (minerals and cash crops), (4) trading the communal surplus for luxuries, (5) exchanging gifts and offering generous hospitality. This disparity in economic goals helps to explain why certain reforms have been widely resisted, notably those that involve loss of jobs, privatization of parastatals, speedy administrative procedures or liberalization of food exports. Recognizing the cultural roots of the resistance offers an opportunity to focus debate and foster change, not an excuse for delay.

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I. INTRODUCTION

Within the last decade, nearly all African governments have announced measures to liberalize trade. The expected economic growth, however, has materialized in only a few countries. The main reasons given in the recent literature are: (see Metzel with Phillips, 1996; Thomas and Nash, 1991)

- Policy reforms were often introduced but not effectively implemented.
- Import liberalization needs to be preceded by realistic exchange rates and export promotion. Otherwise it often leads to a rapid imbalance in the current account, exchange rate pressure, and ultimately backtracking on reform.
- Protectionist sentiments remain strong, for both parastatals and private industries. Parastatals dominate all sectors except retail sales in most countries.

Frustration appears to be developing on both sides of a cultural gap between market-oriented economists and African policy-makers. The present paper is a reflection on how that gap came to be, and what steps may be needed to overcome it.

This paper offers a new theory of the political economy of reform, based on an analysis of transition in economic culture. The definition of economic culture used here focusses on the following: (1) mental paradigms about how an economy operates; (2) goals of economic management; (3) the process of decision-making. African policy-makers, it is argued, operate in

highly corporatist socioeconomic structures, derived from the logic of an historically agrarian mode of production and strongly hierarchical political structures. Together these cultural patterns are expressed in values, attitudes and practices that affect trade and other areas of the economy.

African populations, and their leaders, are operating with mental maps of how economies work that are quite different from current neoclassical economic theory. This suggests that resistance to reform comes not only from reluctant leaders, but also from the expectations of their followers about what constitutes legitimate economic management. This implies that both leaders and followers are involved in the paradigm shift that is occurring. Both need to understand better how open, fast-moving economies work and are managed. The other side of the coin is that market-oriented economists will work more effectively on the reform process if they understand and focus debate on the alternative economic cultural values and management practices that exist.

Some analysts fear that pointing to cultural roots of a problem creates obstacles, implying that reform cannot happen until hearts and minds of the whole population has changed. On the contrary, this paper suggests ways of bringing about necessary changes. It assumes that behavior and mental models interact. One can modify outward behavior by changing rules and laws, even though underlying attitudes change more slowly. One can transform mental models through debate, education and targeted communications strategies. New behaviors also lead people to new ways of thinking. Education to change mental models reinforces it, and feeds back into more behavioral change. Major paradigm shifts have already been occurring in Africa, and will continue. In the trade policy area, the question is whether they can occur rapidly enough to pull

still stagnant economies out of their downward spiral. There are encouraging signs, but mainly from countries that hit rock bottom first and were shocked into thoroughgoing reform. The premise of this paper is that other countries can learn from their experience and from applied research on policy options without having to follow the entire trajectory down and back up.[1]

II. REVIEW OF THE LITERATURE

The two main groups of actors in the trade-policy reform process in Sub-Saharan Africa have been the International Financial Institutions (IFIs) and the African governments, generally represented by their ministries of finance and their central banks. Nearly all of the published analyses of why the process is producing disappointing results come from an IFI perspective, or, more widely, from a neoclassical economic viewpoint. The writers may be of any ethnic background in the world. Such viewpoints derive from authors' education and analytical frameworks, not ethnicity. Finding lack of understanding of their point of view in Africa, they tend to assume that African economic management is a blank slate. It is argued here that this is not so. Africans operate on principles of economic management and concepts of how economies work that are different from western ones. They are, however, widespread in hierarchically organized, agrarian societies.

One finds frustrations similar to those in the African policy debate among policy-reformers, investors and trade advisors working in the former Soviet Union, but there the

[1]An original version of this paper was prepared for a workshop of the USAID Equity and Growth through Economic Research Project (EAGER/Trade), held at Howard University, Washington, D.C., July 17-19, 1996. The EAGER project is designed to enable African policy-makers and researchers to study and debate policy options before their adoption.

resistance is ascribed to Communists, corrupt officials or mobsters. Many factors similar to African economic culture appear to be operating, but it is beyond the scope of this paper to analyze the economic culture of Eastern and Central Europe and much of Asia.

Several schools of thought have emerged to explain slow progress in carrying out trade policy reform in Africa. Economists generally focus on protectionism, parastatals, or the sequencing of reform measures. Political economists, on the other hand, focus on problems of economic governance. Grindle and Thomas, in a recent survey of the literature on political economy and reform throughout the third world, divide authors into two schools, one societal and the other state-based. Societal approaches include both neo-Marxist analyses stressing conflict among class-based interests, and pluralistic analyses of interest and pressure groups. The latter dominate the literature on Africa, tracing resistance to reform by those who might stand to lose personal privileges in weak, arbitrary and prebendalist (read corrupt) institutions and states (Foroutan, 1993; Gulhati, 1986; Wolgin, 1994; Van de Walle, 1992, 1994) Those belonging to the state-oriented school have written of collapsed states and state failure. (Wunsch and Olowu, 1994; Zartman, 1994).

All schools of thought recognize that Africa's inadequate infrastructure hampers trade, but this is not always identified as a policy issue. Past government budgets in nearly every country have gone into unproductive employment in the civil service rather than the transport, communications and power infrastructure needed to make their private sectors competitive. This preference for patronage employment over investment should be recognized as a policy choice, but rarely is.

The recent literature on structural adjustment, and the need for Africa to do better, reads very much like the modernist school of political and economic theory that dominated the academic writing on Africa in the 1960s. It is linear. It assumes progress from the status of underdevelopment to development is the only worthwhile goal. The Cold War is over and market economics won. Dependency theorists are in retreat. This view is almost as widely held among African intellectuals as among western writers, but Africans accept it with anguish and conflict, asking why the failure? Are we really among the poorest countries in the world? What do we gain, and what do we risk losing in the reform process?

Mamadou Dia, leader of the African governance program at the World Bank, has produced keen analyses of the reform process. He traces blockages in the reform process to traditional patrimonial patterns of rule, which he finds recurring in African public administration. He is no apologist for current institutional patterns. On the contrary, he dissects them in detail and recommends fundamental remedies. (Dia, 1993; 1995)

Dia calls for a paradigm shift, and maintains that one finds sufficient commonalities to justify speaking of an African approach to management. He cites two studies that illustrate its characteristics. The first, by Geert Hofstede (1991), surveyed the nature of corporate management, particularly employer/employee relations in IBM companies and branches in fifty countries. It ranked the corporate cultures found there on their degree of individualism vs. collectivism and the degree of power/distance preferred by employees. East Africa, and to an even greater degree West Africa, ranked high on collectivist values and preferred a large power/distance gap between employer and employees. These two offices were part of a large group of developing countries, including Asian tigers Singapore, Thailand, Taiwan, Korea and

Hong Kong, and many Latin American countries. Portugal was the only European country in this group. At the other end of the spectrum were the US, UK, Australia, Canada, New Zealand and the Netherlands, ranking strongly individualist and preferring a small power/distance gap.

Dia finds similar emphasis on power/distance and collectivism in Africa in Binet's (1970) research on economic psychology in 56 African ethnic groups. Binet found that for Africans, "Self-reliance and self-interest tend to take a back seat to group loyalty and the need to participate and belong."

Claude Ake contributes to this school of thought a broader socioeconomic proposal for "Sustaining development on the indigenous."(Ake, 1990: 7-19) He is not referring to "traditional" African models, but a mutable, contemporary, indigenous culture that blends elements of values and institutions from many sources. In Africa, he argues, "The sense of community remains strong. So does loyalty to primary groups . . . Africans seem more interested in communal rights than individual rights." He proposes that policy reform should take account of values and processes rooted in the logic of the household economy, based on building people into communities rather than producing a surplus of tradeable goods. Ake argues that the logic of African household economies is reproduction rather than production, and its goal food self-sufficiency rather than the production of a surplus.

Robert Bates' analyses of African political economy showed how economic goals that were generally considered reasonable by development economists in the 1960s and 1970s led African policy-makers into market manipulations that were devastating for agriculture. (Bates, 1981) He pointed out that countries throughout Africa had followed similar policies. In hopes of closing the development gap with the industrialized countries and improving their terms of trade

with the outside world, they transferred resources domestically from agriculture to protected industrial sectors. The differentials between producer prices paid to African farmers by state marketing boards and world market prices amounted to a heavy tax, far from offset by the subsidy farmers received on inputs. High, protectionist import tariffs resulted in consumer prices that constituted another heavy economic burden on the rural population. A decade later a comparison of effective taxation on agriculture in eighteen countries worldwide showed that in the 1990s, the three African countries (Ghana, Cote d'Ivoire and Zambia) still taxed their farmers 70 percent more than the average for developing countries. (Schiff and Valdes, 1992)

Bates' own later work (1989) neatly established the link between local economic interests and national political alliances in Kenya, from the period of the Mau Mau through the 1980s. Unfortunately, Bates then argued that Kenya was fundamentally different from postcolonial states which put greater emphasis on redistribution, such as Tanzania and Mozambique. His analysis therefore failed to account for the fact that nearly all African countries instituted one-party states, government monopolies on land and major commodities, and state or parastatal corporations responsible for the most dynamic areas of trade. African states also tried to monopolize labor. In their clientele networks they enlisted as many people as possible, and, at a minimum, representatives of every significant national group, through employment in the military or civil service.

Neither the biting criticism of dependency theorists, nor such careful analyses as Bates', explain adequately why African populations have tolerated such treatment. The idea that the reasons are cultural comes from long observation and years of interviewing Africans in every occupation about both economic and political governance issues. Popular discussions of

economic policy issues in Africa focus on different abuses than those selected by neoclassical reformers. They suggest that leaders are often acting in ways sanctioned by popular expectations and widely shared goals. Abuse of such policies for individual gain is a separate issue, and is not generally accepted. It may be tolerated only if the observers perceive themselves as powerless to stop it. What then is culturally sanctioned and what is not, and why? These are the questions this paper seeks to answer.

III. WHAT IS ECONOMIC CULTURE?

By analogy with the way John Paden's classic work on Kano defined political culture, (1973) one can isolate elements that constitute an economic culture. Certain structures and processes in a society regulate the flow of goods and services. Each role in a family, in a village, in a larger society carries specific economic obligations and privileges. Rules, formal and informal, govern the exchange of goods and services, their relative valuation and the ways in which individuals in a society can save or store value for future use. These patterns are particularly relevant for economic analysis, and can be viewed as an economic culture. They differ from one society to another. Modern market-oriented economies have many cultural commonalities. Together they constitute a view of how economies operate that is quite different from that held by many countries undergoing structural adjustment.

IV. THE POLITICO-ECONOMIC CULTURAL DIVIDE

What most IFI commentators view as "lack of ownership" of policy reforms reflects

exactly this cultural divide. In this vein, the Bank's and Fund's insistence on fiscal balance at the expense of jobs is viewed by many African citizens as cold and inhumane. Public outcry comes whenever even a few jobs are lost in African countries, whether in the public sector or private sector. This astounds American observers, for whom layoffs in the thousands have become almost routine. Other areas where reform has met resistance in Africa include privatization of parastatals, administrative reform and regional food exports. It is argued here that these differences in perception are related to economic management patterns that persist culturally today and have roots in precolonial and colonial economic institutions. A proper understanding of these cultural elements complements neoclassical economic analyses; it is not an alternative explanation.

One could argue that a paradigm that is becoming outmoded does not need to be understood; it is irrelevant and can simply be abandoned. This paper disagrees, and argues that African viewpoints and cultural patterns need more attention. Changing it is easier if one knows one's historic roots as well as one's objectives. A paradigm is a sort of mental map. If one is lost and having to change maps, it helps to compare the old and the new.

This return to economic history and cultural analysis would be a scholastic exercise if the divide over the reform process were not widening. As it widens, some proponents of reform have become cynical and some African leaders embittered. Recent approaches among donors aim at consensus-building, by identifying interest groups that leaders can mobilize in support of reform. The problem is that they look for interest groups defined in a western way: private entrepreneurs, farmers, labor, etc. What African leaders are generally trying to mobilize are rather patron/client networks and ethnic constituencies. These are often represented in a Chamber of Commerce,

political party, farmers' cooperative or labor union, invisible to outsiders, but well known among locals. An element of blame creeps into the policy debate on both sides. Illustrating these underlying structures may help both sides to understand the divide more clearly. It may allow Africans to find a route to reform and modern economic management that preserves the best of their cultural values.

V. ADMINISTERED TRADE

One manifestation of African political-economic culture, past and present, is administered trade. This is an approach to trade whose workings were initially described by Karl Polanyi et al. in a seminal work of economic history, *Trade and Market in the Early Empires.* (1955) They show that two types of **gift exchange** characterized the flow of goods in many premodern societies. Exchange among peers, egalitarian exchange, was based on the principle of **reciprocity**. Hierarchical societies, on the other hand, generally circulated goods up and down the hierarchy, which resulted in a pattern of flow of goods and services based on **redistribution.** Hierarchical kingdoms and empires generally developed a pattern of administered trade controlled by the state. Relations with the outside world were deliberately limited to segregated ports of trade. The economy, here, was an **instituted process**, initiated and conducted largely by the state. The practice of trade in such societies was essentially risk-free, as traders were usually trading on the king's account, or at least with his license. **Prices were fixed** in units of account, and most of the negotiation of a sale involved selecting the composition of the package of goods to be received by each side and the generosity of the measures. If supply was low, the measures

were simply a bit short. If supply was high, they were ample. The quoted unit price stayed the same. Special purpose moneys existed, with one type serving as a medium of payment, another as a unit of account, and a third as a store of value.

Polanyi et al. included precolonial Dahomey as an example of administered trade, along with the Maya and Aztec, ancient Babylonia and Mesopotamia, and colonial India. Echos of the same patterns are found throughout Africa, Russia and Asia, all of which today rank high on Hofstede's collectivist and power/distance indices.

In African precolonial kingdoms, trade was a royal monopoly or chartered monopsony, and closely linked to diplomacy. Diplomacy was undertaken deliberately to open an area up to trade. For example, an Emperor of ancient Mali described the great cost he had expended in gifts to neighboring sovereigns, to "open a road" to the gold bearing regions of the south. African kings typically distinguished among two or three tiers of merchants: their own traders, those licensed to trade on their own account (a share of whose profits went to the king), and petty traders in alchohol, livestock and foodstuffs. Modern African countries have analagous institutions, although the top level is camouflaged and split between private corporations run by relatives or friends of the ruler and state corporations. Parastatals occupy the second rung, and the informal sector the third.

The mercantilist era in early modern Europe marked the transition to a fully monetized economy in Europe and the emergence of an autonomous bourgeoisie. The European chartered companies of the mercantile era were contractually more autonomous than the licensed traders of the old empires, but mercantile trade policy still was an instituted process carefully controlled by royal agents. Africa developed autonomous merchant classes, described by Phillip Curtin as

trade diasporas, (Curtin, 1975) under the influence of the trans-Saharan, Atlantic and Indian Ocean slave trades during the same period. Special purpose moneys gradually gave way to multipurpose moneys beginning in the nineteenth century. The process of monetization was not completed, however, until the colonial conquest at the end of the nineteenth century and beginning of the twentieth.

Economic warfare marked the early colonial era. In the nineteenth century Europeans fought to gain a dominant position in trade. Beginning in the early twentieth century, a more subtle, but ultimately devastating economic attack included: (1) imposition of European currencies, (2) imposition of head taxes payable in that currency, and (3) impressment of forced labor. These were at least as important in consolidating colonial rule as military conquest. Walter Ofonagoro showed how the imposition of European currency was used to strengthen the British position in Nigeria at the turn of the century. (Ofonagoro, 1972) Similarly elsewhere, the head tax, unlike the tribute of the past, was payable only in European currency. This forced every family either to cultivate cash crops or to send at least one member of the family to work for cash wages. Forced labor replaced slavery, a distinction unique to the colonial state. Abolishing slavery dispossessed powerful Africans of a large part of their political and economic power, without compensation. Forced labor, recruited by the colonial governments, provided cheap labor to Europeans to construct the colonial infrastructure and fight its wars. It also became a visible symbol of dominance for the tiny ruling minority, whose precarious tenure rested on such symbols. (see Young, 1994)

Colonial African commercial institutions were a curious hybrid of European and African trading practice, though the colonial synthesis was more monopolistic than either. While laws at

home were crafted to ensure fair trade and fair labor practices, and to limit the sectors in which monopolies would be allowed to develop, colonial policies moved in the opposite direction. Monopolistic chartered corporations or state marketing boards were established for cash crops and staple commodities in most African colonies. Colonial governments created legal monopolies over land, minerals, currency, crops and economic sectors of interest to the government, at a time when such economic patterns would have been unacceptable at home in the metropole. Colonial fiscal and monetary policies were mercantilistic, tying each colonial economy to the mother country and establishing strong barriers against trade with neighboring colonies belonging to other metropoles. Africans saw a pattern of ethnic loyalty to the primary group among European colonizers. It was manifest in racial segregation, ethnic exclusion from land or occupational rights, and privileged access to jobs, credit and other business opportunities for Europeans and other outsiders.

Postcolonial African governments rejected capitalism, taking it as synonymous with the colonial institutions sketched above. Most believers in capitalism envisaged an entirely different set of institutions and principles when defending it. What Marxist or Socialist governments, whether in Africa, the Soviet Union or Asia, called Marxism, ironically, was equally far from the classless society in which Karl Marx envisaged the state "withering away." This paper proposes that what they practiced, in the name of Marxist ideology, was really a form of administered trade rooted in their corporatist hierarchical history. Governments used it, in fact, to alienate workers from their means of production, exactly as Marx had argued capitalism did. They instituted statist, centrally planned economies, attempting to use modern skills and technology to recreate well-known patterns of economic administration based on administered trade. The state

corporations and parastatal monopolies established throughout what became known as the socialist world resulted more from common underlying social structures and cultural attitudes toward economic management than from conscious institutional borrowing.

Contrasting the underlying structure in Figure 1 with fully monetized market-oriented economies helps one understand how goods and services circulated differently. Precolonial African societies generally fell into one of four types: (1) hierarchical kingdoms and empires; (2) "stateless" agrarian societies organized into age-grades, often given a loose unity by sacred secret societies or oracle-priesthoods; (3) relatively egalitarian kin-based herder communities; and (4) small and also egalitarian bands of hunter-gatherers. Stateless agrarian societies often had only three or four layers of hierarchy, one at the level of the household, another the clan or ward, then the village, and sometimes also the subregion. For all higher matters, the heads of networks met as peers to negotiate solutions. Kingdoms and empires, on the other hand, had many layers of hierarchy, including conquered tributary kingdoms, a territorial nobility, and bureaucracies in which some appointed offices were held by royals, others by nobles, and still others by crown slaves.

It could be argued that, with such divergent underlying cultures, Africa could not be said to have a common "economic culture" today. Yet public policies have been incontestably similar across the continent. Countries considered economically liberal, such as Cote d'Ivoire and South Africa, have tariff structures and protectionist industrial policies far more similar to their African neighbors than to liberal economies in the West or Asia. Parastatals dominate the industrial sectors of countries as diverse on the ideological spectrum as Senegal. Kenya and Congo-Brazzaville. Export of food crops is widely resisted, except in southern Africa. Contempt

Figure 1.

ADMINISTERED TRADE

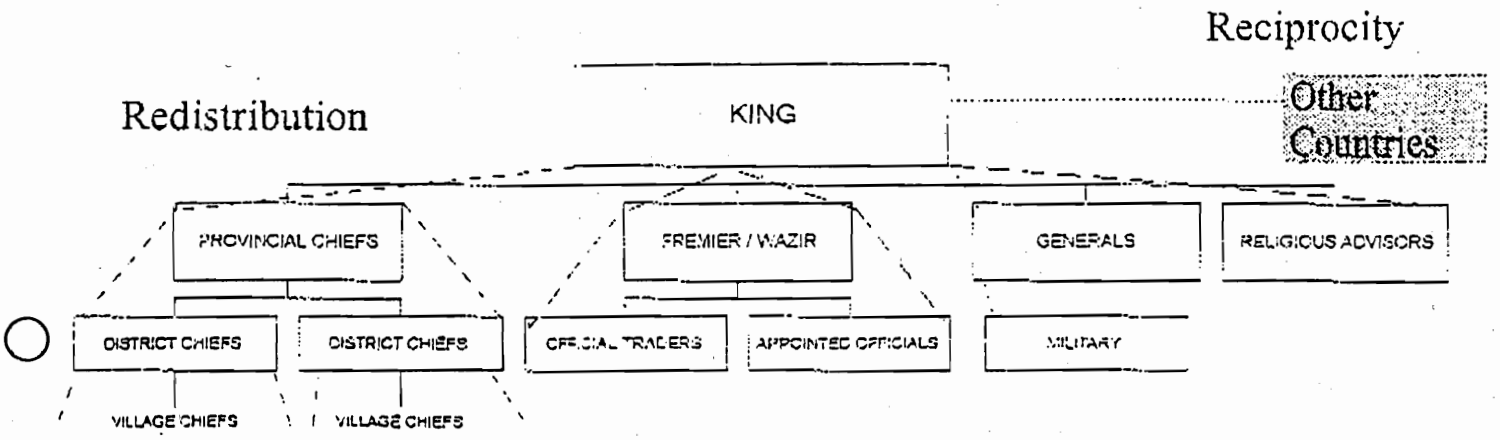

Figure 2.

MARKET ECONOMIES

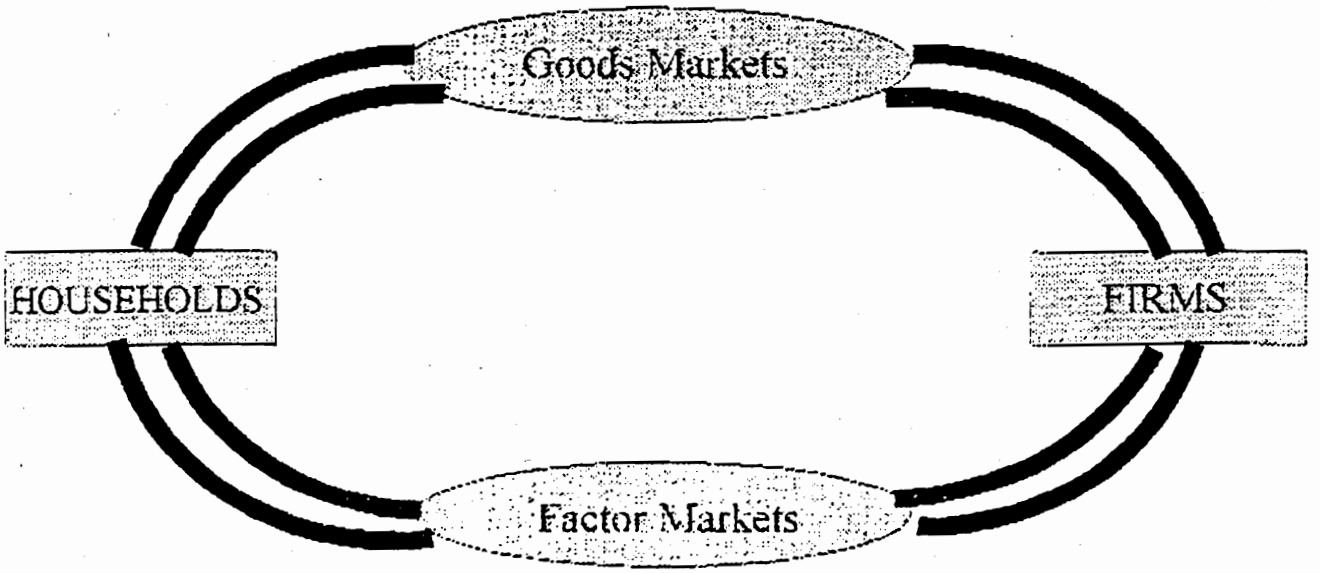

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Figure 1:
Flow of Goods and Services
Administered Economy

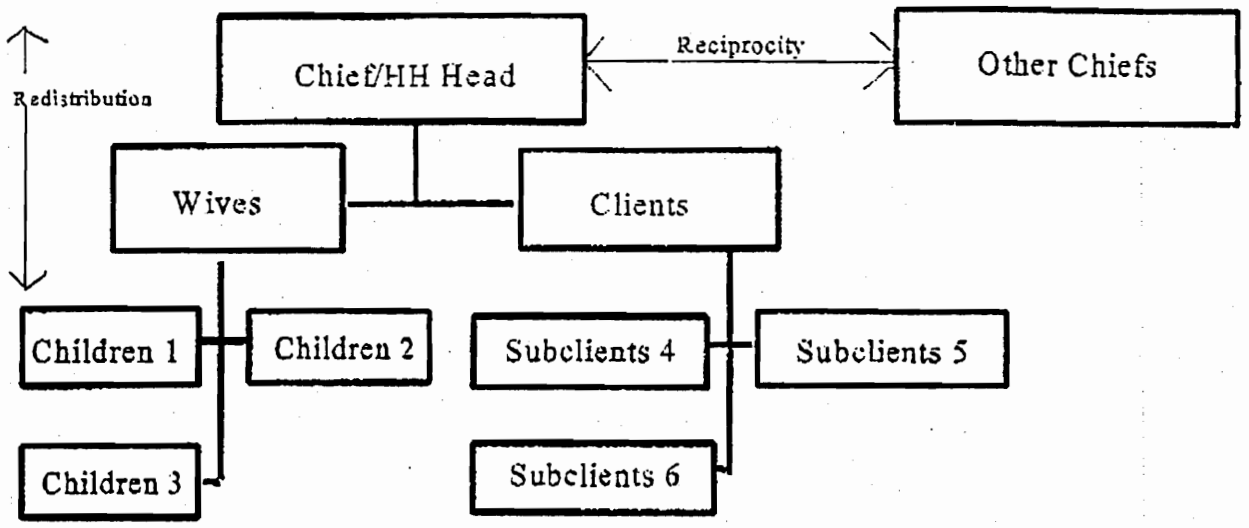
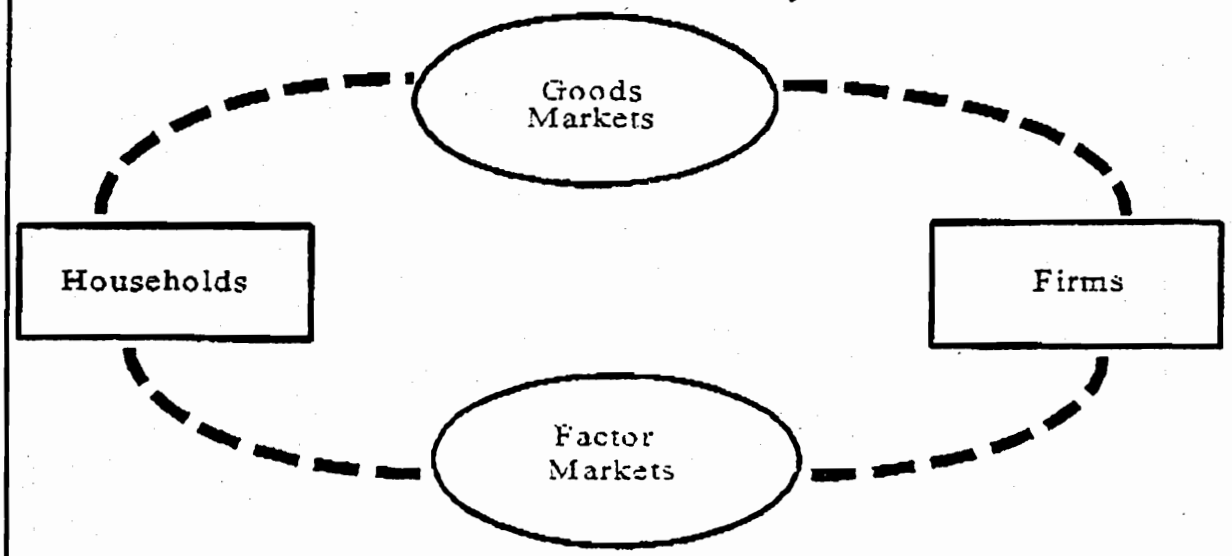


Figure 2:
Flow of Goods and Services
Market Economy



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Insert figures one and two here

for or suspicion of private entrepreneurs is widespread among the population, not only the political class. Wealth from trade is generally regarded as ill-gotten gain. The act of buying and selling is not considered real work, and transaction costs are little understood. Substantial cultural differences exist, but the least common denominator is remarkably similar.

Africans generally feel a strong sense of community, defined by both kinship and loyalty. The world was divided, most learn from early childhood, into "we" and "they." This teaching was particularly strong among the stateless societies. (See Njaka [1972] on the Igbo; Bohannan [1968] and Akiga on the Tiv; Kenyatta [1958] on the Kikuyu) The members of one's community were known for their commitment to the community. They offered protection and security in times of need. Outsiders, other communities, were always potential enemies, and at best temporary allies. Alliances were declared and renewed with elaborate ceremony, designed to establish symbolic and practical foundations for them. This created crosscutting horizontal ethnic identities that became salient when members of different communities came into contact on a group to group basis, generally in urban settings.

Figure 1 diagrams the flow of goods and services. Within a hierarchical group they flowed up and down, thus ensuring redistribution of surpluses and trade goods. Family members and clients provided goods and services for their lords according to their resources and status. The transmission occurred not through markets, but through gift-giving occasions, as harvest share, tribute and booty. Courtesy calls were made at regular intervals. Each occasion involved the exchange of gifts and favors. At the harvest farmers brought the lord's share to him, with a ceremony evoking expressions and loyalty and expectations of protection. The overlord, in turn, was expected to help the client with protection, favors, wives, land, and sometimes to slaves,

livestock, and trade goods.

Horizontal exchange among peers took place according to the norms of reciprocity. In stateless societies, such as the Tiv of Nigeria, described by Bohannan (1958), and Bowen (1964), households redistributed food surpluses such as eggs, meat, beer, etc. by calling on their neighbors or clansmen bearing gifts. The neighbor would return the visit, within the space of a few months, bearing a gift of exactly equivalent value, but unlike nature, such as fruits found in their area or a different type of meat.

Information in hierarchical societies, like trade goods, was supposed to travel mainly up and down the hierarchy, rarely outside it, except under royal control. One sees similar patterns of communications today in African bureaucracies and political networks, where people hesitate to venture an opinion or to share information without consulting their superiors. This is a major obstacle to transparency in both public and private institutions.

The pace of traditional agrarian economies was slow. Special purpose moneys were often cumbersome and negotiations were deliberately prolonged to reinforce the social contact. Multipurpose monies, on the other hand, have accelerated the flows of goods and services, reducing transaction costs and times. How much these should be further reduced is a key issue of trade policy reform in Africa today. Africans still value a slower, courtly etiquette of exchange.

The image that most market economists have of the workings of supply, demand and markets in a market economy is different from the picture most Africans have, consciously or unconsciously, of how economies function.

The aim of the head of any group in a hierarchy was to increase the size of his group, while ensuring the physical well-being of all and harmony among them, both political and

spiritual. Bonds between clients and patrons were for life, and even beyond. They were inherited from father to son, continuing the symbiotic relationship established by the ancestors. Patrons could not forsake their clients, nor could clients desert them.

The diverse surpluses of different localities in a kingdom thus flowed to the top. They were for the king's use, but as most commodities were perishable, his ability to accumulate surpluses was limited. He generally used the surplus food to support his army and bureaucracy, and to entertain his many guests. Among the services clients were expected to provide was help with hospitality. Guests could be sent to be lodged with them, and client women could be mobilized to help cook major feasts. Thus, food and goods were redistributed back down the hierarchy. Surplus local tradeables, on the other hand, the chief sent as gifts to neighboring monarchs, in exchange for gifts of a like value from their kingdoms. This exchange took place on the basis of reciprocity, with a careful calculation of what is owed on each side camouflaged in an elaborate courtly etiquette of gift-giving. Without the protocol, the exchange would have seemed crass, even unacceptable to African rulers. The king's treasure and hospitality, acquired through tribute, trade and booty, were shared out to followers and allies in doses designed to reinforce loyalty.

Monetization of the economy during the colonial and postcolonial period changed the dynamics of redistributive systems. Surpluses converted to cash money could and did grow larger, large enough to be sent into Swiss bank accounts. Benefits increasingly failed to trickle down as expected. Electoral politics similarly changed the links between patrons and clients. Politicians, as Bates shows in great detail, were elected by mobilizing the economic interests of their clients. Once in office, however, their distinct economic interests as members of a new

political-economic elite came into play.

In economic institutions of postcolonial Africa, many underlying attitudes and customs have persisted. Africa today is caught between two economic paradigms. Employees still attach themselves to employers much as clients to patrons. They refer to their superiors as master, patron or boss rather than by name. They expect the employment bond to be for life, and often seek help with personal problems.

Market transactions also still follow many traditional dynamics. Ironically, market economists have hailed the willingness of reformers in developing countries with a phrase that reflects old patterns of thought far more than new ones. Kapoor, for example, reports on a World Bank seminar in Harare in 1994 that, "Most of the participants agreed that it was imperative to *get the prices right*." (World Bank, 1994: 3, [emphasis added]) This expression, which is loosely interpreted by neoclassical economists to mean creating an appropriate, market-oriented incentive system, sounds instead like an echo of the era of fixed prices. In a market economy prices are expected to fluctuate with supply and demand. In an administered economy prices of staples are fixed, and quantities per measure fluctuate in response to supply and demand.

African suppliers still insist on common unit prices, and resist attempts to allow prices to fluctuate regionally or over time. Parastatals engage in complicated calculations to ensure identical prices for inputs and outputs throughout the national territory, rather than allowing them to vary according to distance and transaction. Although prices are globally determined by supply and demand even in a "fixed price" system, unit price variations of any type are often regarded as unfair. In African informal food trade, measures and quality vary widely, but unit prices are sticky.

Gift-giving and hospitality also remain vital traditions in Africa. Visitors are offered hospitality in keeping with their perceived status. In rural areas a guest is expected to bring kola nuts, alcohol, sugar, soap or other hospitality gifts; in cities imported goods are favored. An African returning to his village brings much more: cloth, shoes and all sorts of trade goods. He leaves with food and other local produce. The value of the goods and services exchanged is determined by principles of reciprocity and redistribution, strongly reinforcing social ties.

The tradition of gift exchange is one source of corruption in a monetized economy. Introducing cash cheapens the whole process. Moreover, the radical political transitions created first by colonial rule and then since independence have left modern rulers without traditional sources of authority based on heredity and family position in the community. The temptation to store up a personal nest-egg may be an all too human response to this insecure position of power.

In contrast to the situation under administered trade, Figure 2 shows an illustration of the flow of goods and services in a modern market economy. Through the medium of multipurpose money in goods and factor markets, households and firms exchange goods and services. The state is left out of this diagram, as its intervention is regulatory rather than direct. In this economy one thinks in terms of volumes and velocities of monetary flows, in language borrowed from liquid physics. It is money-centered, not people centered. It assumes that the purpose of individuals is to accumulate money, whereas the African paradigm assumes that the purpose of families is to grow within harmonious communities. Africans seek to accumulate money and goods, but the goods serve to enlist people rather than vice-versa.

Even the time-frame for each paradigm is quite different. Market economists measure time lineally, in daily, monthly and yearly increments. All statistics are cited in these terms. The

more trade, the higher the velocity of monetary circulation, the greater GDP. African economic managers think more organically, in terms of a human lifetime. The wealth that a man builds in his lifetime is the measure of his greatness. It is counted in terms of numbers of people accumulated in his network. Observers who do not understand, or do not accept, that accumulating people can be a stronger goal than accumulating money, often complain that policy decisions are always political rather than economic in Africa.

VI. DECISION-MAKING PROCESSES

A. The African Approach

In the old kingdoms, and even today in most African villages, major policy decisions take place in the context of a social contract. In the past, coronation rituals and seasonal festivals acted out a social contract between the king and each group within the kingdom, vassal kingdoms, vassal nobles, slaves and castes included.

Debate and decision-making, on the other hand, were in the purview of an elite of free heads of household. In societies based on age-grades, major policy decisions belonged to the top age-grade. In those with powerful secret societies, it was those who had taken the top oath. In monarchies the king would allow debate in the council of elders before a decision was announced. Once the leader pronounced a decision, his word was law, no one would openly question it. If, however, what he announced failed to reflect the consensus of the debate that preceded it, he would not stay in office for long.

Debate and decision-making processes similar to those of the precolonial kingdoms are

common in villages throughout Africa today. Participation is a little bit wider than in the past, as heads of household of slave origin attend, but they often say little. Women and youth often gather around the outer circle to listen--in the most progressive villages some even speak out. A skillful chief builds his consensus ahead of time. He calls an assembly only when he has his speakers lined up. Once assembled, everyone is allowed to have a say. A debate can go on all day. At the end the chief announces the consensus. After he announced the consensus, everyone is supposed to follow the group decision.

This approach to decision-making and implementation is stronger at the village level today than in national governments. It is still practiced **within** the executive and party hierarchies, but less between legislative, executive and judicial branches. Moreover, as a result of status acquired through modern education, traditional and contemporary sources of status often conflict in the modern political class. A person of slave origin may be President. Everyone knows it, but mentions it only in whispers. The social contract implicit in traditional rituals has been replaced by an electoral process that pits one primary community against another, fracturing community harmony. Heads of state try to place themselves in the role of symbolic peacemakers, above the fray, but do not always succeed. Some take on sacred accouterments, seeking legitimacy as symbols of national unity like the divine kings of the past. Such symbolism is losing its power, however. The wave of democratization sweeping Africa today has created a liminal moment in societies across the continent. Old norms are being questioned. African media are seizing upon free speech, throwing aside old rules of debate and domestic power balances.

B. The Structural Adjustment Approach

The process of policy making involved in structural adjustment reversed the steps that might have worked had Africans been in charge of protocol. Policy analysis was conducted by Washington-based economists of the IFIs. Reform programs, rightly considered sensitive in the early years, were generally negotiated in secret, with a small cabinet delegation, usually led by the Minister of Finance. Typically, reform proposals were initially floated during two to four week IFI missions in Africa. Final negotiations, however, took place at World Bank and IMF headquarters in Washington, D.C. There, ministers learned what decisions and what deadlines will ultimately have to be met to obtain the loans needed to save their governments from insolvency. After the humiliating annual October ritual gathering of finance ministers before the Boards of the World Bank and IMF in Washington, the ministers of finance returned to their presidents, World Bank, IMF accords and "conditions" in hand.

Having had no way to build a public consensus before or during the process, presidents often retreated to dealing with the information as occult--the modern translation of which might be state secrets. Only what was absolutely necessary was announced, and little effort at implementation followed. Bank staff tried to encourage *ex post facto* legitimization efforts, but met with stony silence. It is simply not done that way. Once a decision is announced, the debate is supposed to be over. Had IFI officials known the custom, might they have changed their approach? Having failed at ex post legitimization, in any case, they have recently emphasized more public dialogue early in the process. This is more in keeping with African custom.

C. Strategic Planning

The comparative literature on the process of policy reform is limited to a review of the decisions made, the time they were announced and funded, the degree to which they have been effectively implemented, and their impact. Strikingly, although Washington's IFI milieu engages in frequent strategic planning exercises, little analysis of the procedures leading up to structural adjustment policy decisions has been published. It may be because it has been an embarrassing process for all concerned. Besides the problems of consensus-building described above, during the first rounds of Structural Adjustment Credit and Loan negotiations, the two main reform institutions' agendas worked at cross-purposes. World Bank proposals aimed at strengthening the private sector, while the IMF concentrated on eliminating fiscal deficits. The result was that new taxes were imposed at IMF urging, and tax collectors often harassed private entrepreneurs more than the economic police and ministries of commerce had ever done. Beginning about 1991 the IMF became more open with Bank officials, and joint missions were conducted. Their respective recommendations are now more coherent.

African analysts have repeatedly called for the reform process to be endogenous, grounded in their own strategic planning. If that happened, they would have to confront divergent goals of economic management, one set suited to market-oriented economies, another to hierarchical political economies. Simplifying a bit, one could say that four main goals of policy-makers in market economies are generally as follows:

- Achieve rapid growth in GDP;

- Keep inflation low;
- Keep a favorable current account balance, with exports exceeding imports;
- Keep unemployment low.

In contrast, popular expectations of leaders in Africa, and leaders themselves focus on the following goals:

- Achieve a rapid growth in the loyal community of followers;
- Ensure that all members work and produce sufficient food;
- Produce a food surplus and local specialties that funnel to the top (minerals and cash crops);
- Trade the communal surplus for luxuries;
- Exchange gifts and offer generous hospitality.

These goals are still widely shared in Africa, despite monetization of the economy. As Dia describes the situation at independence,

> Most Africans considered independence to mean not only the transfer of authority and power to local government, but also the transfer of wealth accumulated during the colonial period . . . two legitimizing themes achieved central importance in defining the role of the state in the early stage of independence: strong centralized control of the economy and patrimonialization of the state. (Dia, 1993: 12)

The only shared goal between the western and African manager's paradigm is keeping unemployment low. GDP and inflation are meaningless concepts to most African citizens. They seek growth, but count it first in people and secondarily in money. Growth in wealth is less

important than socially reinforcing patterns of redistribution. Accustomed to a government-instituted economy and risk-free trade, they often blame governments for price instability. A favorable current account balance would be considered to exist when imports exceed exports, not the opposite.

Even the concept of unemployment is not really understood in the same way. In the western paradigm job seekers and jobs are anonymous statistics. In the African system it matters who employs whom, not merely that there be jobs. If a political rival is seen to give a person a job, the employee is automatically counted as opposition. As African private sectors often include prominent ex-leaders from previous regimes, this is no small problem for privatization programs. The paradigm shift requires that African leaders take credit for generating employment, even when the employee is not in government employ. It also requires that people give them credit for growth in private sector employment, and that employees in the private sector consider themselves full loyal citizens. In the past, the private sector has often attracted individuals marginalized by their political history or group affiliation.

The assumption of a lifelong bond in the employer/employee relationship is also a problem. It is very common in African labor disputes to find that an employee cannot accept being fired for property offenses such as dipping in the till. Many sue their employers for failing to define theft, in writing, as a serious offense. The employee considers himself part of a family. He expects the patron to discipline him severely when he errs, to prevent him from repeating the offense, but not to cast him out unless he does bodily harm.

This concept of employment explains how African civil and military services burgeoned until they absorbed more than the state could afford to spend. Each soldier or employee is

implicitly a client. He **owes** his employer, above all he owes loyalty. Laid off, he turns against the hierarchy and is automatically assumed to feel enmity. Some "demobilized" soldiers, in fact, have acted on that enmity, provoking coups d'etat (Nigeria, 1970s and 80s, Burundi 1987) or engaging in gang violence (Nigeria, Chad, Burundi, Angola, Mozambique, Sierra Leone, Liberia).

Trade reforms that might result in loss of jobs have often been declared but not implemented. There is strong cultural resistance to them, not just stubbornness on the part of leaders. It is a measure of the depth of the crisis that layoffs have, in fact, taken place. The African solution was, for years, to accept lower wages for everyone rather than let anyone go.

Similarly, the idea that it is the responsibility of the state to create economic institutions refuses to disappear. This helps explain why, even as the World Bank is campaigning for privatization of parastatals and elimination of marketing boards, African governments and researchers continue to propose creation of new ones. Parastatals are seen as a group achievement, the nation's big business. Selling them back to outside capitalists, many would find shameful. Outsiders tend to blame resistance on loss of patronage and graft opportunities. It certainly is a factor, but this paper suggests that the resistance is shared by much larger groups than benefit directly from parastatals.

Negotiating new solutions to the economic impasse created by parastatals could potentially be the greatest contribution to growth in trade and GDP over the next decade. Parastatals have emptied government coffers, then dragged them into deep debt. They pay salaries far above median incomes, yet there is little resentment among the people, provided that their ethnic group is adequately represented in their employ. They are a source of local pride.

They are frequently the largest corporations in the country, more than ten times the size of the largest African privately-owned companies. They have been built by and for locals. They represent group achievement, opportunity and access to technology. Unfortunately, most do not make a profit. People agree that it would be better if they did, but they have no way of measuring the drain and are not convinced that parastatals can be sacrificed.

Today the tendency is strikingly strong to protect local industries that are privately owned as well, even privately owned by groups viewed as outsiders (Asians and whites). People fear loss of jobs (particularly in politically sensitive areas), wasted capital investments, and a technological move backwards.

Time and transaction costs are other, less tangible areas where African cultural norms are ill suited to modern economies, thwarting trade expansion and investment promotion. The seemingly pernicious pleasure that African officials take in sending the applicant back to return another day is generally interpreted as a form of extortion. Extortion does increasingly enter in, but this paper argues that an African sense of time with richer values underlies the practice. Delays were actually far more common before demands for "tips" became generalized. Dignity is expressed through slow deliberate movement in Africa. As in Universities where students used to be expected to wait ten minutes for a late Assistant Professor, fifteen for an Associate Professor and twenty for a Professor, the amount of time people wait for a person is a measure of one's status. It was a common tool of diplomacy to test the patience of visitors, and leave them to devise dignified way of expressing impatience. Succumbing to a fit of temper occasioned ridicule and mirth.

Dealing with the distortions this has produced in African economies will be easier if it is addressed consciously. "One stop shops" are a start, but most countries instituted them only for setting up a new corporation or investment. The issue of time delays, in everything from export processing to financial transactions to telephone service and travel formalities, needs to be addressed. The contribution of delays to transaction costs is understood by every business person, but rarely deliberately quantified. People who want rapid service can also adopt more constructive approaches, such as being more courteous, and finding other means of enhancing their interlocutors' sense of self-esteem.

A minor, but telling example of reforms that African populations resist strongly for cultural and historic reasons is the fate of duty drawbacks. Among the least successful trade reforms have been duty drawback schemes for exporters. No such schemes have worked in Africa. Once governments have revenues, they are reluctant to concede them, for a number of reasons. Explanations from IFI observers have blamed this on the fact that nearly all governments are facing continued excessive budget deficits. More important, perhaps, is the fact that reimbursement or credit for taxes makes them flow in the wrong direction through the hierarchy. Money is supposed to flow "downward" only through the largess of leaders. The idea that people would be **entitled** to it is perceived as inappropriate and socially disruptive.

Food exports have also been strongly resisted by officials at every level. It appears that populations expect their rulers, *in loco parentis*, to ensure that there is adequate food for all and that it is equitably distributed within the group. Seeing it go out of the country, or even out of the district, is socially disconcerting. Newspapers regularly publish stories of bean, maize or rice smugglers, as if it were a major crime. Seeing food go away raises the possibility there may be a

shortage. If a government has a policy of food self-sufficiency, as most African countries do, and the government prevents staple foods from leaving the area, it may escape blame in case of famine. Famine may be more likely to occur, but that seems an abstract problem.

The concepts of equity and welfare implicit in the above group of attitudes are fundamentally different from the way the World Bank, USAID and other donor analysts (the author included) have been analyzing the social dimensions of structural adjustment. Many such studies show that the poorest of the poor have not been the losers in the structural adjustment process. In fact, rural populations gained a little more from increases in cash crops than they lost due to price increases on food purchases. (Sahn et al, Cornell Food and Nutrition Policy Program, 1990s; World Bank SDA literature, 1988-1996)

Yet if one listens to discussions in African villages, it is clear that the rural poor are no happier than their leaders with structural adjustment. Their criticisms are not the same as the urban journalists, whose arguments tend to a neo-dependency school of thought. This paper argues that the problem for many villagers is that they are concerned about the welfare of the larger group. Usually this is defined in ethnic or religious terms, but also in national terms. Groups in many countries suffered shocks through structural adjustment. Those individuals who were personally spared that shock are not therefore grateful. Rather they deplore the fate of their group. The equity they seek is group equity, not individual or family. Moreover, people identify with groups at many levels, that can be envisioned as ever larger concentric circles. On the local level, people are concerned that their family and clan be treated equitably in the village. On the regional level, they want their subregion to do as well as any other--not too much better or worse, as hubris is as dangerous as neglect. On the national level, they want their ethnic or religious

group to share equitably in opportunities and wealth. Structural adjustment represents a recognition of past policy failures and future uncertainty for ordinary African citizens as well as their leaders.

VII. RECONCILIATION?

The synthesis achieved thus far embodies many of the negative elements of both African and western paradigms. Most African leaders have not yet reconciled the two in a way that either enhances traditional values or leads to economic growth. On the contrary, both political and economic institutions still lack accountability, openness and the rule of law.

The idea that the gap is cultural, rather than purely economic or political, should be no cause for despair among either African leaders or neoclassical economic reformers. On the contrary, it offers an opportunity for greater clarity in the debate and more mutual respect on both sides. It is evident that certain reforms provoke widespread resistance, notably:

- decreasing public sector employment
- privatizing parastatals
- exporting staple foods
- speeding up transactions, producing growth through velocity and volume

Recognizing this, let us focus debate and strategic thinking on employment. How can the government take political credit for generating private sector jobs? It takes thought and public relations work, but it can be done. How can citizens **not** employed by the government express their loyalty as citizens. It can, and is being done by the most astute firms, through public events,

political contributions, community service, worker parades, etc.

How can the group, the nation, feel a sense of pride and ownership in industries run by outsiders? Fortunately innovative stock sale plans are helping to show new ways. African corporations, however, still are predominantly sole proprietarships. And hostility to foreign ownership is often enshrined in both corporate and labor laws. Group confidence in joint stock corporations will require higher accounting and auditing standards. This needs to be as important a concommitant of successful privatization as having a stock market. Firms that recognize the importance of national pride can, regardless of the ethnic identity of their managers, make enhancing it a conscious part of their marketing and public relations strategy. Treating one's technological innovations as a national accomplishment, rather than a private one, resonates better in Africa.

How can the community feel confidence in food security, or for that matter, reliable basic infrastructure without resorting to autarchy? Buying surplus food or hydroelectric power produced by neighbors is usually a better strategy for achieving reliable self-sufficiency than trying to produce everything at home. But people will have to be convinced of it. They must see that dependency on a regional market is not threatened by political tensions if the world market provides ready access to alternative sources. They must also see, and believe, that it is economically more viable.

How can one change the way people think about time and growth? Get people to talk about it. Analyze and quantify transaction costs. Show what impact transaction costs have on the competitiveness of businesses in one country compared to its rivals. Let local economists analyze their impact on the ability of a country to attract foreign investment. What is the time and cost of

getting a shipment through customs, of getting a license, an employment permit, a letter of credit, a transfer of funds, of finding an oversees buyer or source of supplies? Focus debate on alternative ways people can preserve the sense of dignity that is traditionally expressed by acting slowly and by exchanging favors.

Asian institutional models are likely to be useful, as countries such as Japan, Korea and Thailand have strong corporatist traditions successfully adapting to modern economies. Dia looks to their financial institutions to bridge the gap between African formal and informal economies. African corporatist attitudes toward employment, and towards family values in firms are similar to Japan's. Perhaps African firms can use outsourcing to achieve similar large-scale production efficiency. No one country's model suits another entirely, however. The World Bank study, *The East Asian Miracle* (1993) concluded that the countries that had succeeded, the tigers, had followed very different models. They had in common mainly an ability to tailor economic legislation and institutions to their particular economies. Their policies combined neoclassical reliance on market mechanisms with state-led interventions in industrial policy and financial markets more typical of statist approaches. All recruited, "a competent and relatively honest technocratic cadre," and insulated it from daily political intervention. They also established business-friendly legal, judicial and regulatory frameworks. Moreover, all created formal institutions for encouraging dialogue between mutually suspicious public and private sectors.

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Regional Integration and Cooperation in Sub-Saharan Africa: Are Formal Trade Agreements the Right Strategy?

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Steven Radelet

Abstract

This paper examines the potential for success for trade-focussed regional integration agreements in sub-Saharan Africa, with a particular focus on southern Africa. The paper surveys the existing literature on regional integration, and attempts to distill the most relevant lessons about success and failure for the current integration initiatives in the region. It finds that there is little reason to expect significant economic gains from formal trade agreements at this time. Such agreements, in and of themselves, are unlikely to yield appreciable benefits unless they are preceded by decisions within member countries to follow more general open trade strategies. Indeed, it is possible that they could be detrimental to the economies involved, either because they might encourage import substitution on a regional basis (as has happened in the past) or simply because they absorb scarce administrative and financial resources. More open trade policies coupled with more disciplined fiscal and monetary policies (and hence more economic stability), perhaps augmented by regional cooperation efforts on transportation and communications infrastructure, appears to be a more promising initial strategy.

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1. Introduction

Sub-Saharan Africa (SSA) has a long history of regional integration and cooperation agreements. The South African Customs Union (SACU), for example, evolved from an earlier union that was established in 1910. Similarly, the countries of the recently-resurrected East African Community (EAC) -- Tanzania (then just the mainland of Tanganyika), Uganda and Kenya -- first established a common internal market early in this century, and the Congo Basin Treaty emerged from the Berlin conference of 1884. Since the wave of independence movements in the 1960s, African leaders have time and again spoken of the importance of regional cooperation and unity. In fact, there have been more regional integration and cooperation agreements consummated in Africa than on any other continent. But, with few exceptions (notably SACU and possibly the franc zones) these agreements have yielded disappointing results. They have not led to increased trade within the region, or between the countries of the region and the rest of the world. Moreover, except for the franc-zone monetary unions, they have had little success in actually integrating the economies of the member countries. Basically all analysts agree that the great amount of time, effort, and resources expended to date in the name of regional integration in sub-Saharan Africa has had little payoff.

Yet the enthusiasm for regional integration remains. Most notably, there is great hope that the political changes in South Africa can pave the way for increased integration and cooperation around the southern rim of Africa, and in turn, that the South African economy can be an engine of growth for the entire region. Several initiatives are under way, including an attempt to expand the agenda of the Southern Africa Development Community (SADC) to

include trade policy, the Cross Border Initiative (established in 1991), and the Common Market of East and Southern Africa (COMESA), which was established in 1993. The resurgence is not limited to Southern Africa: the East African Community was re-inaugurated in March 1996, nineteen years after it was disbanded.

Are these new initiatives likely to achieve greater success than their forerunners in integrating African economies? Or will they simply divert scarce administrative talent and only undermine the credibility of member governments? This paper examines these and related questions by surveying the existing literature on regional integration and cooperation in SSA and attempting to distill the most relevant lessons for the recent initiatives. It distinguishes between *integration* agreements (that focus on trade and factors of production) and *cooperation* agreements (that involve selected policy harmonization or joint infrastructure projects). It makes a further distinction between the objective of economic integration and the specific mechanism of a formal regional integration agreement. It does not evaluate monetary unions, which would require a separate paper.

The basic conclusion is that at this time there is little reason to expect significant gains from formal regional integration agreements in SSA. Such formal arrangements, in and of themselves, are unlikely to yield appreciable benefits unless they are preceded by decisions within the member countries (particularly South Africa) to follow a strategy of opening their economies to competition in global markets. This is not to say that there is no potential for further economic integration and deeper intra-regional trade in SSA (indeed, there *is* significant potential); rather that formal regional trade agreements are not the most appropriate mechanism to achieve these goals. There appears to be much greater potential for gains from

individual country efforts to pursue a more outward-oriented trade strategy, especially if these actions are complemented by efforts towards regional *cooperation*, including the joint construction of transportation and communication infrastructure and other public goods (such as education and research facilities).

The paper is organized as follows. The second and third sections describe different types of regional integration and cooperation agreements, the theoretical gains and losses from such arrangements, and some stylized characteristics of the types of countries most likely to gain from integration and cooperation. Sections Four and Five discuss the relevance of these issues for SSA by exploring the extent to which the countries of the region are likely to gain from formal integration and cooperation agreements. The final section offers some concluding observations.

2. Types of Regional Integration and Cooperation Agreements

Formal regional integration and cooperation arrangements vary widely in their structure, objectives, sector coverage, and membership. Regional integration agreements (RIAs) generally are aimed at removing discrimination between foreign and domestic goods, services, and factors of production (Balassa, 1976). There are four classic types of arrangements:

- *Free (or preferential) trade areas*, in which member countries reduce or eliminate trade barriers between each other, while maintaining barriers for non-member countries.
- *Customs unions*, in which member countries reduce or eliminate barriers to trade

between each other and adopt a common external tariff towards non-member countries.

- *Common markets*, in which members expand the basic customs union by reducing the barriers to the movement of factors of production (labor and capital).
- *Economic unions*, in which members aim to more fully harmonize national economic policies, including exchange rate and monetary policies (e.g., a monetary union).

By definition, RIAs provide preferential treatment for members and entail discrimination against non-members. Bhagwati and Krueger (1995), among others, have emphasized this point with respect to free trade areas, and have argued that they instead should be called *preferential* trade areas.

RIAs should be distinguished from *cooperation* agreements, which are aimed less directly at trade and factors of production, and instead commit members to work together towards a common end or purpose. Cooperation initiatives tend be more selective in their coverage and generally require less long-term commitment than integration. There are two broad types of cooperation initiatives:

- *Selected policy harmonization,* such as the adoption of common standards and consistent regulations, similar tax treatment of foreign investors, mutual defense and security, and coordinated voting in international organizations; and
- *Joint production of public goods*, including infrastructure (e.g., railroads, bridges, communications systems) or institutions (e.g., education, research).

RIAs, whatever their specific structure, also vary in their objectives. A critical distinction is whether an RIA is established to support an inward-oriented or outward-oriented trade strategy. Many RIAs in developing countries are inward-oriented; that is, they were established to enlarge the domestic market for import-substituting firms in what members usually refer to as a strategy of self-sufficiency. In these arrangements, protected domestic firms operate on a regional rather than national level. In some cases, these RIAs permit limited competition between firms within the region. In other cases, RIAs include complementation agreements that allocate authority over specific sectors to different member countries, which in turn provide their firms with monopoly power in the region and nearly complete protection from competition. By contrast, outward oriented RIAs are often established as a first step towards integration with the global economy. These RIAs are designed to expose firms to regional competition with a view towards eventually competing in global markets. This fundamental difference in orientation has an enormous impact on the potential economic gains from integration, as we shall see later in this paper.

With respect to sectoral coverage, RIAs commonly are limited to industry, and more specifically, to manufacturing. A minority encompass agriculture and services. In general, the more limited the agreement, the more likely it will exclude sectors in which some countries have a comparative advantage, which obviously reduces the potential gains from increased trade.

Finally, RIAs differ in terms of the relative income levels of their membership. Some RIAs, like the European Community, encompass only industrialized countries. Others, such

as the North American Free Trade Area (NAFTA) and the Asia-Pacific Economic Cooperation (APEC) forum, include both industrialized and developing countries. Still others include only developing countries. The experiences of one type of country grouping may not always be relevant to others. Langhammer and Hiemenz (1990) refer to the tendency of governments from developing countries to assume that the experience of industrialized country RIAs can easily be replicated in developing countries as "the fallacy of transposition." They argue that "many initial conditions conducive to integration in Europe have been overlooked by governments of developing countries: e.g., a high level of intra-regional trade before integration was started; similarities in income and industrialization levels allowing for intra-industry specialization; political congeniality in foreign affairs; and capability and willingness to provide compensation payments."

3. Expected Gains and Losses

The structure, objectives, sectoral coverage, and membership of RIAs can substantially influence their potential economic gains and losses. Both economic theory and a vast body of empirical evidence point towards the superiority of full multilateral (rather than regional) free trade as the best strategy for a government to maximize national welfare. RIAs are a second-best arrangement, and are at most a step towards the ideal of multilateral trade. One way to evaluate RIAs, then, would be to compare their outcomes against hypothetical outcomes from more open trade. However, in most models, the net benefits of RIAs are measured relative to the initial starting point, rather than against the standard of multilateral free trade. Using this standard, RIAs can be expected to lead to both static and dynamic gains (de Melo, et al, 1993;

de la Torre and Kelly, 1992; Langhammer and Hiemenz, 1990, Robson, 1987, Balassa, 1961).

Static Gains

Static gains result from a one-time reallocation of economic resources such as land, labor, capital, or natural resources. The static effects of RIAs depend primarily on the relative sizes of *trade creation* and *trade diversion*, a distinction first made in the classic analysis of customs unions by Viner (1950). Trade creation takes place when a member switches from consumption of goods produced domestically (at relatively high cost) to goods imported from a lower cost firm located in a partner country. For example, consider a domestic shoe company protected by a 50% tariff, sufficient to preclude shoe imports. Following the RIA, the tariff on shoes from member countries is eliminated. If a second member country can produce shoes at a lower cost, the first country will import shoes from the second, thereby creating trade.

Viner was the first to show that trade creation is welfare enhancing, providing gains on both the supply side and the demand side (Viner, 1950; see also de la Torre and Kelly, 1992; and Balassa, 1961). Supply side benefits accrue from the reallocation of resources away from protected industries and towards firms producing goods for the regional market (assuming full employment), once protection in other member countries is reduced. On the demand side, consumers benefit from being able to buy from the lowest-cost producer in the region. These effects can have important distributional consequences: previously protected producers lose, while consumers and low-cost producers gain.

Trade diversion takes place when a member switches from consumption of lower cost goods imported from outside the region to higher cost goods produced within the region

(which face lower tariffs after integration).[1] Trade diversion is generally welfare reducing (although strictly speaking this may not always be the case). The loss from trade diversion stems from the reduction in government revenue as imports from outside the region (with high tariffs) are replaced by imports from within the region (with lower tariffs). Although there is an offsetting gain because consumers face lower prices (with an increase in consumer surplus), a portion of the price they pay effectively subsidizes producers in other member countries, rather than accruing to the government for reallocation within their own country. This cross-border subsidy represents a decrease in aggregate economic welfare.

There are at least two theoretically possible ways in which trade diversion will not necessarily be welfare reducing. First, it is possible that the cross border subsidy can be fully compensated by the increase in consumer surplus (resulting from lower consumer prices), in which case trade diversion is not welfare reducing. Second, if member countries jointly constitute a large share of world trade in specific commodities, RIAs may be able to influence world prices (Robson, 1987). Members could conceivably act as a cartel and lower the price of imports from the world or raise the price of exports to the world. This terms of trade effect could be enhanced by the possibility of member countries jointly imposing an optimal tariff on either exports from or imports to the region. Both of these outcomes, however, are highly unlikely.

Members can also gain from the reallocation of factors of production across borders, if

[1] RIAs in which tariffs for non-members are *raised* can lead to trade *suppression*, in which imports from non-members are replaced by higher-cost regional production. This strategy, however, is against WTO rules and so is rare.

barriers to movements of capital and labor are removed by the agreement. An expansion from country to regional markets for factors of production is assumed to lead to more efficient use of resources. However, even in the complete absence of legal or administrative barriers, factors of production may still face natural obstacles to mobility. These may include, inter alia, transportation and moving costs, incomplete information, greater risks, and psychological and sociological costs of displacement.

Dynamic Gains

Dynamic gains from RIAs stem from the impacts on productive capacity and potential output, and the resulting impact on income growth. RIAs will expose firms to greater competition in regional markets, which should bring about greater efficiencies in production and marketing, and possible gains from industry restructuring. Perhaps most importantly, a large competitive market will induce firms to produce more specialized products, facilitating the expansion of firms serving niche markets. This benefit was particularly important for the EU. However, RIAs can also result in *less* competition, either because of cartel-like cooperation between firms in the region, or because in some RIAs, members allocate control of different sectors to different countries.

Additionally, if there are economies of scale in specific production processes, a larger market may enable firms to lower unit production costs (de la Torre and Kelly, 1992; Langhammer and Hiemenz, 1990, Robson, 1987; Balassa, 1961). Similarly, region-wide transportation and communications networks are likely to be cheaper on a per unit basis; larger markets may also be conducive to spillover effects such as transfers of knowledge from producers to users. Mutual gains can be realized from the joint production of public goods of

common interest. For example, member countries can cooperate in the construction of connecting road or rail networks, or from joint management of natural resources (such as ocean or river fisheries).

Several other dynamic gains may result from RIAs, including the sparking of greater investment (from both inside and outside the region) as the size of the market increases and internal trade barriers fall, improvements in technology from imports of capital goods, and the importation of best practices and new technologies.

The dynamic gains could be especially large if the RIA is designed as an intermediate step towards global integration, rather than as an end in itself. In this view, which is essentially an infant industry argument, firms can progress from being domestically competitive to region-ally competitive to globally competitive. The assumption in this "training ground" argument is that extending protection to a regional basis will have beneficial impacts on quality control, marketing techniques, and management capabilities that will enhance the capacity of firms to eventually compete on global markets (Langhammer and Hiemenz, 1990). Krugman (1984) has referred to this strategy as "import protection as export promotion." While this argument has some theoretical merit, it assumes that member country governments can distinguish "infant" industries from "sunset" industries, or more generally, that members are able to determine which sectors have the potential to eventually compete in world markets. It also assumes that member governments actually will be willing to eventually expose firms to global competition.

Thus, the most important dynamic issue is whether or not an RIA is likely to lead to even greater integration with the world economy, a step which would increase joint welfare

beyond the limits of an RIA (Lawrence, 1995; Bhagwati and Panagariya, 1995; Bhagwati, 1993). In other words, what will be the impact of a formal regional integration agreement on the incentives for decision makers to pursue more extensive multilateral integration? Theoretical work on this issue is in its infancy, and economists and political scientists are divided on the likely outcomes. RIAs could impede further integration, for several reasons. First, member governments might believe the regional market in an RIA is large enough to meet their objectives. Second, the principal motivating factor behind forming the RIA may be for politically influential firms to take advantage of opportunities created by trade diversion, or to extend their protected market to a regional basis. In these circumstances, there may be few political incentives for further global integration (Grossman and Helpman, 1995; Krishna, 1995). Third, because of the smaller number of members in an RIA (relative to full multilateral trade), political opposition can focus more easily on a prospective new member, threatening to derail the process of expansion of the agreement. For example, groups opposing the NAFTA agreement in the United States were able to raise fears at home by focusing attention on policy issues specific to Mexico, a strategy that might be less successful in a more diffuse multilateral agreement (such as the GATT).

Other analysts argue that even if RIAs are inferior to full liberalization, they should be viewed as a positive step in that direction. In this view, regional integration is seen as establishing a long-term dynamic towards more complete global integration, and thus is likely to be beneficial in the long run (Summers, 1991). RIAs are seen as easier to negotiate than full multilateral agreements because they involve fewer members, so that some level of integration can take place more quickly. Furthermore, the establishment of an RIA can be

costly for nonmembers (if they are hurt by trade diversion), creating an incentive for them to try to join. In this "domino" effect, the more non-members that eventually join, the closer the RIA becomes to approximating world trade (Baldwin, 1993).

Non Economic Benefits

Langhammer and Hiemenz (1990) identified three non-economic benefits from RIAs. First, RIAs can improve the collective bargaining power of member countries vis-a-vis against non-member countries. Acting in concert, member countries may be better able to demand access to markets (or to withstand demands from non-members for access to the region) or to increase their voting power in international fora. Second, RIAs may facilitate member's commitment to political objectives of common interest. RIAs are likely to increase regional dialogue and discussion, which may help diffuse potential regional disputes, and engender mutual political support. Such agreements can expand to security and defense issues. Effectively, RIAs can provide a means towards a modicum of political integration without governments sacrificing the independence of the nation-state.[2]

Third, membership in an RIA entails some loss of sovereignty, which can be either positive or negative. Governments, especially those in newly independent countries, are

[2] However, regional defense and security commitments created a dilemma for The Gambia in 1989 when its membership in two separate regional groupings called for conflicting courses of action following a series of border skirmishes between neighboring Senegal and Mauritania. As a member of the Senegambia Confederation with Senegal, The Gambia was committed to a mutual defense treaty with its neighbor. Hence, Senegal demanded that The Gambia join in its defense. But The Gambia was the chairman of ECOWAS at the time, in which capacity it was committed to mediate disputes between members, including the dispute between Senegal and Mauritania. The Gambia chose the latter course, which was a major factor leading to the demise of the Senegambia Confederation later that year.

loathe to give up any of their new-found power. However, regional agreements can serve as a scapegoat for unpopular policy decisions. By committing to a schedule of tariff reductions, for example, governments effectively give up some of their policy options to the supranational organization, but can then deflect criticism for any negative outcomes by citing the importance of the larger goal of regional cooperation.

Net Gainers or Losers: Some Stylized Characteristics

Integration theory suggests some general guidelines about the relationship between the characteristics of regional agreements and the likelihood of net gains for member countries. These guidelines are at best rules of thumb: there are circumstances under which each of them may prove to be incorrect. Nevertheless, several broad generalizations emerge from the literature.

- The larger the share of intra-regional trade in total trade for the member countries *before* the RIA, the more likely that trade creation will dominate trade diversion (Langhammer, 1992). That is, the greater the existing trade links, the less likely trade will be diverted from low cost firms outside the region to higher cost firms within the region.[3] This observation suggests that neighboring countries may be logical candidates for RIAs. However, Bhagwati (1992) has pointed out that it is not necessarily the case that neighboring countries form natural trading partners. Other

[3] Bhagwati and Panagariya (1996) show that even this widely-held result may not always hold, depending on the redistributional impacts of changes in tariffs.

factors, such as geo-strategic alliances, colonial links, and complementarity of production can play a far more important role in determining trade flows. The possibility that Chile may become the next member of NAFTA is a case in point.

- The higher the initial tariffs between partner countries, the greater scope for trade creation. Reducing high tariffs between members is likely to lead to the replacement of goods previously produced by highly protected domestic firms with output from more efficient firms elsewhere in the region. In this situation, the greater the difference in cost structures of firms in different member countries, the greater the scope for increased trade and production efficiency following integration.
- The higher the tariffs facing non-members after the formation of the RIA, the greater the potential for detrimental trade diversion, and the less beneficial the RIA.
- The smaller the elasticity of substitution between member and non-member goods, the smaller the likelihood of trade diversion. That is, if goods produced by member countries are not close substitutes for goods previously imported from non-members, trade diversion will be smaller (Bhagwati, 1992).
- The greater the membership, economic size, and share in world trade of the RIA, the greater the scope for trade creation, and the smaller the tendency for trade diversion (Langhammer, 1992, Robson, 1987). In other words, the larger the membership, the more likely that the lowest cost producer of any particular good will be included in the arrangement, and the greater the potential for specialization. The ultimate extension of this argument, of course, is complete multilateral integration.

- Similarly, the broader the sectoral coverage of the RIA, the greater the possibility that all members will enjoy comparative advantage in some products. In more limited arrangements (e.g., to certain manufacturing sectors) it is possible that countries with comparative advantage in excluded sectors (e.g., agriculture) will gain little, and may in fact lose from the RIA.
- The higher the transportation and communication costs among member countries, the lower the potential gains from trade creation (Langhammer and Hiemenz, 1990; Balassa, 1961).
- Because RIAs require a great deal of negotiation and compromise, the greater the history of political harmony and support between member countries, the larger the scope for integration and other cooperation. Countries with a history of animosity are unlikely to be good candidates for RIAs.
- Theory provides conflicting hypotheses about the impact of differences in member country's incomes. On the one hand, income levels tend to be correlated with factor endowments, so the larger the difference in income levels, generally speaking the larger the difference in factor endowments, and the larger the potential gains from trade (driven by comparative advantage). In other words, dissimilar countries may make better partners because their economies are potentially complementary, rather then competitive (de Melo and Panagariya, 1992). On the other hand, countries with similar income levels and consumer demand patterns may be better able to reap gains from intra-industry specialization and product differentiation. This latter issue may be most relevant for RIAs involving industrialized countries because the demand for more

specialized products tends to increase with income (de Melo and Panagariya, 1992). More impor-tantly for developing countries, disparities in income are likely to be accompanied by differences in transportation systems, communication networks, and legal systems that may make the potential for increased trade more difficult to realize. Partly because of these differences, the economic gains from integration are likely to accrue more rapidly to the richer country (McCarthy, 1994; Hazelwood, 1979). Firms will tend to prefer to locate their major operations in the wealthier country, since it is likely to have better infrastructure, deeper financial markets, and larger product markets. This, of course, is precisely what happened with the East African Community, where most firms gravitated to Kenya.

4. Regional Integration Experiences and their Relevance for Sub-Saharan Africa

The balance between the potential gains and losses from RIAs is ultimately an empirical question. The vast experience with RIAs around the world allows us to go beyond these stylized guidelines to explore the characteristics of the country groupings and the arrangements where RIAs have been successful or unsuccessful in the past, and the relevance of these experiences for RIAs in SSA.

Basic Outcomes

In general, RIAs involving developing countries have failed to promote trade or industrialization, or to result in significant economic gains for member countries. Empirical evidence suggests that RIAs have had little, if any, impact on intra-regional trade.

Langhammer and Heimenz (1990), in their comprehensive survey, could find no case in which an RIA made up solely of developing countries had made a significant contribution to trade expansion or economic development. Most other analysts have come to the same conclusion. Of course, there are some RIAs with developing country members in which trade has grown rapidly (e.g., APEC, NAFTA), but in each case trade expansion *preceded* the RIA. Within SSA, only the South African Customs Union (SACU), with South Africa as the key member, has achieved any significant integration of goods markets (Foroutan, 1993). The Communauté Economique de l'Afrique de l'Ouest (CEAO) appeared to have a modest positive impact on intra-regional trade immediately following its formation, but trade growth stagnated thereafter. Other RIAs within SSA had no discernable impact (Foroutan and Pritchett, 1993).

The record has been somewhat better with agreements involving industrialized countries (such as the EC), where RIAs generally are considered to have stimulated increased trade and economic growth. There are several reasons for this different outcome (de la Torre and Kelly, 1992). First, trade creation appears to have been relatively larger in industrial country RIAs, at least partially because member countries were more integrated before the agreement. Second, industrialized countries have exploited gains from intra-industry specialization and product differentiation, which are more important in larger, high income markets. Expansion in intra-industry trade has been a clear outcome in the EC. But in poorer countries where the market for differentiated products is more limited, intra-industry trade has not increased. Third, RIAs in high-income countries have a much better record of actually implementing agreed policy changes, often ahead of schedule.

More fundamentally, the failure of many RIAs in developing countries can be traced directly to their basic strategy of attempting to foster industrialization based on import substitution. Inward-oriented RIAs have consistently failed to support the expansion of either trade or industry (Langhammer and Hiemenz, 1990; de la Torre and Kelly, 1992; de Melo and Panagariya, 1993). Indeed, trade diversion was an implicit objective of many RIAs, with members aiming at expanding intra-regional trade as a substitute for world trade, rather than to foster competition (Langhammer, 1992). Almost all such RIAs have broken down as a result of internal conflicts over the distribution of the costs and benefits of the agreement. Member countries in inward-oriented RIAs have tended to develop high and widely dispersed levels of effective protection. In many cases, the high levels of protection led to excess capacity in the protected sectors. To avoid this problem, many developing country RIAs either allowed member countries to impose barriers to entry, or explicitly included complementation agreements that allocated specific industries to different member countries. These clauses often led to conflicts, as there were no clearly articulated criteria to guide such allocation decisions (de la Torre and Kelly, 1992). These issues, plus the limited size of the regional market, ultimately led many governments to view (probably correctly) inward-oriented RIAs as at best zero-sum games (Hazelwood, 1979). As a result, member countries attempted to exempt more sectors, further limiting the potential gains from these agreements. Finally, inward oriented RIAs have tended to foster the creation of vested interests, rather than competition. Protected industries have been more likely to fight integration with the world economy, and are less likely to be able to eventually survive such competition. In practice, then, the "training ground" rationale for RIAs has not applied, as they have not helped prepare

firms to compete on global markets.

By contrast, RIAs in industrialized countries have tended to be outward oriented, with members generally aiming to ultimately expand the agreement and become more integrated in global markets. Outward oriented RIAs have been far more successful than inward oriented arrangements, especially when member countries adopted a basically open stance before the agreement (e.g., APEC, NAFTA, EC). *In other words, formal RIAs have worked best when they have built on previous steps towards openness and integration. They have not worked well when they were a first step towards openness, and have had especially poor outcomes when they acted as a substitute for more fundamental trade liberalization.* For example, a common conclusion about the true benefit of NAFTA for Mexico is that it locked in earlier reforms and set the stage for future liberalization, rather than introducing new policy changes as part of the agreement (Lawrence, 1995; de Melo and Panagariya, 1992).[4]

In general, the countries of SSA continue to be inward oriented and have only modest trade linkages. For example, the share of intra-group exports in total exports was less than 6% for all of the major RIAs in SSA in 1990, with the exception of the CEAO, where it reached 10.5%. The comparable shares for ASEAN, NAFTA, and the EC were 19%, 42% and 61% (Foroutan, 1993). Although the magnitude of *actual* trade flows in SSA is almost certainly larger than the official figures indicate because of unrecorded flows (Husain, 1993; Barad, 1990), the basic conclusion remains that most existing trade takes place with countries outside the region. Foroutan and Pritchett (1993) used a gravity model to show that the

[4] Bhagwati and Krueger (1995) argue that Mexico could have locked in its earlier reforms through the GATT, and that NAFTA was unnecessary to achieve this goal.

relatively small share of intra-regional trade in SSA is about what should be expected, given relative income levels and the geographical characteristics of the countries in the region. Because of these small existing linkages, the potential for trade diversion is high, and the potential gains from expanding existing trade are relatively small.

One reason for these weak intra-regional trade ties is the strategy of inward-oriented import substitution that has guided so many African governments. As long as this strategy is in place, the possibility of exploiting the gains from trade will be limited, particularly on a regional basis. Foroutan and Pritchett (1993) concluded that "(t)he fundamental explanation for the failure of regional integration in SSA to increase intra-regional trade share is to be linked to the inability and/or unwillingness of these countries to carry out the preferential trade liberalization measures that represent the prerequisite for trade creation among integrating markets."

One difficulty faced by African governments in reducing import tariffs and following a more outward-oriented strategy is that tariffs account for a large share of government revenue, much larger than in other developing countries. As a result, tariff reductions have an immediate and relatively large impact on the budget and related macroeconomic balances. It follows that to the extent a more outward oriented basic strategy is necessary to facilitate greater regional trade, significant expenditure and tax reform is a prerequisite for (or must accompany) trade reform.

A second reason for the lack of trade integration within the region is that, in many cases, the structure of output across countries is not complementary. On the export side, diamonds from South Africa, copper from Zambia, and coffee from Kenya will not find a

large market within Africa. On the import side, demand for capital goods and certain intermediate inputs (such as steel) cannot be met on an efficient basis within the region. There is of course some scope for complementary trade (especially in diversified agricultural products), but it is more limited that in other RIAs.

Intra-regional trade is also inhibited by weak infrastructural linkages (Stern and Gugerty, 1996). Poor port facilities, weak communications links, and underdeveloped road networks all limit the potential for expanding regional trade. Moreover, in many cases, rail, road, and port facilities were designed to strengthen trade ties with the former colonial power, not for trade with neighboring countries. Similarly, many of the strongest commercial ties are between domestic firms and those in former colonial countries, especially where African firms have preferential access. These existing arrangements reduce the scope for significant trade expansion in the region, especially in the immediate future (Langhammer and Hiemenz, 1990).

The experiences of RIAs around the world also suggests that macroeconomic stability in each member country is a prerequisite for long-term success. Instability tends to lead members to impose controls on imports or capital flows, which can ultimately undermine an RIA. This has been especially true for inward-oriented RIAs, in which members have less economic flexibility and are less able to adjust to external shocks. These concerns are magnified when member countries depend heavily on a small number of primary commodities for their export earnings, and thus are more prone to large terms of trade shocks. Moreover, the periodic imposition of controls is more likely when members are developing countries, because each member is likely to impose restrictions on other developing countries (including other members) rather than on industrialized countries from which they import technology and

capital equipment (Langhammer, 1992). This problem arose in the EAC in the mid-1970s after the oil crisis (Hazelwood, 1979).

African countries' history of both macroeconomic and political instability suggest that they would be relatively poor candidates for membership in RIAs. In the uncertain political and economic environment that continues to prevail throughout much of the continent, it is highly unlikely that many of the theoretical dynamic gains from RIAs (e.g., increased investment, product and process innovation) can be achieved. These concerns suggest that taking preliminary steps towards export diversification and achieving and maintaining macroeconomic stability would be prerequisites to successful trade integration in the region.

Similarly, where RIA agreements (and member governments) have lacked credibility, investment has not occurred. Investors have shied away from projects that have relied on the regional market and the existence of the integration agreement.

The experience of RIAs has also shown that where the member countries have very dissimilar underlying economic and political strategies, there is a much smaller likelihood of successful integration. Integration between a state-centered economy and a more market-oriented economy can be problematic, as was shown with Tanzania and Kenya in the East African Community. Similarly, countries with a history of political support, cooperation, and mutual global interests make better candidates for RIAs, whereas countries with antagonistic histories find it more difficult to negotiate and compromise. It is difficult to generalize about these issues within the context of SSA, as each pair of countries has a unique historical relationship. But given the history of regional and domestic conflicts, and the differences in and uncertainty about basic economic strategies, negotiations on a multilateral trade agreement

can be expected to be slow.

Implementation Issues

In addition to these structural characteristics, RIAs in Africa have suffered from weaknesses in design and implementation. Most agreements in SSA have limited their sectoral coverage to industry, which has not allowed member countries to exploit their comparative advantage in other sectors, especially agriculture (Langhammer, 1992). For example, Barry (1994) and Salinger and Stryker (1993), among others, found that removing the barriers to trade in cereals, non-cereals, and livestock could increase intra-regional trade in these products.

Moreover, policy instruments in most RIAs in SSA have been limited to tariff reductions (Langhammer, 1992). Progress on removing other barriers, such as quantitative restrictions, impediments to factor flows (with the exception of the monetary unions), barriers to entry, and other administrative and legal obstacles, has been limited. These impediments have reduced the scope for trade expansion, even in cases where tariffs have been reduced.

Implementation of RIAs, both in SSA and elsewhere, has been particularly slow where tariff reductions have been negotiated product-by-product rather than across-the-board. Similarly, less progress has been made when RIAs have relied on positive lists of sectors to be included, rather than negative lists of sectors to be excluded. Case-by-case negotiations and positive lists give members considerably more latitude to exclude sensitive products from liberalization (de la Torre and Kelly, 1992), limiting the scope for gains from integration.

A different set of problems in developing country RIAs has arisen from the distribution of benefits, especially when the benefits have been perceived to accrue more rapidly to richer

member countries. In principle, the richer country could compensate the poorer country through explicit financial transfers, differing schedules for tariff reductions, changes in the allocation of industrial location, or location of infrastructure to support the agreement (e.g., regional development banks, organizational secretariat). But in practice, the calculation of the appropriate size and distribution of the compensation payments has proven to be difficult, and has been the source of friction between members countries. Three types of problems have arisen. First, members tend to rely on simple, seemingly transparent measures of economic gains and losses (such as lost tariff revenues), but often the indicators are very misleading measures of true economic gains and losses. Second, members have not always followed through with agreed compensation payments. Third, even where cross-border compensation takes place, it generally is not distributed to the individuals and firms that lose from integration; more often it accrues to the government budget for more general distribution. The perceived imbalance in economic gains was the major reason for the demise of the East African Community (EAC) in 1977 (McCarthy, 1994: Foroutan 1993, Ravenhill, 1990; Robson, 1987; Hazelwood, 1979). The only example of successful compensation arrangements in SSA is SACU, where member countries have agreed to a split of tariff revenues collected by the South African Customs Administration. But even here the administration of the split is challenged regularly.

Finally, preferential trade agreements (as distinct from customs unions) suffer from the difficulty of establishing rules of origin. These rules, which are often fairly arbitrary in their design, add an additional administrative layer to RIAs, and are increasingly difficult to use in an era of globalization of design, production, and assembly (Bhagwati and Krueger, 1995).

5. Regional Cooperation

Developing country regional agreements aimed at cooperation have fared much better than those aimed at integration. Cooperation agreements can focus on any of a wide variety of issues, including infrastructure construction, research and development, environmental initiatives, food security, energy management, improved flows of information, and mutual defense and security. The strong consensus in the literature is that the countries of SSA would be far more likely to gain by enhancing regional coordination in these areas than by formal trade integration (Mytelka, 1994; McCarthy 1994; Foroutan, 1993; de Melo and Panagariya, 1992, Ravenhill, 1990; Mulaisho, 1990; Langhammer and Hiemenz, 1990; Robson, 1987).

The best example of successful coordination in SSA is by SADC (formerly SADCC). From its beginnings in 1980, SADC emphasized specific projects and programs, and downplayed the explicit goal of integration of regional markets (Foroutan, 1993; Mulaisho, 1990; Ravenhill, 1990). It purposely did not establish a highly centralized and expensive bureaucracy, and instead established a small secretariat, leaving most responsibility for various sectors with individual member states. It placed its priorities on enhancing infrastructure and communications linkages among member countries, with some success. For example, between 1980 and 1990, the percentage of transit traffic from the six landlocked member states moving through SADC ports increased from 20% to 60%, despite extensive military activity in the region (de la Torre and Kelly, 1992). The most successful transport project was the development of the Beira corridor between Zimbabwe and Mozambique, which substantially reduced Zimbabwe's dependence on South African ports (Foroutan, 1993). Progress was also

made in connecting national power grids, enhancing food security, and cooperative research on new crop strains.

A similar example from outside the region is the Association of Southeast Asian Nations (ASEAN), which also was not primarily aimed at trade integration. Rather, the main objective was to defuse conflict among member states and to forge a common voice on international matters of mutual concern. Trade integration took a back seat, both because some members (especially Indonesia and Thailand) initially had high tariffs, and because member states initially mistrusted each other's intentions. As both these factors changed over time, the early emphasis on dialogue and cooperation eventually evolved into more substantive discussions on trade.

One of the major advantages of cooperation initiatives is that they require much less long term commitment by member governments than formal integration arrangements. Their scope and size is flexible: they can be limited to one project or expanded to several initiatives; similarly, they can involve many countries (like SADC) or be limited to bilateral arrangements. As a result of this flexibility, cooperation initiatives are less threatening to the ruling elite than formal trade agreements in terms of encroaching on national sovereignty (Ravenhill, 1990). They also tend to be lower profile, and thus less risky for policymakers. Cooperation initiatives also usually have smaller secretariats and bureaucratic hierarchies, and therefore are less demanding on scarce administrative and financial resources than more formal trade agreements. Finally, and perhaps most importantly, cooperation can help pave the way for increased trade within the region (and beyond) by improving communication and transportation links and by establishing dialogue between member countries, both of which are

prerequisites for successful integration.

6. Conclusions

Formal regional trade agreements are unlikely to be beneficial to the countries of SSA at the present time. In general, African countries show few of the characteristics that are normally associated with successful RIAs. This conclusion does not imply that the potential gains from increased trade within SSA are limited; indeed, several studies show just the opposite. Rather, formal integration agreements are not the most appropriate first step to realize these gains. A trade-focussed RIA is unlikely to succeed in the absence of enhanced economic and political stability, stronger infrastructure and communications linkages, a reduction in the administrative and bureaucratic constraints to trade, and, most importantly, a more fundamental shift to an outward-oriented trade policy.

In the absence of such a shift in policy, formal integration agreements are unlikely to move member countries towards greater integration with the global economy, and thus are unlikely to be beneficial to member countries. *Instead, they could actually be detrimental to the countries involved, either because they might encourage import substitution on a regional basis or simply because they absorb scarce administrative and financial resources.* de Melo and Panagariya (1992) concluded that "(d)espite a greater acceptance of outward-oriented policies today, the temptation to use regionalism as a vehicle for import-substituting industrialization is high. African markets remain small, and the efforts at regional integration will only divert attention from efforts to integrate SSA into the world economy." Given the limited supply of skilled administrators and policymakers in many of the countries of SSA,

such a diversion of effort has large opportunity costs. Moreover, to the extent that RIAs in SSA are unsuccessful, they could erode, rather than build the credibility of member governments. Ravenhill (1990) concludes his analysis by asking the following rhetorical question: "Why persist with schemes that are ignored, that increase frustration, and that, even in the unlikely event that they were to be implemented, offer little prospect of significant gains in the short run?"

A more promising approach is to couple individual country efforts to open their economies to greater trade with efforts to promote regional cooperation. Cooperation agreements are easier to administer and are less threatening to national sovereignty than formal trade agreements. In the case of joint infrastructure projects, they are also more likely to result in short-term, visible benefits. Most importantly, regional cooperation may help lay the groundwork for greater trade and factor market integration, both within SSA and between the region and the rest of the world.

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EQUITY AND GROWTH THROUGH ECONOMIC RESEARCH

Trade Regimes/Growth and Equity

SAHELIAN WEST AFRICA: IMPACT OF STRUCTURAL ADJUSTMENT PROGRAMS ON AGRICULTURAL COMPETITIVENESS AND REGIONAL TRADE

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I. Introduction

Intra-regional trade in West Africa has regained attention after the devaluation of the CFA franc which took place in January 1996. This renewed interest is motivated by the potential trade of goods based on competitiveness which, for a long time, have been inhibited by an increasing overvaluation of the CFA franc. In fact, the overvaluation has generated a distorted flow of goods, thereby artificially stimulating imports into the member countries of the CFA zone and discouraging exports towards other countries. The affluence and the convergence of agricultural and industrial products towards the CFA zone motivated its members to erect tariff and non-tariff barriers designed to limit imports from non African countries as well as from other West African countries, notwithstanding the existence of several regional organizations aimed at promoting regional trade.

At a time when large economic blocs are being formed in other regions of the world to foster trade among member countries, West African regional organizations are characterized by the failure to achieve their main objectives, as shown by trade statistics. The World Bank (1989) shows that intra-regional trade represents about 6% of total official trade of those economies. Even if informal intra-regional trade is taken into account, regional trade appears to still account for a small share of West African total trade.

Some analysts attribute the limited volume of trade among West African countries to similarities in agricultural production and to the non-complementarity of the different economies. According to these analysts, the lack of complementarity stems from the concentration of production in the same period, resulting in substantial increases in supply right after harvest, while there is general scarcity of food several months after harvest. This line of thought suggests that the comparative advantage of the coastal countries is similar to those of Sahelian countries, notwithstanding different factors endowments. This argument has been rejected by another line of thought which has generated several studies (World Bank, 1991; Salinger and Stryker, 1991; Badiane, 1992; Barry, 1994). The results of these studies show that the limited volume of trade is caused by the macro-economic and sectoral policies. Key among these are the industrial development strategies that could be viable only in an inward-oriented environment. These policies are generally incompatible with the desire of promoting trade and regional integration and they constitute inhibiting factors for trade in West Africa.

Another argument which has been recently proposed to explain the low level of West African trade, especially for agricultural trade, has pointed to economic and sectoral policies resulting from the implementation of Structural Adjustment Programs. The rationale behind this argument is that these programs, which have been negotiated individually by the different African countries, pursue only a reduction of national budget deficits, without taking into consideration their impact on the productivity of the agricultural sector. Furthermore, the removal of input subsidies has resulted in a drastic reduction in the demand for chemical fertilizers, to the point where agricultural productivity has substantially declined, thus negatively affecting both the competitiveness of West African agricultural sector and agricultural trade flows. This would explain why trade flows among West African countries may have declined since the implementation of the Structural Adjustment Programs.

The object of the present study is to contribute to the debate on regional trade of agricultural products by starting with the underlying hypothesis of the second line of thoughts. To this end, the study will focus on a group of countries that includes Burkina Faso, Côte d'Ivoire, Ghana, Guinea-Conakry, Mali, and Senegal to attempt to provide an answer to the following questions:

1. To what extent have the Structural Adjustment Programs been implemented as expected?
2. What have been the effects of these programs on production efficiency, costs of production, competitiveness of West African agricultural products, and potential regional flows?
3. If the impact of these programs on the above mentioned indicators has been negative, which macro-economic and sectoral measures could be recommended to improve and promote both agricultural competitiveness and agricultural trade, thus enhance food-security in West Africa?

This study will, on the onset, describe the policy environment before the implementation of policies linked to structural adjustment. Moreover, it will focus on both the factors which induced the adjustment programs and the implementation of certain of their elements, keeping in mind the difference between the elements that have been proposed and those that have actually been implemented. Based on the knowledge of the measures that have been actually applied, we will then provide an analysis of their impact on the comparative advantage of these countries and on the competitiveness of agricultural products through their effects on factors and good markets. Then, we will assess the constraints to regional trade.

II. Economic Growth and Intra-Regional Trade From Independence to Structural Adjustment Programs

2.1 Macroeconomic Environment

The record of Sub-Saharan Africa's growth has been one of the least successful among developing countries. Per capita income between 1965 and 1985 increased at a rate of 0.9% per year, as a result of stagnating or negative growth rates experienced by the region in the second half of the 1970s. Exports of manufactured goods from Sub-Saharan Africa declined between 1970 and 1986, while other developing regions saw a significant rise in theirs. Many Sub-Saharan African countries depended on only a few commodities for exports, while growth in agricultural production rose to only 2% between 1965 and 1980 and fell to an even lower 0.6% for the first half of the 1980s (World Bank, 1993). The negative performance of these countries was a product of a number of domestic and external factors.

At the domestic level, the main cause for the low levels of growth has been poor macroeconomic policies. Following the end of the colonization period, many governments opted for protectionist measures which reduced significantly the competitiveness of Sub-Saharan African goods in external markets. Most countries followed import-substitution strategies characterized by high barriers to trade, thus raising the cost of inputs and affecting negatively economic growth. Overvalued exchange rates were also a persistent phenomenon throughout the region, as shown by the World Bank. It estimates that, before the adjustment

period, the average parallel market premium was about 300%. Fiscal indicators for the period suggest the presence of a heavy burden on the economy, resulting from massive government spending. In the early 1980s the average ratio of government consumption to GDP reached 17% in sub-Saharan Africa, compared to 10-12% for other developing regions. Only indicators for human development (infant mortality, life expectancy at birth, education, etc.) and for financial development showed some improvement, although their level remained still low compared to other low an middle-income economies.

This situation generated a bias against the agricultural sector, upon which most of Africa's income depends. Agriculture had been more taxed in Sub-Saharan Africa than in other regions. Official producers' price for agricultural exports remained low relative to other developing countries as producers were forced to sell to state marketing organizations. But the agricultural sector was not the only one to be negatively affected by these policies. The private sector experienced a strong bias as well. Inadequate infrastructure, rent-seeking behavior, and complex bureaucracies resulted in increased transaction and absolute costs for the private business, while unstable macroeconomic environments, combined with the deterioration of governance, limited foreign investment.

At the international level, most sub-Saharan African countries experienced a decline in their terms of trade (with the exclusion of the oil exporting ones), resulting in an income loss of about 5.4% of GDP in the periods 1970-73 and 1981-86. Such a decline, though, cannot account for a great part of the stagnation and decline in economic growth. The World Bank (1993) calculated that the decline in the terms of trade explains only 10% of the reduction in growth rates between 1970s and the mid-80s. Moreover, most low-income countries suffered the same deterioration in the terms of trade, but still managed to boost economic growth. External transfers partly offset the losses resulting from declining terms of trade. The share of net transfers to GDP for sub-Saharan African countries increased from 3.7% in the early 1970s to about 7% by the early 1980s, the highest percentage among all low and middle-income countries.

Like most sub-Saharan African countries, West African markets have suffered from inefficiencies in domestic production and marketing systems, stemming from inappropriate government policies that inhibited competition and the exploitation of economies of scale. Since the mid-80s, there has been a significant effort towards the removal of such impediments. Under the aegis of the international financial institutions, West African countries have introduced policy reforms aimed at both building a sound macroeconomic environment that would stimulate domestic and foreign investment, and enhancing productivity in the region, while reducing the role of the state in production and stimulating private activity. Moreover, the reform programs were designed to reduce the bias against the agricultural sector as a mean to reduce poverty and increase economic growth.

Structural Adjustment Programs have consisted, and still consist of a mix of policy reforms that target different sectors of the economy and that has an overall impact on growth. The "reform package" usually entails lowering trade barriers, such as tariffs and/or quotas that were raised at independence to increase state revenues, decrease dependency on a few products and external markets, and promote food security. The removal of trade barriers also includes the dissolution of state controls on exports and imports (e.g. the dismantling of marketing boards). Another important step toward market liberalization has been the

realignment of the currencies vis-à-vis external markets, through either devaluation of pegged currencies (such as the CFA) or movements towards a more flexible exchange rate (such as in the case of the Ghanaian Cedi or the Guinean Franc). Trade liberalization and currency realignment were accompanied by further adjustment measures consisting of reducing the size and costs of the public sector, control on the rate of inflation, and increasing efficiency in the productive sector through fiscal incentives.

2.2 Intra-Regional Exports

One of the expected outcomes of policy reform is an expansion of the export sector, which is supposed to have a positive impact on the rate of economic growth (Lopez, 1990, and Nishimuzu and Page, 1984). Both the traditional and non-traditional export sectors are to benefit from the reforms, although the patterns of trade are quite dissimilar for the two. Traditional exports, in which West Africa has had a strong comparative advantage, have recorded some decline because of demand and supply limitations, although they still represent the highest percentage of exports from West Africa (only about 11.3% of African food exports in 1990 went to other African countries). The expansion of non-traditional exports has been the focus of a great part of the trade literature, which recognizes its key role to economic growth in most African countries for the next two or three decades. At the same time, expansion of non-traditional exports entails a significant and often costly adjustment of the economy in order to produce goods that can be competitive in the external markets.

Traditional and non-traditional exports play a significant role in intra-regional trade. Salinger and Stryker (1992), analyzing the competitiveness of traditional agricultural production in Senegal, Guinea, Mali and the Côte d'Ivoire, found that the potential for intra-regional trade of agricultural exports in West Africa is significant, provided that major policy reforms aimed at the removal of distortions in the economy are implemented. A study carried out in 1994 by a multidisciplinary team of the Club du Sahel also found that increased rate of urbanization and population growth in West Africa will increase demand in the region (WALTPS, 1994). The importance of intra-regional trade is based on two main factors. The first one rests on the general gains in terms of efficiency that trade creates. The second one is more specific to the characteristics of the region. In many instances, West African countries have a comparative advantage in the production of goods that are not fully consumable in domestically markets. The region is thus an efficient market upon which to reallocate excess supply.

The encouragement of intra-regional trade has generally been associated with agreements stemming from regional institutions, albeit some researchers warn against the euphoric impetus that regional integration has registered in the past decade as a mean to enhance trade. Radelet (1996) suggests that regional integration has done little to promote intra-regional trade in developing economies, especially in Africa. His study traces the causes of such a negative performance in the inward-orientation that has characterized regional integration agreements, as well as the problems related to the distribution of benefits among member countries, especially when the income gap of such countries is quite wide (such as the case of Nigeria in ECOWAS).

2.3 Regional Organizations

Desire for regional integration started in the early 60s, although most regional organizations did not come to light until the mid-70s. In 1975 ECOWAS (Economic Community of West African States) was formed under Nigeria's leadership with the purpose of defining a free trade area and a Customs Union. Its centerpiece was the Fund for Cooperation, Compensation, and Development, which would guarantee an equal redistribution of profits derived from trade liberalization. Radelet (1996) argues that the organization has not been able to establish a free trade area nor an efficient customs union, due mainly to structural differences among the participating countries.

CEAO (West African Economic Community) was created in 1973 and included until its dissolution in 1994, the members of the West African Monetary Union (CFA zone). Its main vehicle for regional integration was a preferential duty regime among its members seeking to lower import taxes on goods produced in the Community. Although Robson (1983) argues that CEAO has been among the best performer among regional organizations in terms of increasing regional trade, it still has not been very successful in promoting substantial trade among its members. It has rather generated a protective structure against the outside for its weakest participants. As a result, it created productive inefficiencies in its member countries. CEAO has been replaced in 1994 by UEMOA (Union Economique et Monétaire Ouest-Africaine) which is in the process of reflecting on a common external tariff structure.

Finally, we can cite the Mano River Union (MRU) which has existed since 1973. It includes Liberia, Sierra Leon, and Guinea. But, intra-regional trade among its members has stagnated, owing to the existence of high tariffs and not-tariff barriers and lack of complementarity across production structures.

III. Agricultural Production before and during Structural Adjustment Programs (SAPs)

Agricultural production in sub-Saharan Africa has performed poorly. During the period 1965-1980, agricultural value-added for sub-Saharan African countries grew on average at a rate of 1.8%, while population grew in the same period at 2.7% per year. While the growth of population increased at a rate more than 3% per year during the following decade, agricultural growth rate decreased to 1.4% per year. The trend is even more disappointing if we consider that between 1980 and 1990 the growth rate of the agricultural production was 4.8% per year for East Asian and Pacific countries, 4.3% for middle-eastern countries and North Africa, 3% in South Asia, and finally 1.9% in South America and the Caribbean. At the same time agricultural exports for sub-Saharan African countries declined while they increased in other developing regions of the world (Cleaver, 1993).

At independence, most West African countries were experiencing a generally positive trend in agricultural production. Real agricultural GDP in Côte d'Ivoire grew at a annual rate of 4.5% during the 1960s and at an annual rate of 3.3% during the 1970s. In Ghana production of the main agricultural goods showed a steady increase until the mid- to late 1970s. In the late 1970s, agricultural production registered a significant decline, owing to inward-looking policies.

Food production in Ghana rose steadily until the 1970s and then fell across all products, due mainly to a severe drought and more importantly to a lack of producer incentives and a deteriorating transport system. Producers were heavily taxed in order to support increasing budget deficits. There was a general shortage of spare parts and fuel and the road network deteriorated. A final strike was given by the fall in the international prices of cocoa, Ghana's main export, which decreased substantially the capacity of the government to finance already high expenditures.

In Côte d'Ivoire the performance of the agricultural sector started deteriorating in the early 1980s, (between 1980 and 1986 the rate of growth was -1.2%) due to inefficient macroeconomic and sectoral policies, accompanied by a sharp drop in the international price of its main exports crops. Among the main factors behind the inefficiencies of the sector were the powerful rents created by the heavy taxation of primary producers necessary to sustain a large bureaucracy. Export and input taxes, in combination with an overvalued real exchange rate, diminished the income of the rural sector and hindered adoption of technologies to enhance production. Budget constraints, moreover, reduced also the volume of public investment in the agricultural sector. In addition, prices of cocoa and coffee declined in the 1980s, while the dollar depreciated. Towards the end of 1980s the price of the export commodities fell further, resulting in increased taxation and reduction of government expenditures in order to limit public deficit.

Throughout its socialist years Mali experienced some political stability which allowed the state to implement long term industrial and agricultural policies. The aim of the government in those years was to stimulate industrialization and urbanization, while at the same time introducing modernization in agricultural production. Like most other countries in the region, producers and consumer prices were fixed by the state, which was also in charge of cereals marketing. Given these policies, the Malian franc became rapidly overvalued and inconvertible, reducing significantly the competitiveness of domestic products. Low producer prices and controlled marketing lowered consistently incentives to farmers. An attempt to revert to a more profitable economy was undertaken during the early 1970s. Producer prices were raised, but exogenous factors such as the oil shocks and the droughts of 1972-74 offset the potentially positive outcomes of the interventions. Agricultural production fell again in the early 1980s, after a short period of recovery, with crop output declining in 1984 by 20% and herds by 35% (USAID Mali, 1988).

Guinea saw as well a decrease in revenue and both agricultural and livestock production between 1973 and 1981. Although exogenous factors such as the droughts and the oil shocks of the 1970s had an inevitably negative impact on agricultural production, the main factor of such poor performance can be traced to the implementation of unsound policies. Among these were the existence of an overvalued exchange rate which affected the competitiveness of Guinean exports negatively, state controlled marketing and collective farming, a high number of import taxes and subsidies as well as barriers to domestic trade, poor transport infrastructure, and a large inefficient public sector which drained heavily the country's resources. As a result of these policies, production and exports of crops declined steadily, while imports of food products increased significantly. While some reforms were implemented in the early 1980s, such as the removal of almost all state marketing quotas in favor of an expansion of the private sector, numerous distortions in the domestic market still

remained. During the Fist Republic agricultural markets were almost totally monopolized by the state. Producer prices were established by the state on the basis of official consumer prices. For example, the price of rice which is the major staple food of the country was maintained low through an overvalued currency, resulting in a major between official and parallel markets. The widening of this gap sparked rent-seeking behavior which diverted products from the official channel to the more profitable private market, while imports and inflation soared. Stryker at al. (1989) report that in the early 1980s the parallel markets was supplying about 80% of total urban demand for goods and almost the totality of the demand for marketed consumer goods outside Conakry.

The economic performance of Senegal after independence was quite encouraging until the country lost its privilege of guaranteed prices for export crops in 1966. The Senegalese economy has been characterized by a heavy tertiary sector, consisting of a large and relatively well paid government sector, and the dominance of groundnut production in the agricultural sector. The high paid public sector burdened the economy not only in terms of government expenditures but also because its wages set the benchmark for wages in the private sector, thus resulting in a loss of competitiveness for domestic products. Senegal's deep crisis started when the country experienced windfall profits from exports in the second half of the 1970s following an increase in the prices for groundnuts and phosphates (the biggest mineral export for the country) quadrupled. This led to a substantial increase in government spending, with investments mainly in the establishment of export-oriented industrial processing of primary commodities. In the late 1970s Senegal experienced a deterioration of its current account when exports declined and imports soared, while the country faced the collapse of the agricultural credit system.

3.1 Adjustment Programs and Trade of Food Products

The limited size of the West African markets characterizes them as price takers for most commodities. This implies that the regional economies are significantly vulnerable to fluctuations in the level of world prices for commodities. Nevertheless, as we described above, there are numerous endogenous factors to which the negative performance of the West African countries can be traced. The competitiveness of agricultural production is constrained in West Africa by low levels of labor productivity and relatively high wages, inadequate financial markets which result in capital shortages, diminishing access to arable land and water, poor distribution systems that affect the availability of both inputs and outputs, obsolete infrastructure, and finally the set of economic and investment policies adopted by the state. It was in this perspective that major policy reforms were designed during the 1980s under the Structural Adjustment Programs.

The implementation of these programs in West Africa is characterized by similar policies across different countries. These policies consisted mainly of realignment of the currency, liberalization of domestic markets, and freeing trade regimes.

The devaluation of the CFA franc, as well as the move towards flexible exchange rate for other currencies have played a major role in the definition of the new economic scenarios. All countries in the study experienced during the adjustment period significant devaluation or realignment of their currencies. Already in the early 1980s FAO recommended for Côte

d'Ivoire a formal devaluation of the CFA franc, although at that time it argued that the feasibility of the policy was impaired by the multiplicity of countries.

Stryker et al. (1994) assume that the impact of devaluation on crop agriculture is a function of a number of factors. On the supply side, the financial profitability of production depends on the tradable-input intensity of the production and on the output price. If the content of tradable inputs is high, financial profitability will decrease, albeit this is partially compensated by the decrease in the relative cost of non-tradable (especially labor). This will be true if the increase in input prices is greater than the increase in output prices. In the case of horticultural products and coarse grains, for which production is labor-intensive, a decrease in the real cost of labor following devaluation should thus result in an improvement of the competitiveness of the production, provided that the increase in output prices is at least equal to the increases in input prices.

Devaluation of the currency generates thus a change in the relative prices of tradable and non-tradable goods. But price incentives have also been brought by direct intervention on them. Price incentives represent a fundamental factor in stimulating agricultural production. Properly implemented changes in the relative prices of goods allow shift in both production and consumption of such goods, resulting in a more efficient and productive allocation of resources. In the case of Senegal, FAO recommended that an increase in the relative price of rice to the level of its domestic cost to millet would shift consumption to domestic millet from imported rice, while an increase in domestic price of millet would shift the production to millet from groundnuts in order to adapt to the shift in demand for food crops for local consumption. The suggestion was based on the assumption that millet and rice were substitutes.

Liberalization of prices, mainly accompanied by the dissolution of state marketing boards, has been implemented across most countries, although at different time for different products. Prices and markets for coarse grains, for example, have traditionally been more liberalized than those for other goods, while state control on rice through marketing boards started declining only around 1995. In Guinea export procedures in the late 1980s were still quite cumbersome due to the multiplicity of taxes, fees, controls, and procedures. At the same time, although imports tariffs have been significantly lowered for most products, the government still regulates rice imports. In Ghana output prices have been market-driven rather than artificially imposed by the state after the implementation of the Economic Recovery Program. The removal of marketing boards and price distortions was also part of the reform program in Côte d'Ivoire.

In Guinea, following the implementation of the reform polices, the outlook for the agricultural sector has significantly improved. Although less important than before independence, cash crops (coffee, horticultural products) still contribute substantially to Guinean exports. Since the implementation of reform programs, most coffee exporters are now private (six out of seven traders) and the same is true for horticultural products exporters.

In summary, Structural Adjustment Programs in the 1980s were designed to increase diversification of the agricultural sector towards the production of goods with high comparative advantage as opposed to goods with declining economic benefits, while at the

same time restoring competitiveness of domestic production by reducing high costs. These programs entailed improving financial assistance to farmers and investing in high priority activities in rural areas, in order to complement macroeconomic policies.

IV. Comparative Advantage, Competitiveness, and Regional Trade

The object of this section is to discuss the comparative advantage of a group of products from different countries before and during the implementation of the Structural Adjustment Programs (SAP) in order to predict the potential directions of trade flows. Following this discussion, we will evaluate the impact of SAP on the competitiveness of these products , thus on the trade flows between the national and sub-national markets of West Africa. This study assumes that the devaluation of the CFA franc that took place on January 12, 1994, constitutes the culminating point of SAP for the countries of the franc CFA zone. Therefore, this date represents the cut-off point between before and during the SAP. The calculations for the period before the SAP are based on data collected in 1990, while the data relative to the structural adjustment period are those of 1995. All the results are provided in the Annexes.

4.1 Comparative Advantage before Structural Adjustment Programs

4.1.1 Methodology

The estimation of comparative advantage is essentially based on the Domestic Resource Cost (DRC) coefficient, which is derived from the economic analysis and on the notion of opportunity costs of resources (see annex for a detailed explanation of the methodology).

In summary, the DRC is the ratio between, on one hand the economic cost of all non-tradable resources (capital, land, water, labor, etc.) employed to produce one unit of the final good , and ,on the other hand, the added value of tradable goods, converted into local currency through the shadow exchange rate. A DRC lower than unity (<1) for a specific product on a specific market indicates a positive economic profit for the country of production which therefore has a comparative advantage in the production of such a good. In contrast, if the DRC is greater than unity (>1), the country of production is said to have a comparative disadvantage in producing and marketing the good to the specific market.

We should bear in mind that the analysis of the comparative advantage of nearly all the West African agricultural commodities, except groundnuts, are treated as import substitutes. Therefore, their relevant reference price is the CIF price, adjusted to the consumption point.

4.1.2 Coarse Grains

The results of the analysis suggest that the production of coarse grains in the CFA countries was efficient before the devaluation of the CFA franc. The same results are obtained for Guinea at the beginning of the 1990s. At the same time, all coastal countries lose their comparative advantage for maize and millet/sorghum when these products are shipped

towards the large coastal consumption centers, indicating also relatively high transport costs in West Africa. The comparative advantage for these West African countries seems generally stronger for those production systems that generate relatively higher yields.

On the other hand, the results show that the potential for regional trade of coarse grains is quite significant, especially between Mali and Côte d'Ivoire, whose comparative advantage are respectively for millet/sorghum and maize. Northern Guinea could also ship maize to Mali, especially during the hungry season. Similarly, Mali could provide Eastern Senegal with millet/sorghum. In any case, Southern Mali and Central Guinea would have serious difficulties in providing coarse grains respectively to Northern Guinea and Eastern Senegal, due to high transport costs.

4.1.3 Rice

Like coarse grains, the production of paddy seems to perform quite well, albeit the economic cost of local rice consumed in the coastal cities seems higher than the economic benefit that the West African societies could derive from it. The potential for trade flows of this product, although it would appear to be high, is more limited than those for coarse grains. Guinea appears to have the greatest potential in providing rice to a significant part of the vast Malian territory. Mali could also ship rice to Northern Côte d'Ivoire and even further from this consumption area, towards the central part of the country. Mali's comparative advantage in supplying Côte d'Ivoire is however hindered by high transport costs.

4.1.4 Horticultural Products

Until today, very little information is available on both costs of production and marketing, and regional trade flows of horticultural products. The limited data available allow us to assume that Burkina Faso, Mali, and Niger could provide the coastal countries with horticultural products (onions and green beans), given the favorable natural climate of the Sahelian areas. Senegal could, as well, export groundnuts and groundnut oil to Mid-Guinea and Western Mali. But beyond this areas high transport costs will play a hindering role in the regional trade flows of these goods.

4.1.5 Livestock

Differences in climatic and agro-ecological conditions determine to a great extent the producers-exporters and the net consumers of meat in West Africa. Livestock, primarily concentrated in the arid and semi-arid zones and on the Nigerian and Guinean plains, gives a natural comparative advantage to this areas and generates flows between Sahelian and coastal countries. It is therefore not surprising that coastal countries constitute the preferential market for Sahelian livestock.

The analysis carried out by AIRD confirms that Sahelian countries have a strong comparative advantage in providing the coastal countries with live animal. This comparative advantage is mainly a function of the use of pasture and forage which have currently very low opportunity cost. At the same time the economic benefit of the traditional production systems of the coastal countries is decidedly above zero on coastal countries, although their

productivity is lower than that of the Sahelian countries. The comparative advantage of these systems is a function of their vicinity to the consumers' markets, thus benefiting from more moderate transport costs relative to those of Sahelian livestock.

This comparative advantage would still look strong even if the cost of labor and capital were to increase or if production would decrease significantly. This suggests that the natural conditions play an important role. These conclusion rests on the European subsidies on their exported meat, proving once more the robustness of the comparative advantage of West African countries in the production of meat.

4.2 Comparative Advantage during Structural Adjustment Programs

Structural Adjustment Programs are generally aimed at a more efficient reallocation of resources based on comparative advantage. For this to take place, they recommend a disengagement of the State from production and limit its role to the implementation of those actions necessary to create an open economy, whereby the economic agents can react freely to changes in market conditions. These agents are assumed to react positively and dynamically to changes in market prices if favorable institutional and physical conditions exist, leading thus to dynamic comparative advantage. For example, if the basic infrastructure is provided by the State and the legal environment ensure a reduction in transaction costs, then price incentives will induce producers to increase investment and improve agricultural productivity, thus enabling them to reduce their cost of production. This reduction results in the reinforcement of the comparative advantage or in the creation of a new comparative advantage, *ceteris paribus*.

The devaluation of January, 1994, inasmuch as it was an isolated phenomenon, did not have, in principle, a direct effect on the comparative advantage of the West African countries, given that the analysis had taken into account and corrected the overvaluation of the CFA franc in the economic analysis. Nevertheless, the devaluation has modified the structure of the markets for goods and tradable factors of production. Thus changes in relative prices resulted in changes in incentives for the demand of intermediate goods, which had an impact as well on agricultural productivity and unit costs.

The devaluation has also had an impact on marketing activities through its effect on transport costs. Although the greatest part of transport costs have increased following the devaluation, the increase has been partially offset by the liberalization of the transport sector which took place well before the devaluation. Changes in transport costs have an impact on marketing costs of not only locally produced agricultural commodities, but also imported products, making it quite difficult to predict changes in comparative advantage. In these conditions, how did comparative advantage change following the liberalization of the transport sector and the modification of the exchange rate?

4.2.1 Impact of Structural Adjustment Programs on Coarse Grains

The implementation of Structural Adjustment Programs has had a limited influence on the productivity of coarse grains. Maize yields in Côte d'Ivoire have declined slightly (-1% per year), while those of millet/sorghum in Mali experienced a marginal increase (less than 1% per year), resulting therefore in a modest change in comparative advantage of these

countries on consumption markets. Although we do not have information on the consumption of inputs before and after the implementation of Structural Adjustment Programs, we could nevertheless assume that the small decrease in yields in Côte d'Ivoire is caused by the increase in input prices, which was not offset by a proportional increase in output prices. The decrease in the use of inputs is even more attributable to the fact that production of grains is quite unpredictable, given its dependence on rainfall.

We can also observe a slight decreases in comparative advantage on certain consumption markets close to the coastal areas, probably due to the increases in transport costs between the production areas and the cities on the coast. In contrast, the comparative advantage on Sahelian markets distant from the ports appears to have improved slightly, owing to increases in transport costs which have a negative impact on imported goods.

4.2.2 Impact of Structural Adjustment Programs on the Rice Subsector

Unlike the case of coarse grains, the Structural Adjustment Programs appear to have a significant impact on rice productivity in the Sahel. In fact, paddy yields have increased at least 3% per annum in the Sahelian countries. This growth has even been greater for Mali, averaging nearly 10% a year after the devaluation of the CFA franc and thus reinforcing the country's comparative advantage in the regional markets. Just by taking into account the increases in productivity, Mali could provide rice to Central Côte d'Ivoire and even to some cities close to the coastal areas. The improvement in Mali's comparative advantage has however been moderated by the increases in tradable costs, especially transport costs between the two countries, thus limiting Mali's comparative advantage in Central Côte d'Ivoire. Under these conditions, Malian rice could be shipped only to the bordering zones of Senegal and Guinea.

4.2.3 Impact of Structural Adjustment Programs on Horticultural Products

Structural Adjustment Programs appear to have had a positive impact on Senegal's comparative advantage in the production of groundnuts, generating a moderate increase in the estimated yield per hectare (about 1.5% per year) and strengthening Senegal's position on consumers markets. The beginning of the privatization of SONACOS, following negotiations between the government of Senegal and the World Bank, could result in a reduction of the costs of processing groundnut into oil and therefore increase Senegal's comparative advantage in the neighboring markets. Nevertheless, high transport costs due to the lack of a sea link among West African countries could be a significant obstacle to the growth of groundnut trade and their by-products (oil) between Senegal and its neighbors. This growth is also impaired by the existence of numerous vegetable oils which are substitutes for groundnut oil.

4.2.4 Impact of Structural Adjustment Programs on Livestock

The results of the analysis undertaken by Metzel (1995) show that Mali's comparative advantage has strengthened after the devaluation of the CFA franc. Nevertheless, the analysis was not aimed at measuring the impact of Structural Adjustment Programs on the livestock subsector. Comparative advantage depends not only on production costs but also on international prices and on the exchange rate. He did not isolate the effect of these exogenous

elements on comparative advantage. Sahelian countries have no influence on international prices. Nor do they have an impact on the exchange rate between the French franc and the US dollar.

4. 3 Competitiveness and Regional Flows before Structural Adjustment Programs

The basic principle of the analysis of competitiveness of West African agricultural products lays in the capacity of the producers and/or traders to make financial profit, consisting of the difference between the unit price of the final good and all of its unit costs. These include costs of production and marketing to this market (see annex on methodology). The basic hypothesis of this analysis stems from the principle that the production and marketing of a good in a market will take place as long as they are financially profitable. In such context the activity is said to be competitive and viable. In contrast, a financial loss indicates that the activity is not competitive and viable given the market conditions.

The results that are discussed here assume that for the production of groups of agricultural commodities, family labor is valued at the average day rate of hired agricultural workers in rural areas, which is his opportunity cost. The rationale behind this assumption is that the West African agricultural sector is going through a transformation leading to a complete monetization of the sector. The retribution of family labor at the rate of the salaried labor force could nevertheless increase if the family's food self-sufficiency is considered to be a priority with respect to financial gains. Under these conditions the discussion will focus more on the production side and less on the marketing aspects.

4.3.1 Coarse Grains

In the light of the results of the analysis, it appears that the systems of production that have been studied have generated negative returns if labor is valued at the daily rate of hired labor. The fact that these systems have survived until today seems to indicate that the daily return to family labor is lower than the on-going wage rate. In fact, this return varies between 200 and 500 CFA franc per day depending on price of coarse grains and their costs of production, suggesting that the principal motivation for producers is not financial profitability, but rather safeguarding the family's food self-sufficiency. The corollary of such hypothesis is that the volume of grains sold in the market represents the excess production aimed at providing an income for the family for the satisfaction of other needs. The yearly surpluses, which are quite variable as a result of the strong dependency of grain production on rainfall, partly explains the instability of regional trade. Taking into account the limited availability of statistics on these trade flows, wouldn't these fluctuations result in uncertainty which would moderate the desire of producers to market significant volumes of coarse grains?

4.3.2 Rice

The results of the financial profitability study suggest that rice is quite competitive in almost all consumers markets and pays well family labor in the production areas. This competitiveness could result from the relatively high yields of irrigated rice for which producers pay only fees for the use of water through the irrigation infrastructure. Given these fees, what should be the competitiveness of local rice if producers were charged part of the amortization costs of investment in the irrigation network?

Besides the fact that local rice pays only fees on water usage, it also benefits in large part from tariff and non-tariff barriers which allow the price of rice on the consumer market to increase artificially. An example of the protectionist policies on local rice is the *Péréquation* system that was in place in Senegal until 1996 and aimed not only at subsidizing the irrigation infrastructure and the parastatal services, but also at homogenizing the price of broken rice imported into the domestic market (Hibou, 1990). Mali's protectionist policy was exercised through the control of rice sales and imports as well as high tariff rates as a mean to increase domestic price of rice and provide an incentive to local producers.

Like Senegal, Côte d'Ivoire taxes the imports of rice and has adopted a *Péréquation* system which, in contrast to Senegal, consists of creating a panterritorial pricing scheme. Guinea applies a less severe protectionist policy than Senegal or Côte d'Ivoire. Nevertheless, rice imports in Guinea are limited by an exchange control. In summary, West African local rice benefits from some sort of protection, whether tariff or non-tariff.

4.3.3 Horticultural Products

As illustrated above, studies on the competitiveness of fruits and vegetables before the implementation of Structural Adjustment Programs are quite rare. The ones that are available limit their analysis to the impact of the devaluation of the CFA franc on producers' profits. They show that in general profits have increased following the devaluation and that therefore competitiveness has improved (Kergna and Koné, 1996; Illy, 1996; Asante and Wayo, 1996). Well before devaluation took place, studies that have been done on fruits and vegetables in the Sahel have showed that their production is generally more profitable than that of cereals or some export products such as cotton (Nicholson and Stathacos, 1992). This proposition needs to be confirmed for the humid coastal areas. At the same time, their production is not generalized in the sub-region. Given these conditions, shouldn't research focus in particular on these products with the aim of removing constraints to their supply and design coherent policies for the development of these products?

4.3.4 Livestock

Notwithstanding the droughts of the 1970s and 1980s and the protectionist policies implemented by coastal countries, especially Côte d'Ivoire, West African livestock - especially Sahelian livestock which has a low content of tradable inputs- has shown to be quite competitive both on the consumer markets in the Sahel as well as in the great urban coastal centers. This competitiveness has, nevertheless, decreased over the years, owing to: (1) growing European export subsidies to the meat commonly called "capa", which have increased from about 125 FCFA/kg in 1974 to more than 700 FCFA/kg in 1993; (2) the overvaluation of the FCFA which has progressively stimulated the import of non-African meat at the expenses of Sahelian livestock (Stryker, Salinger, and Metzel, 1994). The authors suggest that he cumulative effect of economic policies, including overvaluation, has penalized more the Sahelian production systems than those of the coastal areas, since they have a higher content of tradable inputs in order to transport Sahelian meat towards these areas, constraining as well regional trade. Following the devaluation of the CFA, financial profitability for farmers and traders in the region has increased substantially, thus making livestock exports more attractive to Sahelian traders.

4.4 Competitiveness and Regional Flows during Structural Adjustment Programs

If we consider the devaluation of the CFA franc as an essential element of the Structural Adjustment Programs and financial profitability as the driving force for intra-regional trade, it is natural to ask what the impact devaluation has been on regional trade. This question is even more crucial, given that the devaluation had an impact on relative prices and transport costs of goods from areas of production to the consumption markets.

On the basis of the above mentioned changes the competitiveness of maize for Mali and Côte d'Ivoire has been positively affected both in the production and in the consumption areas. Nevertheless the financial profitability of maize consumed in the production areas would still be negative if family labor was valued at its opportunity cost. Millet and sorghum appear to be more competitive since the devaluation of the CFA franc. Similarly, rice produced in Mali and exported to the neighboring countries appears to be slightly more competitive after the devaluation. This new competitiveness of Malian rice results from the substantial increases in yields in the zones of production of the Office du Niger. Senegalese rice consumed in Mali will also be more competitive than in the past given relatively high prices of rice in Mali.

Although we will try to explain the competitiveness of horticultural products on different consumers markets in the sub-region, the only information available is for the profits of the producers. Studies carried under the aegis of INSAH show that the devaluation of the CFA franc seems to have had a positive impact on the revenues of horticultural producers, and thus on the competitiveness of their products (Kelly and Chilin, 1996).

The analysis of the marginal revenues based on financial calculations of livestock suggest that it is positive for all systems of production that have been evaluated, even taking into account opportunity costs of labor and capital used by the breeder (Metzel, 1995). These conclusions seem to hold notwithstanding the sale market of the products (Accra or Abidjan). The aggregate marginal revenue in the livestock sector have sensibly increased after the devaluation of the CFA franc since consumers' prices in Accra and Abidjan have almost doubled, while the price of tradable inputs only seems to have doubled as well. These inputs represent between 20 and 25% of the total cost of production and marketing. The other costs relative to non-tradable resources (labor, feed, etc.) have increased only by about 30%, depending on the rate of inflation resulting from the devaluation.

The devaluation of the CFA franc has made prohibitive the import of non-African meat in the Côte d'Ivoire, allowing Sahelian meat to become more competitive and increasing its demand on the Ivorian market. This renewed gain in competitiveness resulted in the opening of other markets as well to Malian meat, notably that of Ghana whose improved economic performance has stimulated an increase in the demand for meat.

In conclusion , the devaluation of the CFA franc inasmuch as it has been one of the major elements of the Structural Adjustment Programs has had a positive impact on both the comparative advantage of West African countries and the competitiveness of their agricultural

products, notably rice produced in Mali. Although the financial profitability of coarse grains becomes negative once family labor is estimated at its opportunity cost, the competitiveness of these products has improved since the devaluation.

V. Constraints To Regional Trade in West Africa

There is general consensus among development economists that policies that fostered opening of economies and trade result in a positive impact on income growth (Rodrik, 1994; Edwards, 1993; Dollar, 1992; Balassa, 1978). The impact of trade is even stronger if efforts are undertaken with the aim of removing physical and institutional constraints.

The object of this section is to detail the elements that impair the development of regional trade. More specifically, the analysis will look at the general constraints that hinder the global subsectors. These include the inefficiency of regional institutions and the lack of coordination of national trade policies, the weakness of the functioning of agricultural input markets, the lack of coordination of agricultural market information systems, high transport costs, and the abuse of law enforcement officials. Once these constraints are discussed, the section will analyze those that are specific to each subsector.

5.1 General Constraints

5.1.1 Institutional Inefficiency and Lack of Regional Trade Policies

As mentioned above, in West Africa there is a significant number of sub-regional organizations aimed at promoting regional trade. Their impact on trade has nevertheless been quite limited and raises questions about their existence. The negative performance is even more significant given the fact that these institutions have shown very limited intellectual leadership about the needs of complementarity among the different zones of West Africa. We could imagine an operational structure articulated around groups of products (cereals, horticultural products, oils, livestock) with the aim of carrying frequent analyses on competitiveness and designing concrete recommendations in terms of sectoral policies to promote regional trade, as well as export to the international markets. Each study group should follow not only the evolution of the costs of production and marketing of West African agricultural products, but also the fluctuations of international prices and the forces behind those. This kind of follow-up would allow to a great extent to devise macro-economic and sectoral policies to improve the competitiveness of agricultural products.

5.1.2 Backsliding of Economic Reforms

Following the implementation of reforms, a few West African countries have tried to review some of the decisions of economic policy. An example which confirms this turn-around is the case of Nigeria, which has imposed restrictions on trade since 1994. Ghana, to a lesser extent, has also experienced some policy reversal which are characterized by growing budget deficits, sparking rapid inflation. This, in turn, has resulted in a constant depreciation of the exchange rate. As a result, Ghanaian products are artificially more competitive than those of neighboring countries, especially those of the CFA zone with a fixed exchange rate, generating distortions in regional trade. This situation, which could generate regional trade in

the short run, will have a negative effect on the trade in the long run, inasmuch as it creates growing uncertainty in the eyes of economic actors who find it more difficult to plan, and generates rent-seeking behavior rather than stimulating productive activities, thus discouraging trade based on complementarity.

5.1.3 Weak Input Markets

Born out of the incapacity of African countries to limit their appetite for expenditures, Structural Adjustment Programs were aimed at re-establishing macro-economic balances. One of their easier components was the removal of input subsidies. Given this objective, parastatals marketing inputs became useless, although their function has not been taken over by the private sector. A major consequence, with the exception of the distribution system created by the Compagnie Française de Développement des Textiles (CFDT), there has been a breakdown in input marketing which, to these days, is still very weak in most countries. A staggering example of the weakness of input markets is that offered by Guinea where the supply of inputs is almost nonexistent, with the exception of producers which are part of specific agricultural projects. As a result, the agricultural productivity is generally quite low outside these projects. One could speculate that the non-usage of agricultural fertilizer finds also an explanation in the non-profitability of production systems which essentially depend on uncertain rainfall pattern.

5.1.4 Lack of Coordination among Market Information Systems (MIS)

Since the implementation of Structural Adjustment Programs, significant efforts have been made to provide information on prices of agricultural commodities to producers and traders. Now, every West African country has at its disposal a MIS which covers agricultural products. Unfortunately, the data provided by MIS are generally limited to cereals. To these days, only the MIS of the Côte d'Ivoire provides information on some horticultural products. It would be recommendable that the neighboring MIS do the same.

The MIS provide benefits to regional trade. They allow producers and marketers in the sub-region to have timely information on prices for all West African countries and thus provide them with the possibility of knowing the supply and demand conditions on regional markets. The unfortunate part of the West African MIS is that they collect only price data and do not provide any information on volumes of goods traded in the market. Information on volumes are help guide traders in targeting markets. Such is the wish of the members of the West African Enterprises Network (WAEN) to enable them to trade large of agricultural commodities in the region. It is thus necessary that the different West African MIS focus on adding information on volume and coordinate their activities to exchange the information collected.

5.1.5 High Transport Costs

One of the major characteristics of West African trade is high transport costs between the production zones and the consumption markets, which affect the competitiveness of agricultural products as well, especially in markets beyond the center of the coastal countries. Even if the transport sector has been liberalized to some extent in order to reduce costs, transport costs are still quite high (Camara, 1992; Gaye, 1992; Savadogo et al., 1992; Gabre-

Madhin et al., 12992). These studies show that transportation costs represent more than half of total transfer costs of agricultural products in West Africa. One of the factors that contribute to such high costs are high taxes and duties on imported spare parts and utility vehicles. According to INRET (1989), these taxes and duties amount to about 60% of utility vehicles. Although the rationale for such high taxes is to limit the drain of foreign exchange, they represent a significant entry barrier in the transport sector, reducing as well the supply of transport services in the sub-region. Another factor explaining high transport costs are the poor conditions of the road network, especially during the rainy seasons; thus, forcing vehicle owners to charge high costs in order to amortize rapidly the cost of their vehicles.

Sectoral policies of transport aimed at reducing transfer costs could have a positive impact on the competitiveness of local agricultural products and improved food-security for West African populations.

5.1.6 Abuse from Law Enforcement Officials

The rules of the ECOWAS which allow free circulation of people and goods are often not applied and are in sharp contrast with the frequently abusive attitude of law enforcement officials. Even if the direct financial costs generated by the constant holdings of goods at barriers created by the border patrols seem quite negligible, about 1% of the price of agricultural products as calculated by Salinger and Barry (1995), the abuses from law enforcement officials generate indirect costs. They consist of time lost to negotiate the illegal taxes. This fact tends to block vehicles and thus reduce the supply of transport services. These barriers also result in direct losses of transported goods, which, once accounted for, increase the costs of abuses. These abuses are even more important since they are source of discouragement for private agents who do not master the procedures or for those who would have the intention of investing in regional trade. Finally, they reduce competition and also lower food security by keeping prices of agricultural goods artificially high.

5.2 Specific Subsector Constraints

The analysis of the specific constraints for the subsectors is carried out by regrouping the different products as explained above. Thus, the constraints will be analyzed for coarse grains, rice, horticultural products, and livestock.

5.2.1 Coarse Grains

Generally aimed at ensuring household food security, the supply of coarse grains is constrained by the volatile character of its production. Almost exclusively dependent on rainfall, the production of cereals is constantly subdued to exogenous forces, resulting in a limited use of chemical fertilizer and weak productivity, which generate small returns and induce policy makers to limit exports in order to satisfy domestic demand. Generally food policies have been articulated around this purpose, especially in those Sahelian countries where coarse grains are the main staple. These policies, even if justified in the light of the welfare of the population, represent a serious obstacle for the promotion of regional trade (IRAM-INRA-UNB, 1991).

The increases in prices of coarse grains generate a shift in consumption towards rice. This shift is even more significant given the fact that production of grains is handicapped by the lack of appropriate processing technology aimed at increasing their use. Work done by IFPRI and Michigan State University shows that coarse grains are increasingly being relegated to a second place in consumption, since their processing requires hard work for women whose opportunity cost is increasing, given the rate of urbanization. The challenge for researchers and policy makers is thus to find appropriate processing techniques for coarse grains that diminish the work time of women and increase coarse grain consumption, especially in the urban centers where the average income is generally higher than in the rural areas.

5.2.2 Rice

Rice, heavily consumed in urban centers, is a source has been the center of heated discussions among policy makers. The constraints that impair its regional trade are generally institutional in the sense that rice production, although weak compared to demand, has driven most countries to invest in costly irrigation schemes, which have resulted in governments erecting barriers not only against extra-regional imports but also against rice originating from West Africa. Given these protective measures, governments tend to discourage exports with the aim of maintaining enough supply of rice for domestic urban centers. Policies that protect local rice and block its exports are incompatible with expanding regional rice trade.

These interventionist policies in the rice subsector, given the strategic role of rice, explain to a great extent why rice has generally been the last to be liberalized in the region. For example, the liberalization of this subsector started in Côte d'Ivoire and Senegal only in 1995 and 1996. Regional trade of rice has suffered from the fact that certain countries have liberalized their rice subsector very early (Gambia), while others are just starting the process (Burkina Faso).

Another element which impairs rice trade is rules made by regional organizations. For instance, the rules of ECOWAS do not classify rice among primary products, but among semi-processed goods, thus allowing different countries to impose taxes on imports from the sub-region or forbid imports from the regional markets when deem necessary. As a result, tariff and non-tariff barriers are encouraged in the region.

5.2.3 Horticultural Products

Although studies on horticultural products are quite rare, it can be argued that the potential for trade has become extremely wide, given the renewed economic activities and income increases following the devaluation. This potential is nevertheless constrained by a local supply concentrated during a very short period of the year, forcing producers to sell their products when the prices are at their lowest level. This supply is even more limited since producers who are generally small farmers lack modern technologies and adequate knowledge to improve production. The weakness of public investment in research aimed at improving productivity is a sign of the limited interest in horticultural products in most West African countries. This lack of interest is confirmed as well by the scarce agricultural data on production (yield and area) of fruits and vegetables in most West African countries.

The supply of these products has also to confront the well known problem of conservation in the production zones, as well as in the consumption markets. The physical losses after harvest are generally quite high, about 50% for some products such as onions and tomatoes (Nicholson and Stathacos, 1992). The losses in the production areas usually stem form the lack of means of transport to the consumption areas. Moreover, vehicles are often not properly adapted to marketing, since they lack refrigeration to avoid losses, especially when the truck are being held up by law enforcement officials. Without refrigeration, it might be wiser to direct research towards the processing procedures so as to avoid post-harvest losses.

5.2.4 Livestock

At a general level, Metzel (1995) -author of a study on the economic and financial situation of livestock- shows that the potential for regional trade of livestock is constrained by issue related to the supply of the products, and notably the availability of a forage biomass at low cost. The analysis of the use of forage resources in the different systems suggests that the maximum obtainable density in of about 9 UBT/km2 in the semi-arid or rainy zones, 14 UBT/km2 at the Niger delta, and 26 UBT/km2 in Southern Mali. Several studies report that the current density are already at their maximum in the arid areas, and close to their maximum in the remaining areas[1]. In the pure pastoral system where the density is only 3.9 UBT/km2, the optimal number of livestock is already limited by feed and water constraints. In the contrary the current density is less than one third of the capacity in the sub-humid zones.

A comparison of production techniques suggests that the most expansive and mobile systems of production are generally more efficient in cases of low density, but the possibility of expansion of these systems is quite limited. Efforts to promote the use of commercial feed and the intensive management of livestock in West Africa generate higher returns, but with higher unit costs per head. Therefore the per head economic profit increases with intensification, but the daily return to labor decreases. Fattening in the small private farms generates positive economic profits , even if the marginal profit of additional resources is lower that that of production without fattening. For this reason the fattening system on low scale represents an attractive area of investment in order to increase meat production.

These hypotheses show that animal production should increase in the rainy areas and the Niger Delta, provided that integration between livestock and agriculture increases in the next years. This integration is affected by further constraints during certain periods of the year, such as the availability of labor during the beginning of the agricultural season when the demand for labor for field work is very high. At the same time the livestock subsector also needs labor to guide herds to find adequate biomass for feeding and to prevent herds from damaging cultivated fields as well. This simultaneous demand for labor suggests that following the intensification of livestock production, labor will become a constraining factor at the end of the dry season and the beginning of the rainy one, resulting in an increase in the return to labor.

[1] UBT is the unit of tropical livestock which corresponds to 250 kg.

Another constraint which hinders the increase in livestock trade, although less significant than the one described above, is a result of the disparity of health control policies. Savadogo (1997) shows that Ghana has adopted a policy of quarantining livestock from Burkina Faso since the authorities consider the sanitary requirements in Burkina Faso unsatisfactory. Livestock exported from Burkina Faso subsequently loses weight resulting in a decrease of the financial profitability of exports, which discourages exports from Burkina Faso.

In conclusion, the potential for sub-regional trade is significant in West Africa, but numerous obstacles constrain its realization. We can list general constraints which affect all the agricultural sector. These include the inefficiency of regional organizations, the weakness of inputs markets, the lack of coordination between the agricultural market information systems, and high transport costs resulting from fiscal policies and abuses of law enforcement officials. Besides general obstacles we can identify constraints that are specific to the different subsectors. All policies aimed at improving sub-regional trade have to remove these obstacles, that is improve the basic infrastructure to increase the efficiency of marketing agricultural products.

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Before Devaluation

Producer	Importer			MAIZE Impr. Man.	MAIZE Trad. Man.	MIL/SOR Anim. Trac.	MIL/SOR Trad. Man.	RICE Intensive	RICE Semi-intens.
Mali	Senegal	FP (CFAF/kg)	FARM					26.81	32.40
			NIONO					38.89	44.48
			BAMAKO					61.85	67.44
			KAYES					67.05	72.63
			TAMBA					36.06	31.65
			KAOLACK					11.78	-17.64
			DAKAR					-20.99	-20.40
		DRC	FARM					0.38	0.36
			NIONO					0.55	0.53
			BAMAKO					0.79	0.76
			KAYES					0.97	0.93
			TAMBA					1.26	1.21
			KAOLACK					1.45	1.39
			DAKAR					1.68	1.61
Mali	Cote D'Ivoire	FP (CFAF/kg)	FARM			-10.60	-30.47	95.53	32.40
			NIONO					25.88	44.48
			BAMAKO			-9.30	-29.17	78.84	67.44
			SIKASSO			-10.30	-30.17	97.30	81.06
			KORHOGO			20.70	-24.17	52.53	34.13
			BOUAKE			19.93	-19.94	76.76	48.35
			ABIDJAN			26.20	-8.67	114.18	43.78
		DRC	FARM			0.44	0.61	0.40	0.33
			NIONO					0.66	0.54
			BAMAKO			0.55	0.73	0.79	0.64
			SIKASSO			0.55	0.73	1.02	0.84
			KORHOGO			0.74	0.95	1.17	0.93
			BOUAKE			0.92	1.15	1.44	1.12
			ABIDJAN			1.47	1.74	2.40	1.73
Mali	Guinee	FP (CFAF/kg)	FARM	-54.40	-25.73	-10.60	-30.47		
			SIKASSO	-55.56	-26.89	-9.30	-29.17		
			BAMAKO	-43.56	-14.89	-10.30	-30.17		
		FP (GF/kg)	SIGUIRI	-151.44	-62.63	-123.61	-171.30		
		FP (GF/kg)	KANKAN	-141.44	-92.63	-118.61	-166.30		
		DRC	FARM	0.66	0.42	0.44	0.61		
			SIKASSO	0.80	0.52	0.55	0.73		
			BAMAKO	0.80	0.52	0.55	0.73		
			SIGUIRI	1.93	1.37	1.35	1.67		
			KANKAN	2.15	1.55	1.51	1.84		
Cote d'Ivoire	Mali	FP (CFAF/kg)	FARM	-55.09	-24.67				
			BOUAKE	-41.82	-11.40				
			ABIDJAN	-50.14	-19.72				
			KORHOGO	-55.42	-25.00				
			SIKASSO	-71.20	-40.78				
			BAMAKO	-58.20	-27.78				
		DRC	FARM	0.70	0.42				
			BOUAKE	0.92	0.58				
			ABIDJAN	1.56	1.04				
			KORHOGO	0.92	0.58				
			SIKASSO	0.92	0.58				
			BAMAKO	0.92	0.58				
Senegal	Mali	FP (CFAF/kg)	FARM					59.70	
			MATHAM					43.20	
			DAKAR					-19.24	
			KAYES					48.26	
			BAMAKO					25.85	
		DRC	FARM					0.52	
			MATHAM					1.14	
			DAKAR					0.52	
			KAYES					3.31	
			BAMAKO					1.81	
Guinee	Senegal	FP (GF/kg)	FARM	14.09	-18.50				
		FP (GF/kg)	LABE	13.19	-19.40				
		FP (GF/kg)	CONAKRY	54.69	22.10				
		FP (CFAF/kg)	TAMBA	60.79	47.21				
		FP (CFAF/kg)	KAOLACK	53.97	40.39				
		FP (CFAF/kg)	DAKAR	80.84	67.26				
		DRC	FARM	0.59	0.78				
			LABE	0.75	0.97				
			CONAKRY	1.62	1.96				
			TAMBA	1.23	1.52				
			KAOLACK	1.41	1.72				
			DAKAR	1.70	2.05				
Guinee	Mali	FP (GF/kg)	FARM					29.64	
		FP (GF/kg)	KANKAN					16.62	
		FP (GF/kg)	CONAKRY					-39.88	
		FP (CFAF/kg)	BAMAKO					68.97	
		FP (CFAF/kg)	KAYES					74.16	
		DRC	FARM					0.66	
			KANKAN					0.95	
			CONAKRY					2.11	
			BAMAKO					0.83	
			KAYES					0.84	

Change in Price

Producer	Importer			MAIZE Impr. Man.	MAIZE Trad. Man.	MIL/SOR Anim. Trac.	MIL/SOR Trad. Man.	RICE Intensive	RICE Semi-Intens.
Mali	Senegal	FP (CFAF/kg)	FARM					96.19	100.01
			NIONO					26.55	30.36
			BAMAKO					79.50	83.32
			KAYES					69.70	73.52
			TAMBA					73.71	67.53
			KAOLACK					64.43	58.25
			DAKAR					66.67	60.49
		DRC	FARM					0.43	0.41
			NIONO					0.63	0.62
			BAMAKO					0.92	0.90
			KAYES					1.14	1.12
			TAMBA					1.54	1.52
			KAOLACK					1.81	1.78
			DAKAR					2.15	2.13
Mali	Cote d'Ivoire	FP (CFAF/kg)	FARM			-10.60	-30.47	96.19	100.01
			NIONO			na	na	26.55	0.36
			BAMAKO			8.16	-11.71	79.50	83.32
			SIKASSO			-1.34	-21.21	97.72	97.08
			KORHOGO			30.16	10.29	53.20	57.01
			BOUAKE			64.39	44.52	77.42	81.24
			ABIDJAN			55.66	35.79	114.85	118.66
		DRC	FARM			0.44	0.61	0.39	0.38
			NIONO			na	na	0.66	0.64
			BAMAKO			0.55	0.74	0.79	0.77
			SIKASSO			0.55	0.74	1.01	0.99
			KORHOGO			0.75	0.96	1.16	1.14
			BOUAKE			0.93	1.16	1.42	1.40
			ABIDJAN			1.49	1.76	2.37	2.35
Mali	Guinee	FP (CFAF/kg)	FARM	-64.98	-34.19	-10.60	-30.47		
			SIKASSO	-35.10	-4.31	8.16	-11.71		
			BAMAKO	-33.10	-2.31	-1.34	-21.21		
		FP (GF/kg)	SIGUIRI	-35.14	38.75	217.09	169.41		
		FP (GF/kg)	KANKAN	137.86	211.75	136.34	88.66		
		DRC	FARM	0.74	0.47	0.44	0.61		
			SIKASSO	0.92	0.60	0.55	0.74		
			BAMAKO	0.92	0.60	0.55	0.74		
			SIGUIRI	2.31	1.63	1.37	1.69		
			KANKAN	2.61	1.86	1.53	1.86		
Cote d'Ivoire	Mali	FP (CFAF/kg)	FARM	-26.61	6.19				
			BOUAKE	18.66	51.46				
			ABIDJAN	30.34	63.14				
			KORHOGO	-59.94	-27.14				
			SIKASSO	-51.72	-18.92				
			BAMAKO	-45.72	-12.92				
		DRC	FARM	0.78	0.47				
			BOUAKE	1.03	0.64				
			ABIDJAN	1.79	1.17				
			KORHOGO	1.03	0.64				
			SIKASSO	1.03	0.64				
			BAMAKO	1.03	0.64				
Senegal	Mali	FP (CFAF/kg)	FARM					53.79	
			MATHAM					62.31	
			DAKAR					59.81	
			KAYES					57.37	
			BAMAKO					49.95	
		DRC	FARM					0.56	
			MATHAM					1.23	
			DAKAR					3.82	
			KAYES					1.99	
			BAMAKO					1.99	
Guinee	Senegal	FP (GF/kg)	FARM	14.09	-18.50				
		FP (GF/kg)	LABE	353.19	320.60				
		FP (GF/kg)	CONAKRY	55.69	23.10				
		FP (CFAF/kg)	TAMBA	52.50	38.92				
		FP (CFAF/kg)	KAOLACK	53.90	40.32				
		FP (CFAF/kg)	DAKAR	67.30	53.72				
		DRC	FARM	0.59	0.78				
			LABE	0.75	0.97				
			CONAKRY	1.62	1.96				
			TAMBA	1.23	1.52				
			KAOLACK	1.41	1.72				
			DAKAR	1.70	2.05				
Guinee	Mali	FP (GF/kg)	FARM					29.64	
		FP (GF/kg)	KANKAN					379.62	
		FP (GF/kg)	CONAKRY					398.12	
		FP (CFAF/kg)	BAMAKO					98.97	
		FP (CFAF/kg)	KAYES					89.16	
		DRC	FARM					0.66	
			KANKAN					0.95	
			CONAKRY					2.11	
			BAMAKO					0.83	
			KAYES					0.84	

Change in Yields

Producer	Importer			MAIZE Impr. Man.	MAIZE Trad. Man.	MIL/SOR Anim. Trac.	MIL/SOR Trad. Man.	RICE Intensive	RICE Semi-intens.
Mali	Senegal	FP (CFAF/kg)	FARM					57.21	62.43
			NIONO					69.23	74.44
			BAMAKO					92.19	97.40
			KAYES					97.39	102.60
			TAMBA					66.40	51.61
			KAOLACK					42.12	47.33
			DAKAR					9.36	44.56
		DRC	FARM					0.23	0.21
			NIONO					0.36	0.33
			BAMAKO					0.53	0.49
			KAYES					0.65	0.61
			TAMBA					0.82	0.77
			KAOLACK					0.93	0.88
			DAKAR					1.06	1.00
Mali	Cote d'Ivoire	FP (CFAF/kg)	FARM			-16.29	-37 90	57.21	62.43
			NIONO			na	na	69.23	44.44
			BAMAKO			-14.99	-36.60	92.19	97.40
			SIKASSO			-15.99	-37.60	98.40	100.05
			KORHOGO			15.01	-31.60	58.88	64.09
			BOUAKE			14.24	-27.37	73.11	78.32
			ABIDJAN			20.51	-16.10	68.53	73.74
		DRC	FARM			0.49	0.66	0.21	0.19
			NIONO			na	na	0.37	0.34
			BAMAKO			0.60	0.80	0.46	0.44
			SIKASSO			0.60	0.80	0.59	0.56
			KORHOGO			0.81	1.03	0.63	0.59
			BOUAKE			1.00	1.25	0.75	0.70
			ABIDJAN			1.60	1.88	1.11	1.04
Mali	Guinee	FP (CFAF/kg)	FARM	-54.40	-25.73	-16.29	-37.90		
			SIKASSO	-55.56	-26.89	2.47	-19.14		
			BAMAKO	-43.56	-14.89	-7.03	-28.64		
		FP (GF/kg)	SIGUIRI	-131.44	-62.63	203.44	151.57		
		FP (GF/kg)	KANKAN	-161.44	-92.63	122.44	70.57		
		DRC	FARM	0.66	0.42	0.49	0.66		
			SIKASSO	0.80	0.52	0.61	0.80		
			BAMAKO	0.80	0.52	0.61	0.80		
			SIGUIRI	1.93	1.37	1.48	1.82		
			KANKAN	2.15	1.55	1.66	2.01		
Cote d'Ivoire	Mali	FP (CFAF/kg)	FARM	-57.74	-26.37				
			BOUAKE	-44.47	-13.10				
			ABIDJAN	-52.78	-21.41				
			KORHOGO	-58.07	-26.70				
			SIKASSO	-73.84	-42.47				
			BAMAKO	-60.84	-29.47				
		DRC	FARM	0.73	0.44				
			BOUAKE	0.95	0.59				
			ABIDJAN	1.61	1.07				
			KORHOGO	0.95	0.59				
			SIKASSO	0.95	0.59				
			BAMAKO	0.95	0.59				
Senegal	Mali	FP (CFAF/kg)	FARM					59.70	
			MATHAM					43.20	
			DAKAR					-19.24	
			KAYES					48.26	
			BAMAKO					25.85	
		DRC	FARM					0.52	
			MATHAM					1.14	
			DAKAR					3.31	
			KAYES					1.81	
			BAMAKO					1.81	
Guinee	Senegal	FP (GF/kg)	FARM	14.09	-18.50				
		FP (GF/kg)	LABE	13.19	-19.40				
		FP (GF/kg)	CONAKRY	54.69	22.10				
		FP (CFAF/kg)	TAMBA	60.79	47.21				
		FP (CFAF/kg)	KAOLACK	53.97	41.02				
		FP (CFAF/kg)	DAKAR	80.84	67.26				
		DRC	FARM	0.59	0.78				
			LABE	0.75	0.97				
			CONAKRY	1.62	1.96				
			TAMBA	1.23	1.52				
			KAOLACK	1.41	1.72				
			DAKAR	1.70	2.05				
Guinee	Mali	FP (GF/kg)	FARM					29.64	
		FP (GF/kg)	KANKAN					16.62	
		FP (GF/kg)	CONAKRY					-39.88	
		FP (CFAF/kg)	BAMAKO					68.97	
		FP (CFAF/kg)	KAYES					74.16	
		DRC	FARM					0.66	
			KANKAN					0.95	
			CONAKRY					2.11	
			BAMAKO					0.83	
			KAYES					0.84	

Change in Transport Cost

Producer	Importer			MAIZE Impr. Man.	MAIZE Trad. Man.	MIL/SOR Anim. Trac.	MIL/SOR Trad. Man.	RICE Intensive	RICE Semi-intens.
Mali	Senegal	FP (CFAF/kg)	FARM					27.40	32.40
			NIONO					39.48	44.48
			BAMAKO					58.54	63.54
			KAYES					62.10	67.09
			TAMBA					29.74	14.74
			KAOLACK					4.52	9.52
			DAKAR					-28.85	6.15
		DRC	FARM					0.36	0.34
			NIONO					0.51	0.49
			BAMAKO					0.78	0.75
			KAYES					0.99	0.95
			TAMBA					1.34	1.40
			KAOLACK					1.60	1.55
			DAKAR					1.92	1.85
Mali	Cote d'Ivoire	FP (CFAF/kg)	FARM			-10.60	-30.47	28.91	32.40
			NIONO			na	na	40.99	14.48
			BAMAKO			-9.30	-29.17	60.05	63.54
			SIKASSO			-13.30	-33.17	80.11	79.16
			KORHOGO			19.70	-25.17	29.64	70.13
			BOUAKE			18.93	-20.94	43.86	47.35
			ABIDJAN			25.20	-9.67	39.29	42.78
		DRC	FARM			0.44	0.60	0.34	0.33
			NIONO			na	na	0.55	0.54
			BAMAKO			0.54	0.72	0.67	0.66
			SIKASSO			0.54	0.72	0.86	0.84
			KORHOGO			0.75	0.96	0.96	0.94
			BOUAKE			0.93	1.17	1.15	1.13
			ABIDJAN			1.50	1.77	1.78	1.76
Mali	Guinea	FP (CFAF/kg)	FARM	-54.40	-25.73	-10.60	-30.47		
			SIKASSO	-55.56	-26.89	-9.30	-29.17		
			BAMAKO	-46.56	-17.89	-13.30	-33.17		
		FP (GF/kg)	SIGUIRI	-143.64	-74.83	-135.81	-183.50		
		FP (GF/kg)	KANKAN	-178.64	-109.83	-135.81	-183.50		
		DRC	FARM	0.60	0.38	0.40	0.55		
			SIKASSO	0.72	0.47	0.49	0.66		
			BAMAKO	0.72	0.47	0.49	0.66		
			SIGUIRI	2.55	1.86	1.77	2.12		
			KANKAN	2.94	2.19	2.03	2.39		
Cote d'Ivoire	Mali	FP (CFAF/kg)	FARM	-55.09	-24.67				
			BOUAKE	-41.82	-11.40				
			ABIDJAN	-50.14	-19.72				
			KORHOGO	-63.11	-32.69				
			SIKASSO	-76.11	-45.69				
			BAMAKO	-65.11	-34.69				
		DRC	FARM	0.70	0.42				
			BOUAKE	0.92	0.58				
			ABIDJAN	1.56	1.04				
			KORHOGO	0.92	0.58				
			SIKASSO	0.92	0.58				
			BAMAKO	0.92	0.58				
Senegal	Mali	FP (CFAF/kg)	FARM					59.70	
			MATHAM					43.20	
			DAKAR					-19.24	
			KAYES					47.76	
			BAMAKO					25.85	
		DRC	FARM					0.52	
			MATHAM					1.14	
			DAKAR					3.31	
			KAYES					1.76	
			BAMAKO					1.76	
Guinee	Senegal	FP (GF/kg)	FARM	14.09	-18.50				
		FP (GF/kg)	LABE	13.19	-19.40				
		FP (GF/kg)	CONAKRY	54.69	22.10				
		FP (CFAF/kg)	TAMBA	60.79	47.21				
		FP (CFAF/kg)	KAOLACK	53.97	41.02				
		FP (CFAF/kg)	DAKAR	80.84	67.26				
		DRC	FARM	0.59	0.78				
			LABE	0.75	0.97				
			CONAKRY	1.62	1.96				
			TAMBA	1.20	1.49				
			KAOLACK	1.40	1.71				
			DAKAR	1.70	2.05				
Guinee	Mali	FP (GF/kg)	FARM					29.64	
		FP (GF/kg)	KANKAN					16.62	
		FP (GF/kg)	CONAKRY					-39.88	
		FP (CFAF/kg)	BAMAKO					63.97	
		FP (CFAF/kg)	KAYES					67.52	
		DRC	FARM					0.66	
			KANKAN					0.95	
			CONAKRY					2.11	
			BAMAKO					0.85	
			KAYES					0.86	

Change in Price and Yields

Producer	Importer			MAIZE Impr. Man.	MAIZE Trad. Man.	MIL/SOR Anim. Trac.	MIL/SOR Trad. Man.	RICE Intensive	RICE Semi-Intens.
Mali	Senegal	FP (CFAF/kg)	FARM					129.77	134.53
			NIONO					60.07	64.82
			BAMAKO					113.03	117.78
			KAYES					103.22	107.97
			TAMBA					227.24	101.98
			KAOLACK					32.95	97.70
			DAKAR					70.19	94.94
		DRC	FARM					0.25	0.23
			NIONO					0.40	0.38
			BAMAKO					0.59	0.56
			KAYES					0.73	0.69
			TAMBA					0.95	0.90
			KAOLACK					1.09	1.03
			DAKAR					1.25	1.19
Mali	Cote d'Ivoire	FP (CFAF/kg)	FARM			-16.29	-37.90	129.77	134.53
			NIONO			na	na	60.07	34.82
			BAMAKO			2.47	-19.14	113.03	117.78
			SIKASSO			-7.03	-28.64	119.35	120.53
			KORHOGO			24.47	2.86	86.72	91.47
			BOUAKE			58.70	37.09	110.94	115.69
			ABIDJAN			49.97	28.36	148.37	153.12
		DRC	FARM			0.49	0.66	0.23	0.21
			NIONO			na	na	0.41	0.39
			BAMAKO			0.61	0.80	0.52	0.49
			SIKASSO			0.61	0.80	0.66	0.63
			KORHOGO			0.81	1.04	0.72	0.68
			BOUAKE			1.01	1.26	0.86	0.81
			ABIDJAN			1.63	1.91	1.33	1.25
Mali	Guinee	FP (CFAF/kg)	FARM	-64.98	-34.19	-16.29	-37.90		
			SIKASSO	-35.10	-4.31	2.47	-19.14		
			BAMAKO	-33.10	-2.31	-7.03	-28.64		
		FP (GF/kg)	SIGUIRI	-35.14	38.75	203.44	151.57		
		FP (GF/kg)	KANKAN	137.86	211.75	122.69	70.82		
		DRC	FARM	0.74	0.47	0.49	0.66		
			SIKASSO	0.92	0.60	0.61	0.80		
			BAMAKO	0.92	0.60	0.61	0.80		
			SIGUIRI	2.31	1.63	1.48	1.82		
			KANKAN	2.61	1.86	1.66	2.01		
Cote d'Ivoire	Mali	FP (CFAF/kg)	FARM	-29.55	4.27				
			BOUAKE	15.72	49.54				
			ABIDJAN	27.40	61.23				
			KORHOGO	-62.88	-29.06				
			SIKASSO	-54.66	-20.83				
			BAMAKO	-48.66	-14.83				
		DRC	FARM	0.81	0.48				
			BOUAKE	1.07	0.66				
			ABIDJAN	1.86	1.20				
			KORHOGO	1.07	0.66				
			SIKASSO	1.07	0.66				
			BAMAKO	1.07	0.66				
Senegal	Mali	FP (CFAF/kg)	FARM					53.79	
			MATHAM					62.31	
			DAKAR					59.81	
			KAYES					57.37	
			BAMAKO					49.95	
		DRC	FARM					0.56	
			MATHAM					1.23	
			DAKAR					3.82	
			KAYES					1.99	
			BAMAKO					1.99	
Guinee	Senegal	FP (GF/kg)	FARM	14.09	-18.50				
		FP (GF/kg)	LABE	13.19	-19.40				
		FP (GF/kg)	CONAKRY	54.69	22.10				
		FP (CFAF/kg)	TAMBA	147.50	133.92				
		FP (CFAF/kg)	KAOLACK	137.90	124.32				
		FP (CFAF/kg)	DAKAR	138.30	124.72				
		DRC	FARM	0.59	0.78				
			LABE	0.75	0.97				
			CONAKRY	1.82	1.96				
			TAMBA	1.23	1.52				
			KAOLACK	1.41	1.72				
			DAKAR	1.70	2.05				
Guinee	Mali	FP (GF/kg)	FARM					29.64	
		FP (GF/kg)	KANKAN					379.62	
		FP (GF/kg)	CONAKRY					398.12	
		FP (CFAF/kg)	BAMAKO					98.97	
		FP (CFAF/kg)	KAYES					86.94	
		DRC	FARM					0.66	
			KANKAN					0.95	
			CONAKRY					2.11	
			BAMAKO					0.81	
			KAYES					0.82	

Change in Price and Transport Cost

Producer	Importer			MAIZE Impr. Man.	MAIZE Trad. Man.	MIL/SOR Anim. Trac.	MIL/SOR Trad. Man.	RICE Intensive	RICE Semi-intens.
Mali	Senegal	FP (CFAF/kg)	FARM					96.19	100.01
			NIONO					26.55	30.36
			BAMAKO					79.50	79.42
			KAYES					69.70	67.98
			TAMBA					193.71	61.46
			KAOLACK					-0.57	52.17
			DAKAR					36.67	52.03
		DRC	FARM					0.43	0.39
			NIONO					0.63	0.57
			BAMAKO					0.92	0.89
			KAYES					1.14	1.16
			TAMBA					1.54	1.76
			KAOLACK					1.81	1.95
			DAKAR					2.15	2.51
Mali	Cote d'Ivoire	FP (CFAF/kg)	FARM			-10.60	-454.51	96.19	100.01
			NIONO			na	na	26.55	0.36
			BAMAKO			8.16	-435.75	75.61	79.42
			SIKASSO			-4.34	-448.25	95.83	95.18
			KORHOGO			29.16	-414.75	52.20	56.01
			BOUAKE			63.39	-380.53	76.42	80.24
			ABIDJAN			54.66	-389.25	113.85	117.66
		DRC	FARM			0.44	4.49	0.39	0.37
			NIONO			na	na	0.65	0.63
			BAMAKO			0.55	5.47	0.79	0.77
			SIKASSO			0.55	5.47	1.02	1.00
			KORHOGO			0.76	7.44	1.18	1.16
			BOUAKE			0.94	9.57	1.45	1.42
			ABIDJAN			1.52	18.64	2.42	2.40
Mali	Guinea	FP (CFAF/kg)	FARM	-64.98	-34.19	-10.60	-30.47		
			SIKASSO	-35.10	-4.31	8.16	-11.71		
			BAMAKO	-36.10	-5.31	-4.34	-24.21		
		FP (GF/kg)	SIGUIRI	-47.34	26.55	204.89	157.21		
		FP (GF/kg)	KANKAN	120.66	194.55	119.14	71.46		
		DRC	FARM	0.67	0.42	0.40	0.55		
			SIKASSO	0.82	0.53	0.50	0.66		
			BAMAKO	0.82	0.53	0.50	0.66		
			SIGUIRI	3.19	2.29	1.79	2.14		
			KANKAN	3.76	2.76	2.07	2.42		
Cote d'Ivoire	Mali	FP (CFAF/kg)	FARM	-26.61	6.19				
			BOUAKE	18.66	51.46				
			ABIDJAN	30.34	63.14				
			KORHOGO	-67.63	-34.83				
			SIKASSO	-56.63	-23.83				
			BAMAKO	-52.63	-19.83				
		DRC	FARM	0.78	0.47				
			BOUAKE	1.03	0.64				
			ABIDJAN	1.79	1.17				
			KORHOGO	1.03	0.64				
			SIKASSO	1.03	0.64				
			BAMAKO	1.03	0.64				
Senegal	Mali	FP (CFAF/kg)	FARM					59.70	
			MATHAM					68.20	
			DAKAR					65.76	
			KAYES					63.26	
			BAMAKO					55.85	
		DRC	FARM					0.52	
			MATHAM					1.14	
			DAKAR					3.31	
			KAYES					1.81	
			BAMAKO					1.81	
Guinea	Senegal	FP (GF/kg)	FARM	14.09	-18.50				
		FP (GF/kg)	LABE	13.19	-19.40				
		FP (GF/kg)	CONAKRY	54.69	22.10				
		FP (CFAF/kg)	TAMBA	147.50	133.92				
		FP (CFAF/kg)	KAOLACK	137.90	124.32				
		FP (CFAF/kg)	DAKAR	138.30	124.72				
		DRC	FARM	0.59	0.78				
			LABE	0.75	0.97				
			CONAKRY	1.62	1.96				
			TAMBA	1.20	1.49				
			KAOLACK	1.40	1.71				
			DAKAR	1.70	2.05				
Guinea	Mali	FP (GF/kg)	FARM					29.64	
		FP (GF/kg)	KANKAN					379.62	
		FP (GF/kg)	CONAKRY					398.12	
		FP (CFAF/kg)	BAMAKO					98.97	
		FP (CFAF/kg)	KAYES					86.94	
		DRC	FARM					0.66	
			KANKAN					0.95	
			CONAKRY					2.11	
			BAMAKO					0.81	
			KAYES					0.82	

CHANGES IN PRICES, TRANSPORT COSTS AND YIELDS

Producer	Importer			MAIZE Impr. Man.	MAIZE Trad. Man.	MIL/SOR Anim. Trac.	MIL/SOR Trad. Man.	RICE Intensive	RICE Semi-Intens.
Mali	Senegal	FP (CFAF/kg)	FARM					129.77	134.53
			NIONO					60.07	64.82
			BAMAKO					109.13	113.88
			KAYES					97.69	102.43
			TAMBA					220.33	95.91
			KAOLACK					25.11	91.63
			DAKAR					61.74	86.49
		DRC	FARM					0.24	0.22
			NIONO					0.37	0.35
			BAMAKO					0.59	0.56
			KAYES					0.75	0.72
			TAMBA					1.02	1.02
			KAOLACK					1.21	1.12
			DAKAR					1.44	1.36
Mali	Cote d'Ivoire	FP (CFAF/kg)	FARM			-16.29	-37.90	129.77	134.53
			NIONO			na	na	60.07	34.82
			BAMAKO			2.47	-19.14	109.13	113.88
			SIKASSO			-10.03	-31.64	117.45	118.64
			KORHOGO			23.47	1.86	85.72	90.47
			BOUAKE			57.70	36.09	109.94	114.69
			ABIDJAN			48.97	27.36	147.37	152.12
		DRC	FARM			0.48	0.66	0.23	0.21
			NIONO			na	na	0.41	0.38
			BAMAKO			0.60	0.79	0.52	0.49
			SIKASSO			0.60	0.79	0.67	0.64
			KORHOGO			0.82	1.05	0.73	0.69
			BOUAKE			1.03	1.28	0.87	0.83
			ABIDJAN			1.66	1.94	1.35	1.28
Mali	Guinee	FP (CFAF/kg)	FARM	-64.98	-34.19	-16.29	-37.90		
			SIKASSO	-35.10	-4.31	2.47	-19.14		
			BAMAKO	-36.10	-5.31	-10.03	-31.64		
		FP (GF/kg)	SIGUIRI	-47.34	26.55	191.24	139.37		
		FP (GF/kg)	KANKAN	120.66	194.55	105.49	53.62		
		DRC	FARM	0.67	0.42	0.44	0.60		
			SIKASSO	0.82	0.53	0.54	0.72		
			BAMAKO	0.82	0.53	0.54	0.72		
			SIGUIRI	3.19	2.29	1.95	2.32		
			KANKAN	3.76	2.76	2.25	2.61		
Cote d'Ivoir	Mali	FP (CFAF/kg)	FARM	-29.55	4.27				
			BOUAKE	15.72	49.54				
			ABIDJAN	27.40	61.23				
			KORHOGO	-70.57	-36.74				
			SIKASSO	-59.57	-25.74				
			BAMAKO	-55.57	-21.74				
		DRC	FARM	0.81	0.48				
			BOUAKE	1.07	0.66				
			ABIDJAN	1.86	1.20				
			KORHOGO	1.07	0.66				
			SIKASSO	1.07	0.66				
			BAMAKO	1.07	0.66				
Senegal	Mali	FP (CFAF/kg)	FARM					59.70	
			MATHAM					68.20	
			DAKAR					59.70	
			KAYES					65.76	
			BAMAKO					63.26	
		DRC	FARM					0.52	
			MATHAM					1.14	
			DAKAR					0.52	
			KAYES					3.31	
			BAMAKO					63.26	
Guinee	Senegal	FP (GF/kg)	FARM	14.09	-18.50				
		FP (GF/kg)	LABE	13.19	320.60				
		FP (GF/kg)	CONAKRY	54.69	23.10				
		FP (CFAF/kg)	TAMBA	147.50	38.92				
		FP (CFAF/kg)	KAOLACK	137.90	40.32				
		FP (CFAF/kg)	DAKAR	138.30	53.72				
		DRC	FARM	0.59	0.78				
			LABE	0.75	0.97				
			CONAKRY	1.62	1.96				
			TAMBA	1.20	1.49				
			KAOLACK	1.40	1.71				
			DAKAR	138.30	2.05				
Guinee	Mali	FP (GF/kg)	FARM					29.64	
		FP (GF/kg)	KANKAN					379.62	
		FP (GF/kg)	CONAKRY					398.12	
		FP (CFAF/kg)	BAMAKO					98.97	
		FP (CFAF/kg)	KAYES					86.94	
		DRC	FARM					0.66	
			KANKAN					0.95	
			CONAKRY					2.11	
			BAMAKO					0.81	
			KAYES					0.82	

USAID EQUITY AND GROWTH

THROUGH ECONOMIC RESEARCH PROJECT

TRADE REGIMES AND GROWTH COMPONENT

STATISTICAL ANALYSIS OF FOREIGN AND LOCAL INVESTMENT

By Margaret McMillan

Part of a larger study conducted by

Drs. Lucie C. Phillips, Marios Obwona, A.B. Ayako and Margaret McMillan

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6 January, 1998

International Business Initiatives

Rosslyn, VA

1. INTRODUCTION

Foreign direct investment (FDI) is viewed by many leaders in Sub-Saharan Africa as a panacea for low levels of domestic savings and investment. [1] This is not that surprising given the recent hype over foreign capital flows to developing countries and the fact that in the first half of the 1990s, FDI became the largest single source of external finance for developing countries.[2] In fact, several countries have gone out of their way to attract foreign investors by providing subsidies and other special incentives to foreign investors.[3] However, as Table 1 shows, FDI as a percent of GDP is miniscule when

Table 1

How Important is FDI as a Source of Capital?
(both columns are reported as a percentage of gross domestic product)

	Foreign Direct Investment		**Domestic Investment**	
	mean	standard deviation	mean	standard deviation
Sub-Saharan Africa	.011	.039	.196	.145
Asia	.020	.032	.238	.080
Latin America	.013	.017	.162	.061
OECD	.014	.043	.191	.043
All	.013	.028	.193	.100

Sources:International Financial Statistics Tape, 1997. World Investment Directory, Volume V, Africa, 1997.

compared with domestic investment as a percent of GDP. It is domestic investment that will generate growth in Sub-Saharan Africa, not FDI. Unless, FDI increases domestic investment. Hence the question:what impact if any, does FDI have on domestic investment?

This paper conducts a systematic, worldwide, econometric analysis of the causal relationship between FDI and domestic investment. Granger Causality tests are performed on a panel of countries both developed and developing from all regions of the world. Then, four regions are examined separately:the OECD countries, Sub-Saharan Africa, Asia and Latin America. Finally, three countries from Sub-Saharan Africa, Kenya, Mauritius and Uganda are considered on a case by case basis.

[1] Ridell et al. Fry
[2] Harrison & Aitken, 1997.
[3] World Investment Directory, p xii (d) Fiscal incentives and other promotion measures.

Using data for 86 countries from all regions of the world, I find that both domestic and foreign investment have a strong positive impact on future domestic investment. The impact of foreign investment is especially strong in the long run. Conversely, only foreign investment has a strong positive impact on future foreign investment and this only in the short run. Domestic investment does not appear to be an indicator of future foreign investment. Hence, it appears that while FDI can indeed be an engine for domestic investment, the current presence of FDI facilitates the future presence of FDI only in the short run. This seems to justify all the attention paid to determinants of FDI and seems to imply that FDI and domestic investment respond to different sets of explanatory variables.

Sub-Saharan Africa is slightly different because of an apparent crowding out effect of foreign investment relative to future domestic investment. Thus, unlike in the rest of the world, foreign investment does not appear to have been an engine for domestic investment in Sub-Saharan Africa. Also, unlike in other regions, domestic investment does seem to be a pre-condition for future foreign direct investment in Sub-Saharan Africa, especially in the long-run.

Several papers, both theoretical and empirical have examined the impact of foreign direct investment on domestic investment. In theory, FDI can "crowd in", "crowd out"or have no impact on domestic investment. Hence, the question is ultimately an empirical one. Not surprisingly, the results of the empirical work are also mixed. This probably has something to do with the structure of the host economies. The various theoretical arguments are outlined in section 2. Table 2 also in section 2 summarizes the empirical work to date.

The remainder of this paper is organized as follows. Section 2 outlines the related theoretical and empirical work. Section 3 describes the data. Section 4 describes the methodology. Results are presented in Section 5 and concluding remarks in Section 6.

2. Related Literature/Background

Economic theory points to both direct and indirect channels through which FDI may affect domestic investment in the host country. FDI may influence the investment plans of domestic entrepreneurs directly via sectoral linkages or indirectly through the effect on aggregate expenditures. Each of these effects may be positive or negative and their joint effect determines whether FDI will stimulate or stifle domestic investment and by how much.

Under the direct effect, if total investment rises by more than the size of the inflow, then foreign resource inflows may be said to have caused complementary effects. FDI may induce such complementary domestic investments since the operation of both foreign and domestic firms may encourage local entrepreneurship by their purchases from or subcontracts to local suppliers and/or by their supplies of lower cost inputs for local industries. Critics of FDI in developing countries claim that foreign firms do not generate enough of these linkages (Singer, 1960). Reuber er al (1973) have argued that to the extent that foreign firms engage in labour intensive processing of components for exports they will make few local purchases of inputs. These authors also investigated forward linkages based on a sample survey and found that most

of the respondents in their survey reported none. Among the few statistical studies of linkage effects of foreign investment that exist for LDCs, the weight of the evidence seems to support the view that foreign firms purchase a larger proportion of their inputs from abroad than do local firms (Biersteker 1978:Cohen 1973). For a more recent and more elaborate survey of these studies see Caves (1988).

Besides the linkage effects, foreign resource inflows may also encourage or discourage domestic investment through other types of incentive effects. Thus, to the extent that foreign firms help train workers and local managers in new skills and technical know-how, direct investment is likely to exert a larger positive effect on domestic investment than debt capital (Globerman, 1979). However, several others have argued that instead of stimulating domestic investment, FDI might actually stifle domestic investment (Lubitz, 1971: and Papanek, 1972). According to these authors, possible offsets to domestic investment may occur through various channels. Foreign firms may suppress nascent local entrepreneurship (a) due to their technological superiority (b) by pre-empting scarce domestic capital or of some other bottleneck resource and thus depriving indigenous firms of their main source of finance or other critical inputs (c) by their superior tax and import advantages over local firms and (d) by creating effective entry barriers through the monopolistic exploitation of market power and control of patents and trademarks (The Committee for Economic Development, 1988). Since these advantages are usually associated with foreign direct investment as opposed to foreign debt capital, the substitution argument applies primarily to the former rather than to the latter type of capital inflows.

There are also several macro-mechanisms through which capital inflows may affect domestic investment. Like the direct effects the indirect macroeconomic effects of FDI vs. debt capital may be substantially different. The first and most well-known of these indirect channels is the Keynesian accelerator mechanism. According to this principle, deviations of aggregate spending from capacity output is a driving force of domestic capital formation. Thsu, to the extent that the direct and debt capital inflows are able to alter the level of aggregate expenditures, both may have an additional indirect effects on domestic investment. Second, capital inflows in either form may reduce domestic investment if there exists a negative causal relationship between foreign resource inflows and domestic savings. Bhagwati (1978), Weisskopf (1972) and many others have developed the negative savings argument. The underlying rationale for this hypothesis is that as an economy receives more foreign capital, it supplements its available resources, thus it is reasonable to assume that some part of the additional resources will be expended on increasing current consumption. With current consumption rising at a given level of income, current domestic savings must fall. Third, foreign resource inflows either in the form of direct or debt capital may also exert an indirect effect on domestic investment via its impact on exports and imports of the host country. If income changes are insufficient to completely requite the capital inflow in real terms, prices or exchange rates are likely to adjust inducing additional changes in exports and imports. Which of these mechanisms will dominate depends on the prevailing exchange rate regime, the flexibility of domestic wages and prices and the initial level of employment in the capital receiving country (Penner, 1962;Faroque and Veloce, 1990).

Table 2 summarizes the empirical work to date (not yet complete).

- FDI "crowds out"domestic investment (Harrison, 1997, Fry, 1993, Katikati, 1992, Faroque&Bougrine, 1992, Weisskopf, 1972)

- FDI "crowds in"domestic investment (Harrison, 1997, Fry, 1993, Van Loo, 1972)

- Profitability of domestic investment may increase foreign investment and exports (Rodrik, 1995, 1997)

According to Fry (August, 1993), in a sample of 5 developing countries within the Pacific Basin (Indonesia, South Korea, Malaysia, the Phillipines and Thailand) FDI raised domestic investment and rates of economic growth. However, in 11 developing countries outside the Pacific Basin, FDI was accompanied by lower rates of domestic investment, lower national saving and lower growth. Fry claims that the explanation for these different effects lies to a large extent in different macro-economic environments in the recipient countries. Specifically, he argues that greater trade and financial distortions reduce the efficiency of all investment and at some point these distortions turn the positive effects of FDI on domestic investment and growth into negative effects.

Recent work by Ann Harrison tries to get at the links between FDI and domestic investment using firm level data. Although many others have used firm level data, Harrison's work is the first to use a panel. This allows her to control for firm-specific fixed effects and avoid the criticism that the findings are meaningless because... The major advantage of using firm level data is that it allows her to pinpoint sectors where the linkages occur and to identify better the reasons for the linkages. For example, in her paper with Brian Aitken (1997), she finds that foreign investment negatively affects the productivity of domestically-owned plants. They argue that entry of foreign firms causes the productivity of domestic firms to fall by drawing demand away from domestic firms, forcing these firms to spread their fixed costs over a smaller market. These results are corroborated with case study evidence for Venezuela (Matos 1977) which claims very little evidence of technology transger from multinationals to domestically owned firms.

Harrison (1994) did four separate studies on the Ivory Coast, Mexico, Morocco and Venezuela to determine whether multinational enterprises promote technology transfer; test whether multinationals push up wages for local workers; and assess the validity of the "pollution haven hypothesis" i.e. that foreign investors flock to developing countries to take advantage of lax environmental standards. To summarize, she finds that: joint ventures benefit from foreign partnerships through improved productivity; joint ventures and foreign subsidiaries do not transfer technology to domestic enterprises and in fact domestic competitors appear to be harmed by foreign entry; MNEs act as export catalysts, helping domestic firms to break into export markets; MNEs pay much higher wages than domestic firms, which suggests that incoming foreign investment may provide one way to raise living standards for at least a part of the population; no evidence to support the pollution haven hypothesis.

In addition to these studies that look specifically at the links between FDI and domestic investment, several studies look at the determinants of investment. Not surprisingly, all of these studies indicate the importance of a stable macroeconomic environment for investment. An

update of the Adjustment in Africa study by the World Bank (1995) shows that two thirds of the countries that improved their macro policies (fiscal, monetary and exchange rate policies) also experienced an improvement in domestic investment performance, while in the group of countries that experienced a deterioration in macro performance, only one of the countries experienced an increase in investment. Harrison and Revenga (1995) show that a stable macroeconomic environment as measured by the ratio of domestic investment to GDP, the size of government and the real exchange rate is important for attracting foreign direct investment (FDI). Also important are the size of the local market and openness to trade. Fry (1993) in an empirical study of FDI in South Asia, finds that the best way to encourage FDI is to implement policies that generally improve the investment climate. Where domestically financed investment is booming, FDI will seek to participate. Hence, he argues that as a general principal, policies that encourage domestic investment will also stimulate foreign direct investment.

A similar group of work looks not at the macro determinants of investment but at the micro determinants of investment. This research looks at the effectiveness of the microeconomic policies specifically designed to promote private investment, both local and foreign. For example, Fry (1993) finds that policies designed to deliberately stimulate FDI may simply encourage round-trip capital flows from the host country, thus reducing national savings. In a survey of the incentive systems in nine Asian countries, Chen (1994) finds that competition for FDI through special incentive schemes may actually be more harmful than beneficial. For example, one study of Thailand shows that 70% of all projects that received fiscal incentives such as tax holidays would have proceeded without the tax incentives. Moreover, the result of tax competition among these nine countries is that all offer essentially the same package. Hence, the main impact of these incentive schemes is a loss in government revenues. In a series of studies by the OECD, it was found that investment incentives play little role in determining whether or not to undertake the investment, or the timing and form of such an investment, but did play a role in choosing the location of the investment.

An area which has been under-researched is the relationship between FDI and domestic investment in Sub-Saharan Africa. Are FDI and domestic investment close substitutes or are their important differences between the two types of investment? This is an important question since African governments tend to devote a substantial amount of resources to attracting foreign investment.

3. Methodology

Several alternative tests of causality exist. These tests can be grouped into two categories; Granger tests and Sims tests. In addition, each of these tests can be performed using the following test statistics;Wald, Likelihood Ratio and Lagrange Multiplier. Per Geweke et al (1983) who show that the Wald variants of these tests are equivalent in all relevant respects and superior in finite samples, I will use the Wald variants of these tests. Having clarified this technical point, let me briefly define the Granger Causality Test (Granger, 1969) and Sims Causality Test (Sims, 1972) that I will use to establish causality between foreign direct investment and domestic investment.

Granger's definition of causality is based on the following idea. A time series $\{y_t\}$ 'causes' another time series $\{x_t\}$ if present x can be predicted better by using past values of y than by not doing so, other relevant information (including the past of x) being used in either case. If we (i) restrict the relevant information about x to past values of x and y, (ii) assume that x and y are jointly covariance stationary time series with autoregressive representation, (iii) constrain the set of predictors to be linear in past x and y, and (iv) use as a criterion for comparison of predictors the mean square error, then , the question of whether $\{y_t\}$ cases $\{x_t\}$ is equivalent to the question of whether there exists an auto-regressive representation,

$$(1) \qquad \begin{pmatrix} x_t \\ y_t \end{pmatrix} = \begin{bmatrix} d(L) & e(L) \\ a(L) & b(L) \end{bmatrix} \begin{pmatrix} x_t \\ y_t \end{pmatrix} + \begin{pmatrix} \varepsilon_t \\ \delta_t \end{pmatrix}$$

in which e(L)=0.[4]

Sims (1972) considers a slightly different relationship between x and y which in practice is almost identical to Granger's test. In addition to the projection of y_t on current and past x_t,

$$(2) \qquad y_t = f_1(L)x_t + u_t = \sum_{s=0}^{\infty} f_{1s} x_{t-s} + u_t$$
$$\operatorname{cov}(u_t, x_{t-s}) = 0, s \geq 0,$$

Sims considers the projection of y_t on future, current and past x_t ,

$$(3) \qquad y_t = f_2(L)x_t + v_t = \sum_{s=-\infty}^{\infty} f_{2s} x_{t-s} + v_t,$$
$$\operatorname{cov}(v_t, x_{t-s}) = 0, \forall s.$$

He shows that $\{y_t\}$ does not cause $\{x_t\}$ if and only if the second projection involves only currrent and past x_t , so that $f_1(L) = f_2(L)$. The tests end up being very similar in practice because u_t and v_t are typically serially correlated. Hence, estimation requires a feasible generalized least squares estimator obtained using the following transformation of equations (2) and (3),

$$(4) \qquad y_t = \sum_{s=1}^{\infty} h_s y_{t-s} + \sum_{s=-\infty}^{\infty} f_{3s} x_{t-s} + \omega_t.$$

[4] c :ore the fact that in theory their actual form is unknown while in applications we typically arbitrarily restrict them to be polynomials of finite order.

Issues of concern when estimating equations (1) and (4) include: serial correlation of the errors, time-stationarity of the series, the possibility of unit roots and the time-consistency of the estimates. Serial correlation of the errors is not a serious constraint since it can be detected and corrected using either of the cochrane-orcutt or hildreth-lu procedures. Similarly, one can test for time-stationarity and unit roots. If the series is explosive, a well-behaved series can usually be obtained by transforming the series (usually by first-differencing). Time stationarity can be taken into account by allowing for breaks in the series and corresponding differences in the values of the estimated coefficients. On the other hand, consistent estimation of this equation requires observations over a long period of time.[5] If few observations are available, little can be done and the estimates are likely to be biased (direction?) .

When the time-series data are relatively short, one way of getting more observations on x and y is to pool data across the unit of observation. However, pooling data from different cross-sectional units imposes the constraint that the underlying structure (error, constant and slope parameters) is the same for each cross-sectional unit. In practice, this constraint is likely to be violated so we would like to be able to relax this restriction. To relax this constraint, we would like to be able to control for (i) country-specific effects (either fixed or random effects) and (ii) heterogeneity in the error structure across countries. As with a single unit of observation, the issues of time-stationarity and unit and explosive roots are relevant in the panel as they are for the single country case.[6]

A model that allows for country-specific fixed effects, country-specific slope parameters and a heterogeneous error structure can be obtained by modifying equations (1) and (2).Let N stand for the number of cross-sectional units observed over T periods. Let i index the cross-sectional observations and t the time periods. Then, a model analogous to equations (1) and (4) that allows for unit-specific effects is the following,

$$(5) \qquad \begin{bmatrix} x_{it} \\ y_{it} \end{bmatrix} = \begin{bmatrix} d(L)e(L)\alpha_3\alpha_4 \\ a(L)b(L)\beta_3\beta_4 \end{bmatrix} \begin{bmatrix} x_{it} \\ y_{it} \\ f_i \\ f_i \times t \end{bmatrix} + \begin{bmatrix} \varepsilon_{it} \\ \delta_{it} \end{bmatrix}$$

(i = 1, ... N; t=1, ... , T),

where f_i is the unobserved fixed effect and $f_i \times t$ allows for country specific slopes.

[5] The rule of thumb is 30 degrees of freedom.

[6] An additional advantage of pooling cross-sectional units has to do with time stationarity. "The presence of a large number of cross-sectional units makes it possible to allow for lag coefficients that vary over time. Thus, the assumption of time stationarity can be relaxed. Also, the asymptotic distribution theory for a large number of cross-sectional units does not require the VAR to satisfy the usual conditions that rule out unit and explosive roots. Of course, the presence of an explosive process may lead to difficulty in interpreting the model. Nevertheless, it is still possible, for example, to use standard asymptotic distribution theory to formulate valid tests for explosive behavior. (p.1373 H-E, N, & Rosen)" In this paper, I do not allow for non-stationarities across time because ..... either, the series are stationary over the time period 70-96 or when they are not initially stationary, first differences are used.

An additional problem in this context is posed by the presence of lagged dependent variables. When lagged dependent variables appear as explanatory variables, as they do in this case, the MLE even under the fixed effects formulation is no longer consistent in the typical situation in which a panel involves a large number of individuals, but over only a short period of time.[7] The problem arises because estimation of the coefficients by LSDV eliminates the unkown individual constant from each observation. This in turn creates a correlation of order (1/T) between the explanatory variables and the residuals in the transformed model. Obviously, as T goes to infinity, this problem goes away. However, when the series is short, not correcting for this will bias the estimates downward.

Instrumental variables is one way of obtaining consistent estimates in the presence of lagged dependent variables. The procedure involves taking first differences to eliminate the unkown fixed effect and then using the second lag of the first differences as an instrument for the first lag. The result is the following,

$$(6) \qquad \begin{bmatrix} x_{it-1} - x_{it-1} \\ y_{it-1} - y_{it-1} \end{bmatrix} = \begin{bmatrix} d(L)e(L) \\ a(L)b(L) \end{bmatrix} \begin{bmatrix} x_{it-1} - x_{it-2} \\ y_{it-1} - y_{it-2} \end{bmatrix} + \begin{bmatrix} \varepsilon_{it} \\ \delta_{it} \end{bmatrix} .$$

Consistent estimates of the parameters of this equation can be obtained by using either x_{it-2}-x_{it-3} and y_{it-2}-y_{it-3} or x_{it-3} and y_{it-3} as instruments.

Whether or not explosive roots are an issue, depends on the precise way in which F and D are defined. If F and D are calculated as a percent of GDP, then the series must lie between 0 and 1 and so unit roots are ruled out. If, on the other hand, F and D are measured in absolute levels, unit roots become an issue. To estimate equations (8) when the data are in levels, the series are first transformed to a non-explosive series by taking first differences.

4. The Data

Source: International Monetary Fund's International Financial Statistics

110 countries

1948-1996 (developing starts later)

gross fixed capital formation

[7] The bias of γ hat is caused by having to eliminate the unknown individual constant (or effects) alpha i star from each observation, which creates the correlation of the order (1/T) between the explanatory variables and the residuals in the transformed model
When T is large, the RHS variables become asymptotically uncorrelated. For small T, this bias is always negative if gamma hat is greater than 0. Nor does this bias go away as gamma goes to zero. Because a typical panel ususally contains a small number of time-series observations, this bias can hardly be ignored. For instance, when T=2, the asymptotic bias is equal to -(1+gamma)/2, and when Fortuneately a consistent estimator of gamma can be obtained by using instrumental-variable methods.

inward flows of FDI

Source: United Nations National Accounts

33 countries

1950-1996

gross fixed capital formation - private

gross fixed capital formation - public

TABLE 3 - DESCRIPTIVE STATISTICS

5. Testing for Causality

In part the methodology we choose depends on the frequency of the data we use. Tests will be performed on annual data and on 5 year averages. The reason is that investment is the most volatile component of GDP. Year to year fluctuations in investment may pick up a lot of noise. We are not only interested in the year to year fluctuations, we are also interested in the long term relationship between FDI and domestic investment. This we hope to pick up using the five year averages.

Also important for both choice of methodology and interpretation of the results is the way in which we define investment. For example, if we want to look at actual levels, we are likely to find that the series are non-stationary and so we should test for stationarity and proceed accordingly. If we use investment as a percent of GDP, the series will be stationary but it will be more difficult to interpret the results. For these reasons, tests are performed on (i) investment as a percent of GDP, (ii) nominal first differences, (iii) real first differences and (iv) real percentage changes.

Whether or not instrumental variables is necessary depends on the number of observations over time. If I have more than 20 years worth of data, I will assume that a time-

consistent estimate may be obtained without recourse to instrumental variables. However, to determine the longer run relationship between F and D, I will use five year averages. This, of course, cuts the number of observations over time considerably. In this case, I do use instrumental variables to estimate these equations.

Note, an additional assumption I will make is that concerning the lag length. I assume that the lag length is the same for both D and F. I also assume a finite lag length equal to m.[8] To determine m, I apply the Schwarz-Bayes Information Criterion.

Based on the specification in equation (5), I estimate the following system of equations for a sample of 86 countries:

$$F_{it} = \alpha_0 + \sum_{L=1}^{m} \alpha_L F_{it-L} + \sum_{L=1}^{m} \beta_L D_{it-L} + \eta_i cdum_i + \lambda_i cdum_i \times time + u_{it} \tag{9}$$

$$D_{it} = \delta_0 + \sum_{L=1}^{m} \delta_L F_{t-L} + \sum_{L=1}^{m} \gamma_L D_{it-L} + \mu_i cdum_i + \pi_i cdum_i \times time + v_{it}$$

where m denotes the lag length and is chosen to ensure that the u_t and v_t are white noise error terms. The α' s , β 's , δ's and γ 's are the coefficients of the linear projections of F and D on a constant and past values of F and D. cdum is the country fixed effect and cdum multiplied by time allows for country specific trends.

All of the results discussed in sections 5.1 and 5.2 are presented in Tables 4-8. The results in Table 4 are based on annual data while the results in Tables 5 and 6 are based on five year averages. Tables 7 and 8 are contingency tables based on 15 year averages. The results discussed in section 5.3 are based on Table 9 and Figures 1 and 2.

5.1 All Countries

Two very robust findings are:domestic investment significantly predicts future domestic investment and fdi also significantly predicts future domestic investment. Both effects are positive and economically relevant. For example, a one percent increase in domestic (foreign) investment as a percent of GDP increases next years domestic investment by 0.7% (0.5%) . When we consider the data measured in first differences, a one dollar increase in the change in domestic investment leads to a 40 cents increase in the change in next years domestic investment in nominal terms and in real terms 30 cents increase. When we consider the data measured in first differences, a one dollar increase in the change in foreign investment leads to a 90 cents increase in the change in next years domestic investment in nominal terms and in real terms 60 cents increase.

[8] "In practice, the entire history of each economic unit is not usually observed and some assumptions must be imposed to identify the time series relationship of F and D using the observed data." (HE,W, N)

The evidence on the impact of domestic and fdi on future foreign investment is somewhat less clear. Domestic investment has a small and only marginally significant impact on future foreign investment. On the other hand, foreign investment has a strong and significant impact on future foreign investment when measured as a percent of GDP: an increase by one percent of FDI today leads to an increase of about 0.4 % in FDI next year. When measured in first differences, an increase in foreign investment today leads to a reduction in foreign invesment tomorrow of about 15 to 20 cents per dollar. This seemingly contradictory evidence can be interpreted as follows: (calculations in footnote) from the first difference specification we know that the impact of current FDI on next years FDI is actually one plus the reported coefficient. Hence, the first difference evidence can be reinterpreted as indicating that a one dollar change in current foreign investment leads to an 85-80 cents change in the level of FDI in the following year. This number is greater than the coefficient on FDI as a percentage of GDP because of the positive effect that current FDI has not only on next years FDI but also on next years GDP.

Longer term evidence obtained using five year averages and measuring variables as a percent of GDP When it comes to long run relationships, not surprisingly the evidence from percent of GDP regressions is not very strong. Indeed over a five year period one would expect domestic investment and foreign direct investment to be on average close to their quote unquote equilibrium levels. These equilibrium levels are not likely to change much from one five year period to the next.

However, when measured in first differences, we find a strong and significant impact of both domestic and foreign investment on future domestic investment. For example, a one dollar increase in the change in domestic investment induces an increase of about 90 cents in the future change in domestic investment. The impact of foreign investment is even stronger: a one dollar increase in the change in foreign investment leads to about a 6 dollar increase in the future change in domestic investment. On the other hand, neither domestic nor foreign investment has a sizeable or significant effect on future foreign investment.

What we'd like to be able to test for are structural changes in the economy. This is particularly relevant for SSA where investment as a percent of GDP is lower than "average". One way of doing this is to use a non-parametric test Non-parametric tests circumvent the problem of misspecification and when it comes to these very long run relationships we could do either cross-sectional regression or a non-par. test and I choose the non-p test because of the advantage of not having to specify the relationship between current and future invesment. Results of this test are presented in

[[Check contingency table for all countries.]]

In summary, we may conclude that both domestic and foreign investment have a strong positive impact on future domestic investment;both in the short and long runs, where the impact of foreign investment is especially strong in the long run. Conversely, only foreign investment has a strong positive impact on future foreign investment and this only in the short run. Domestic investment does appear to be an indicator of future foreign investment Hence, it appears that while FDI can indeed be an engine for domestic investment, the current

presence of FDI facilitates the future presence of FDI only in the short run. This seems to justify all the attention paid to determinants of FDI and seems to imply that FDI and domestic investment respond to different sets of explanatory variables.

5.2 Sub-Saharan Africa & Other Regional Evidence

The evidence for SSA is both qualitatively and quantitatively similar to what I obtained for all countries considered jointly. The two very robust findings are still :domestic investment significantly predicts future domestic investment and fdi also significantly predicts future domestic investment. Both effects are positive and economically relevant. For example, a one percent increase in domestic (foreign) investment as a percent of GDP increases next years domestic investment by 0.6% (0.5%) . When we consider the data measured in first differences, a one dollar increase in the change in domestic investment leads to a 40 cents increase in the change in next years domestic investment in nominal terms and in real terms 20 cents increase. When we consider the data measured in first differences, a one dollar increase in the change in foreign investment leads to a 40 cents increase in the change in next years domestic investment in nominal terms and in real terms 30 cents increase.

The evidence on the impact of domestic and fdi on future foreign investment is still somewhat less clear. Again, domestic investment has a small and only marginally significant impact on future foreign investment. On the other hand, foreign investment has a strong and significant impact on future foreign investment when measured as a percent of GDP: an increase by one percent of FDI today leads to an increase of about 0.2 % in FDI next year. When measured in first differences, an increase in foreign investment today leads to a reduction in foreign invesment tomorrow of about 50-15 cents per dollar. As in the discussion above, these coefficients translate into a positive impact of about 50 cents per dollar and 85 cents per dollar for nominal and real regressions respectively.

When it comes to long run relationships, again the evidence from percent of GDP regressions is not very strong. For example, the only significant effect is that of current FDI on future domestic investment which is only marginally significant but quantitatively large: a one percent change in current FDI leads to almost a 4% change in domestic investment over the next five year period. This evidence dissappears when time dummies are included indicating that the results may simply reflect a worldwide trend in both domestic and FDI. Again, these results are not that surprising as discussed in paragraph section .

However, when measured in first differences, we find a strong and significant impact of both domestic and foreign investment on future domestic investment. The evidence concerning domestic investment is qualitatively similar to that for all the other regions: current changes in domestic investment have a positive impact on future changes in domestic investment of about 50 cents per dollar. Conversely, unlike the evidence for all countries considered simultaneously and all other regions, an increase in the current change in FDI has a sizeable and negative effect on future domestic investment: a one dollar increase in the change in FDI today leads to a 10 dollar decrease in the future change in domestic investment.

When it comes to the impact of current domestic and FDI on future foreign, the evidence for Sub-Saharan Africa again differs from the evidence for the rest of the world. A one dollar increase in the change in domestic investment leads to a significant increase of about 10 cents in the future change in foreign investment. And an increase current foreign investment of one dollar increases future future foreign investment by about 70 cents.

The contingency table, Table 7, provides evidence for even longer term relationships for domestic and foreign investment. Here, I consider averages over the two periods 1965-1980 and 1981-1996. Countries are ranked according to domestic and foreign direct investment as a percent of gdp and then grouped into above average and below average. The main stylized fact from this table, is that countries with a low ratio of domestic investment to GDP over the first sub-period also tend to have a low ratio of FDI to GDP over the second sub-period. On the other hand, countries with a high ratio of domestic investment to GDP over the first sub-period, tend to have a high ratio of FDI to GDP over the second sub-period.

In summary, we may conclude that Sub-Saharan Africa differs from other regions because of an apparent crowding out effect of foreign investment relative to future domestic investment. Thus, unlike in the rest of the world, foreign investment does not appear to have been an engine for domestic investment in Sub-Saharan Africa. Also, different from other regions, in Sub-Saharan Africa domestic investment seems to be a pre-condition for future foreign direct investment. This is especially true in the long-run. (domestic incrueses future foreign and domestic thus although there may be some crowding out of domestic investment, the overall impact will be positive)

5.3 Some Country Examples:Kenya, Mauritius & Uganda

Based on the specification in equation (1), I also estimate the following equation for the three countries of special interest, Mauritius, Kenya and Uganda:

(8)
$$F_t = \alpha_0 + \sum_{L=1}^{m} \alpha_L F_{t-L} + \sum_{L=1}^{m} \beta_L D_{t-L} + u_t$$
$$D_t = \delta_0 + \sum_{L=1}^{m} \delta_L F_{t-L} + \sum_{L=1}^{m} \gamma_L D_{t-L} + v_t$$

The only difference is that in this set of equations, there is no i subscript.

6. Conclusion

Table 8:Sub-Saharan Africa

Relationship between Domestic Investment 1965-1980 and Foreign Direct Investment 1981-1996

	Relatively low ratio of foreign direct investment to GDP 1981-1996	Relatively high ratio of foreign direct investment to GDP 1981-1996
Relatively low ratio of domestic investment to GDP 1965-1980	Zaire Sierra Leone Zimbabwe Sudan Kenya Uganda Niger Benin Senegal Burundi Ghana Madagascar	South Africa Tanzania Cote d'ivoire
Relatively high ratio of domestic investment to GDP 1965-1980	Rwanda Cameroon Ethiopia	Central African Republic Togo Malawi Mauritius Mozambique Lesotho Zambia Nigeria Botswana Seychelles Swaziland

Relationship between Foreign Direct Investment 1965-1980 and Domestic Investment 1981-1996

	Relatively low ratio of domestic investment to GDP 1981-1996	Relatively high ratio of domestic investment to GDP 1981-1996
Relatively low ratio of foreign direct investment to GDP 1965-1980	Sudan Zambia Ghana Madagascar Ethiopia Uganda	Rwanda Burundi Zimbabwe Mali South Africa Mauritius Mozambique Lesotho Tanzania
Relatively high ratio of foreign direct investment to GDP 1965-1980	Nigeria Sierra Leone Central African Republic Cote d'Ivoire Malawi Senegal	Benin Niger Kenya Togo Seychelles Swaziland Botswana Cameroon

Table 4
Granger Causality Tests between Foreign and Domestic Investment
(1970 - 1996 Annual Data)

Model	Region	Domestic D_{-1}	Domestic F_{-1}	Foreign D_{-1}	Foreign F_{-1}	Country Dummies	Time Trend	R^2	F	n
Investment as a percent of GDP	All	**0.66**	**0.46**	**-0.003**	**0.36**	yes	yes	0.99	↔	1704
		(35.77)	(8.40)	(2.10)	(15.86)					
	SS Africa	**0.57**	**0.53**	**-0.004**	**0.21**	yes	yes	0.98	←	605
		(16.20)	(5.47)	(0.83)	(5.59)					
	Asia	**0.64**	**0.62**	**-0.003**	**0.54**	yes	yes	0.99	←	224
		(13.05)	(3.33)	(1.64)	(8.69)					
	L.America	**0.69**	**0.61**	**-0.01**	**0.45**	yes	yes	0.99	↔	356
		(17.99)	(5.05)	(2.47)	(8.65)					
	OECD	**0.73**	**0.22**	**0.005**	**0.44**	yes	yes	0.99	←	519
		(23.74)	(2.41)	(1.18)	(10.58)					
First Differences Nominal	All	**0.41**	**0.93**	**0.01**	**-0.18**	no	yes	.26/.06	↔	1619
		(17.29)	(9.88)	(2.76)	(6.61)					
	SS Africa	**0.41**	**0.36**	**0.04**	**-0.51**	no	yes	.22/.33	↔	572
		(10.33)	(1.99)	(5.51)	(14.57)					
	Asia	**0.69**	**0.94**	**0.01**	**0.06**	no	yes	.54/.14	←	212
		(10.64)	(3.56)	(1.33)	(0.73)					
	L.America	**0.06**	**1.04**	**0.002**	**-0.13**	no	yes	.11/.07	←	339
		(1.05)	(3.61)	(0.48)	(2.11)					
	OECD	**0.41**	**0.93**	**0.01**	**-0.17**	no	yes	.44/.13	←	496
		(9.49)	(6.03)	(1.43)	(3.38)					
First Differences Real	All	**0.28**	**0.63**	**0.002**	**-0.15**	no	no	.11/.03	←	1619
		(11.76)	(7.09)	(1.49)	(6.69)					
	SS Africa	**0.19**	**0.27**	**0.01**	**-0.15**	no	no	.04/.08	↔	572
		(4.71)	(2.27)	(2.21)	(6.31)					
	Asia	**0.44**	**0.95**	**0.0002**	**0.06**	no	no	.22/.003	←	212
		(6.84)	(3.93)	(.05)	(0.74)					
	L.America	**0.17**	**0.75**	**0.0004**	**-0.14**	no	no	.06/.02	←	339
		(3.17)	(3.58)	(0.13)	(2.45)					
	OECD	**0.29**	**0.68**	**0.002**	**-0.19**	no	no	.11/.04	←	496
		(6.79)	(3.79)	(0.91)	(4.19)					

Data Source: All data come from International Financial Statistics tapes. Data on foreign direct investment for Sub-Saharan Africa was updated using the United Nations Commission on Trade and Development Investment Directory Volume V, published in 1997. Notes: (1) Country dummies and time trends are included in the model if they are significant before correcting for heteroscedasticity. (2) The time trend allows for country specific slopes in the first model. (3) Values in parentheses are absolute t-statistics. (4) Heteroscedasticity is corrected for in all four models using generalized least squares. (5) Real values are obtained by deflating by the US GDP deflator and the base year is 1980.

Table 5
Granger Causality Tests between Foreign and Domestic Investment
(1970 - 1996 Five Year Averages)

Model	Region	Domestic D_{-1}	Domestic F_{-1}	Foreign D_{-1}	Foreign F_{-1}	Period Dummies	F	n
Investment as a percent of GDP (first differences)	All	**-0.45**	**2.04**	**0.22**	**-1.38**	no	←	100
		1.23	2.29	1.36	1.48			
	SS Africa	**0.71**	**3.82**	**0.02**	**-0.25**	no	←	37
		1.32	2.46	0.83	1.59			
	Asia	**1.76**	**-18.91**	**0.28**	**1.98**	no	⊘	11
		0.37	0.38	1.08	1.02			
	L.America	**-0.94**	**-1.48**	**-0.55**	**1.09**	no	⊘	20
		1.42	0.43	0.51	0.27			
	OECD	**1.57**	**-1.08**	**-0.002**	**1.71**	no	⊘	32
		0.76	0.29	0.02	1.39			
	All	**-0.54**	**1.63**	**0.18**	**-1.33**	yes	⊘	100
		1.63	1.72	1.46	1.67			
	SS Africa	**0.18**	**1.84**	**0.02**	**-0.23**	yes	⊘	37
		0.57	1.84	0.89	1.34			
	Asia	**0.08**	**0.29**	**-0.32**	**2.27**	yes	⊘	11
		0.42	0.15	0.74	0.73			
	L.America	-0.91	-1.59	-0.49	0.33	yes	⊘	20
		1.35	0.43	0.61	0.11			
	OECD	-1.77	**-4.92**	**-0.08**	**1.97**	yes	⊘	32
		0.67	0.62	0.72	1.52			

Data Source: All data come from International Financial Statistics tapes. Data on foreign direct investment for Sub-Saharan Africa was updated using the United Nations Commission on Trade and Development Investment Directory Volume V, published in 1997. Notes: (1)Sub-periods are as follows:1970-74, 75-79, 80-84, 85-89, 90-96. (2) Values in parentheses are absolute t-statistics. (3) Heteroscedasticity is corrected for using generalized least squares. (4) Instrumental variables is used to correct for presence of lagged dependent variable in the panel. The instruments are the second lags of the respective variables.

Table 6
Granger Causality Tests between Foreign and Domestic Investment
(1970 - 1996 Five Year Averages)

Model	Region	Domestic D_{-1}	Domestic F_{-1}	Foreign D_{-1}	Foreign F_{-1}	Period Dummies	F	n
First Differences Nominal	All	**0.92**	**6.09**	**0.03**	**0.38**	no	←	109
		4.33	5.85	1.44	1.61			
	SS Africa	**0.49**	**-10.12**	**0.11**	**-0.33**	no	↔	42
		3.84	6.34	9.61	2.79			
	Asia	**-4.19**	**-11.13**	**-0.05**	**6.34**	no	⊘	13
		0.58	0.032	0.37	1.07			
	L.America	**0.89**	**12.81**	**0.06**	**1.97**	no	←	22
		1.32	20.34	0.26	1.51			
	OECD	**1.32**	**-1.01**	**-0.01**	**0.07**	no	⊘	32
		8.95	0.63	0.24	0.15			
	All	**0.95**	**5.89**	**0.03**	**0.39**	yes	←	109
		5.92	4.12	1.34	1.61			
	SS Africa	**0.45**	**-9.46**	**0.11**	**-0.31**	yes	↔	42
		3.82	5.98	9.45	2.52			
	Asia	**3.91**	**13.2**	**-0.09**	**4.42**	yes	⊘	13
		0.06	0.06	0.92	1.72			
	L.America	1.26	12.54	**0.11**	**1.65**	yes	←	22
		2.01	23.79	0.42	1.42			
	OECD	**1.38**	**-1.31**	**-0.03**	**0.16**	yes	⊘	32
		8.78	0.79	0.71	0.51			

Data Source: All data come from International Financial Statistics tapes. Data on foreign direct investment for Sub-Saharan Africa was updated using the United Nations Commission on Trade and Development Investment Directory Volume V, published in 1997. Notes: (1)Sub-periods are as follows:1970-74, 75-79, 80-84, 85-89, 90-96. (2) Values in parentheses are absolute t-statistics. (3) Heteroscedasticity is corrected for in all four models using generalized least squares. (4) Instrumental variables is used to correct for the presence of lagged dependent variables in the panel. The instruments are the second lags of the respective variables.

EQUITY AND GROWTH THROUGH ECONOMIC RESEARCH

Trade Regimes and Growth

TRENDS IN AFRICAN TRADE

Survey Paper

May 28, 1996

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TRENDS IN AFRICAN TRADE

Introduction

In the early 1960s, most African governments continued the colonial legacy and emphasized what the conventional wisdom considered their comparative advantage. They encouraged the production of crops such as coffee, tea, cocoa and plant fibers, and the extraction of mineral and forest products for exports. Since the early 1970s the economic performance of Sub-Saharan Africa (SSA) has been disappointing and the average per capita income declined sharply in the 1980s, suggesting that population grew faster than income. Even though external factors, such as bad weather and weak world commodity prices, played a role in the lackluster economic performance, much of the blame rests on policy-induced factors.

By the 1970s a growing number of African countries had adopted economic policies geared toward industrialization believed to be the engine of economic growth. This belief was largely influenced by Prebisch's (1959) theory of declining demand for primary commodities and secular deterioration of their terms of trade. Prebisch's theory was reinforced by Hirschman's (1958) backward and forward linkages thesis which gave precedence to the manufacturing sector over agriculture. The reasoning underlying these approaches was that agriculture is the reservoir of unlimited low productivity labor and that only the rate of capital accumulation in the modern sector can accelerate labor absorption and bring about economic growth. As a result of these theories, agricultural exports were downplayed and import-substitution industries were advocated in economic development strategies. The main thrust to promote import substitution was economic policies tailored to protect the nascent industries against "cheap" imports at the expense of the agricultural sector. Thus, inward-looking strategies were favored over outward-looking policies.

Implementation of these strategies was based largely on the assumption that government should play the dominant role to compensate for capital shortage and lack of managerial skills. Public enterprises were created, domestic prices were regulated, trade was restricted, and foreign exchange was allocated. In sum, the economic policies put in place were designed to encourage rapid industrialization and biased the incentive structure. Not only was the primary commodity sector taxed heavily by fiscal policies, but also it was greatly penalized by the overvalued exchange rates by making exports artificially expensive, while at the same time imports of industrial inputs and goods became relatively cheaper. High tariffs and quantitative restrictions were thus necessary to shield the local manufacturing sector from cheap imports.

Some of the distortions have been removed by the Structural Adjustment Programs (SAP) introduced in the early to mid-1980s by SSA's governments, under pressure from the international institutions from which they sought financial assistance. For instance, most African currencies were devalued and more flexible exchange rates (except in the CFA countries) were introduced. In addition, domestic price control were eliminated and most internal input and output markets were liberalized. Moreover, export taxes and import controls were either eliminated or reduced to ease trade barriers. However, there still remain impediments to expanding trade. Marketing boards still handle exports of primary products in some countries. In addition, a host of factors such as underdeveloped financial markets, infrastructure decay, and weak institutional capacity seriously hinder SSA's trade.

The focus of the present paper is to describe trends in African trade, including exchange between SSA

and the world market, and among African countries. The focal goods of the study are primary products (traditional exports and food crops, livestock, and mining), manufacturing goods and nontraditional export products. The paper focuses on explaining the underlying internal and external factors that contributed to or impeded African trade. Moreover, it aims to propose measures designed to help African countries to recapture the market share lost to other regions. It also intends to examine the conditions under which these countries can successfully venture into new opportunities in which they hold a strong comparative advantage.

II- Export Trends of Sub-Saharan African Primary Products

2.1 Trends in Exports of Traditional Primary Products

The overall trade performance of SSA has been disappointing over the years, especially after the mid-1970s in terms of annual growth, market share and product diversification. Available records show satisfactory trade performance for most SSA countries throughout the 1960s. Real exports from the region grew at 6 percent per annum between 1954 and 1969 (Helleiner, 1986). Imports also grew at nearly the same rate, according to table 1. In contrast to this period, SSA experienced poor export and import performances from the mid-1970s to 1992. The value of SSA's exports has increased marginally in the last one and one half decade but during the 1980s its annual rate of growth declined by 2 percent while world's exports grew at average of 6 percent per annum. It is also important to note that earnings for the five major oil-exporting countries have dominated trade trends in the region as a whole. In the 1980s, oil exports have accounted for about one half of SSA export earnings.

Table 1: Annual Average Growth Rates of Exports and Imports (%)

	1960s		1970s		1980s		1990-91		1991-92	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
World	9.2	9.1	20.3	20.2	6.1	6.1	-0.4	-1.2	6.7	7.6
SSA	7.8	6.2	20.0	20.1	-2.0	-2.8	-3.1	10.2	-2.3	0.0

Source: Handbook on International Trade and Development Statistics, UNCTAD 1993, pp. 16-21

The export share of SSA have also exhibited a declining trend over the years, as shown in table 2. While this share was averaging 2 percent for both exports and imports during throughout the 1960s, 1970s and early 1980s, it gradually declined over the years to a low 1 percent in the early 1990s. African and Latin American countries lost their export market share to South and South East Asian countries whose share increased from a average of 6 percent in the 1960s to an average of 12 percent in the early 1990s.

Table 2: Share of World Exports and Imports

	1960		65		70		75		80		85		90		91		92	
REGIONS	X	M	X	M	X	M	X	M	X	M	X	M	X	M	X	M	X	M
Developed																		
America	20.3	16.6	19.0	16.1	18.9	17.3	15.9	15.5	14.2	15.4	15.6	21.7	14.6	17.4	15.4	16.7	15.3	17.3
Europe	39.2	41.0	41.4	44.4	43.2	45.1	41.1	42.4	39.8	43.6	39.4	38.4	46.5	46.4	45.8	47.0	45.6	45.6
Japan	3.1	3.3	4.5	4.1	6.1	5.8	6.4	6.4	6.5	6.8	9.1	6.4	8.3	6.6	9.2	6.7	9.3	6.2
Developing																		
America	7.7	7.2	6.8	5.9	5.5	5.5	5.2	6.2	5.5	5.9	5.4	3.9	3.9	3.2	3.8	3.6	3.6	4.1
LAIA	5.6	5.0	5.0	3.8	4.0	3.5	3.4	4.1	4.0	4.1	4.4	2.5	3.3	2.3	3.3	2.8	3.2	3.2
Africa	4.2	4.9	4.1	4.1	4.1	3.4	4.1	4.3	4.7	3.6	3.2	2.7	2.3	2.1	2.2	2.1	1.9	2.1
North	1.4	2.1	1.5	1.4	1.6	1.2	1.8	2.0	2.3	1.5	1.5	1.3	1.1	1.1	1.0	1.0	0.8	1.0
Others	2.8	2.8	2.7	2.6	2.4	2.2	2.3	2.2	2.4	2.1	1.7	1.4	1.2	1.0	1.1	1.1	1.0	1.1
Asia	9.5	9.7	8.5	8.7	8.1	7.8	14.6	10.1	17.8	12.3	14.3	13.1	14.9	14.3	16.3	16.5	16.9	17.3
West	3.4	2.5	3.4	2.3	3.4	2.0	9.4	4.0	10.6	4.9	5.1	4.5	3.7	2.9	3.5	3.3	3.4	3.6
South and South East	6.1	7.2	5.1	6.4	4.8	5.8	5.2	6.1	7.2	7.5	9.2	8.6	11.2	11.4	12.8	13.2	13.5	13.7

Source: Handbook of International Trade and Development Statistics, United Nations, pp. 28-29

Most SSA countries have made little progress in diversifying their export structure since the end of 1960s. A few countries were able to expand their export composition between the 1960s and the 1970s. Such was the case for Kenya and Côte d' Ivoire which increased the number of export commodities from 76 and 81 in 1970 to 143 and 154 in 1980, respectively (UNCTAD, 1989-93). By the early 1990s, the vast majority of SSA countries experienced a decline in their export composition, as shown in table 3. For instance, the number of export commodities for the two countries mentioned above shrank to 128 and 130, respectively. Only a handful of countries such as Mauritius, Zimbabwe and Madagascar increased notably their export commodities. For instance, Mauritius improved its export structure from 55 to about 100 commodities during the period 1980-91.

As displayed in table 3, the high concentration indices suggest that most of the SSA countries rely on a few primary commodities for their export earnings. These indices are confirmed by table 4 which shows the commodity share in SSA's export earnings during the period 1981-83. Petroleum accounts for, for example, over 90 percent of the export earnings of most oil producing countries. Non-oil producing countries depend to a large extent on a few commodities for their export earnings. For instance, the share of coffee and tea is nearly half of the export earnings in Kenya which is relatively diversified by African standards. This suggests that most SSA countries are highly vulnerable to external shocks arising from a fall in primary commodity prices.

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Table 3: Export Concentration and "Diversification" Indices

Countries	1980			1991		
	Number of commodities exported (1)	Diversification index (2)	Concentration index (3)	Number of commodities exported	Diversification index	Concentration index
Nigeria	147	0.771	0.948	117	0.915	0.952
Angola	22	0.737	0.732	9	0.916	0.911
Guinea	23	0.951	0.905	22	0.958	0.858
Zambia	49	0.953	0.717	45	0.932	0.823
Gabon	46	0.732	0.763	39	0.913	0.770
Niger	39	0.947	0.821	44	0.915	0.763
Chad	15	0.962	0.794	18	0.951	0.729
Congo	29	0.765	0.890	26	0.886	0.707
Uganda	22	0.953	0.950	26	0.948	0.699
Rwanda	13	0.953	0.668	14	0.960	0.688
Malawi	47	0.925	0.490	29	0.926	0.686
Burkina F.	43	0.891	0.476	22	0.941	0.698
C.A.R.	15	0.945	0.415	24	0.931	0.634
Mauritania	24	0.955	0.661	24	0.950	0.624
Ethiopia	30	0.895	0.636	29	0.934	0.617
Benin	30	0.875	0.415	31	0.859	0.580
Sierra Leone	39	0.922	0.444	18	0.954	0.563
Mali	40	0.909	0.477	33	0.918	0.559
Guinea Bissau	22	0.903	0.331	10	0.941	0.551
Togo	51	0.890	0.468	51	0.869	0.506
Sudan	63	0.923	0.388	44	0.893	0.482
Somalia	14	0.929	0.767	19	0.904	0.480
Zaire	62	0.760	0.450	42	0.868	0.409
Ghana	55	0.915	0.729	56	0.907	0.377
Mauritius	55	0.909	0.688	101	0.944	0.335
Zimbabwe	87	0.852	0.257	165	0.782	0.327
Cote d'Ivore	154	0.850	0.383	130	0.856	0.312
Kenya	143	0.812	0.383	128	0.806	0.309
Madagascar	53	0.845	0.501	76	0.811	0.285
Senegal	113	0.810	0.271	92	0.857	0.280
Cameroon	90	0.720	0.409	116	0.777	0.272
Tanzania	83	0.839	0.286	74	0.832	0.262

Notes: (1) The countries are ranked according to the concentration index in 1991

(2) Number of products exported at the three-digit SITC, revision 2 level. This figure includes only those products which are greater than $50,000 in 1980 or $100,000 in 1991 or more than 3% of the country's total exports.

(3) The concentration index discriminates more finely between countries which are relatively more concentrated in their export structure. The diversification index discriminated more finely between countries which diversified.

Source: Handbook of International Trade and Development Statistics, UNCTAD 1993, pp. 241-43

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Table 4: Commodity Share of Country Total Exports in 1981-83

Countries	Cocoa	Coffee	Tea	Sugar	Groundnuts	Cotton	Timber	Tobacco	Petroleu	Minerals, & Metals	Total of Commodit
Angola		6.1				0.1		0.3	93.1	0.1	99.7
Benin	14.2	12.1				20.7					47.0
Botswana						0.1				4.6	4.7
Burkina			0.1	0.1	0.3	45.0					45.5
Burundi		91.2	3.2			2.8					97.2
Cameroon	13.1	16.7	0.1	0.4		3.8	8.9	0.5			43.5
C.A.R		28.7				7.2	25.4	0.9			62.2
Chad						60.7					60.7
Congo	0.3	0.4		0.3			3.1		93.1		97.2
E. Guinea	71.5	5.5					18.5				95.5
Ethiopia		61.5		0.7							62.2
Gabon	0.3	0.1							69.0	4.9	74.3
Gambia					30.7						30.7
Ghana	41.9	0.3					1.6		0.5	0.8	45.1
Guinea	1.2	2.2								52.0	55.4
Guinea-Bi					23.7	5.3	1.0				30.0
Ivory-Coast	24.2	19.4		0.8		3.0	13.7		2.2		63.3
Kenya		23.9	15.6	1.4		0.2	0.1				41.2
Liberia	2.4	4.2					9.5			63.0	79.1
Madagascar	0.8	32.8		2.5	0.1	1.5	0.1	0.3			38.1
Malawi		0.5	16.9	19.8	2.5	0.3		49.8			89.8
Mali					0.3	38.6					38.9
Mauritania										54.7	54.7
Mauritius			1.9	59.9							61.8
Mozambique			7.9	5.5	0.5	8.1	1.8				23.8
Namibia										45.7	45.7
Niger										0.1	0.1
Nigeria	1.7								90.5	0.2	92.4
Rwanda		66.6	8.7							17.0	92.3
Senegal					1.0	2.1				11.2	14.3
Sierra Leone	9.6	9.2						0.1		5.4	24.3
Somalia											0.0
Sudan					7.9	27.6					35.5
Swaziland				35.2		2.2	4.6				42.0
Tanzania	0.5	29.8	4.3	0.5		13.3	0.2	3.5		0.9	53.0
Togo	11.0	9.0				8.2				46.5	74.7
Uganda	0.1	94.0	0.2			1.8		0.1			96.2
Zaire	0.5	11.6	0.2				1.0	0.1	19.0	65.5	97.9
Zambia				0.2		0.3	0.5	0.4		95.8	97.2
Zimbabwe		1.4	0.7	5.2	0.2	6.1	0.5	20.0		2.3	36.4

Source: Commodity Trade and Price Trends, IBRD/WB, pp. 22-23.

Looking at SSA's export performance on a product basis, Koester et al. (1990) found that coffee and cocoa are by far the most important export commodities for SSA and accounted for over 50 percent of the value of agricultural exports throughout the period 1960-85. While world cocoa exports grew marginally during the past three decades, SSA cocoa exports decline in the 1960s and 1970s and increased by an average annual rate of 3 percent from 1980 to 1992 (Svedberg, 1990). In the six most important markets of coffee, cocoa, beans, refined copper, timer, and sugar, the decline was in the 22-38 percent range over the period 1970-85. The most dramatic decline in the share of SSA, according to Stryker and Baird (1991), was experienced with vegetable oils, averaging over 60 percent between the period 1961-65 and 1986-88. This decline in vegetable oil market is confirmed by Badiane (1994) who examined the export performance of the member countries of the African Groundnut Council (AGC) during the same period. According to him, AGC's loss of world market share was also accompanied by a continuous decline in yield and acreage in its member countries. Meanwhile, Asian and South American countries increased yields and more than quadrupled their combined market share of groundnut world market.

Crude oil is the only major export product from SSA that has developed favorably since 1970. In 1970 it accounted for less than 10 percent of total exports from the region and by 1985 the share of this product in total exports climbed to over 50 percent. Growth of the world oil market, and the increased SSA share, contributed substantially to the region's total export-earnings growth. In contrast to crude oil, SSA lost its market share in many metals and minerals, including copper, tin, chromate, and diamonds. For instance, SSA's market share of iron ore declined by nearly 50 percent between the 1960s and the mid-1980s (Svedberg, 1991).

There was a large variation in countries' performance over the years. Côte d'Ivoire, for example, increased its exports of cocoa almost threefold between the 1960s and the 1980s, whereas Ghana and Nigeria's exports fell by almost 50 percent during the same period. Similarly, Kenya, Zaire, and Zimbabwe experienced substantial growth in coffee exports, when Madagascar's and Guinea's exports of coffee declined. During the same period, most African countries, especially Nigeria and Senegal, experienced a dramatic decline in their groundnut exports over the years. The most significant development was the change of Nigeria's position from the world's largest exporters of groundnuts to a net importer mostly because of the oil boom of the early 1970s. The Côte d'Ivoire continues to be the world's leading producer of cocoa and the fourth largest producer of coffee. The drastic fall in export prices has reduced their importance in total export earnings from about 52 percent in 1989 to 34 percent in 1990.

Most SSA countries have made limited progress in diversifying their trading partners. As shown in table 5 destination of SSA primary exports, especially traditional agricultural products, have been concentrated in the member countries of the Economic Cooperation and Development (OECD). These countries appear to receive over two-thirds of SSA's major agricultural exports. Of these countries the European Economic Community (EEC) accounts for as much as 60 percent of SSA's exports. Africa's export concentration to Europe, in particular to the EEC, largely reflects the colonial heritage and the Lomé Convention. This convention was designed to guarantee African and Caribbean and Pacific countries free access to the European market without the condition of

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Table 5: Africa Direction of all Food Exports

Years	World Total	Developed Market Economies				Centrally Planned Economies	Developing Africa	Other Developing Countries
		EEC	US & Canada	Japan	Others			
1960	100	n.a.						
1965	100	58.6	9.7	0.5	1.5	2.4	9.5	n.a.
1970	100	54.2	13.7	0.9	0.8	5.7	7.9	12.4
1975	100	49.7	11.3	3.1	4.0	8.4	9.5	14.0
1980	100	54.4	10.5	2.6	4.3	9.5	7.6	11.1
1983	100	50.1	10.1	4.3	4.1	8.1	9.0	14.3
1984	100	51.7	10.1	3.4	4.7	7.2	8.6	14.2
1985	100	53.3	8.8	4.1	3.6	7.9	9.7	12.6
1986	100	61.8	8.7	4.9	4.4	5.8	8.4	6.0
1987	100	59.4	7.9	5.1	5.3	7.1	9.2	6.0
1988	100	59.1	8.2	5.3	4.4	6.4	9.3	7.3
1989	100	58.5	6.4	6.2	4.9	6.3	10.9	6.8
1990	100	60.7	6.5	5.7	4.3	3.9	11.3	7.6

Notes: (1) Includes countries of European Free Trade Association
(2) Includes countries of Eastern Europe and Socialist countries of Asia
(3) Includes all countries of Africa, except South Africa
(4) Includes developing countries of Europe, Latin America, Asia, and Oceania

Source: Africa's and South-East Asia's Agricultural Export and Import Markets, ECA/FAO Agricultural Division, Monograph No. 7, p. 9.

reciprocity[1]. The EEC is followed by both the US and Canada with 6 percent of SSA's export market share, while Japan accounts for 4 percent of this market share. Important questions loom for SSA with the end of Lomé IV Convention and implementation of new rules under the auspices of the World Trade Organization (see survey paper on Promoting New Trade Opportunities for Africa).

Much of the SSA's exports of fruits and vegetables, cotton and tea went to developing countries outside North Africa and the Middle East and SSA. The combined share of these regions in SSA's exports of fruits and vegetables, cotton, and tea was 15, 17 and 13 percent, respectively. Meanwhile, North Africa and the Middle East accounted for 40 and 59 percent of SSA's live animal exports.

The sluggish performance of the export sector in most SSA countries seems to have caused serious problems. Imports have been compressed, as shown in table 1. Given the composition of imports, which include mainly industrial and investment goods, intermediary products and fuels, capacity utilization and growth have declined notably in most countries. (source) This, in turn, has affected the export sector negatively, even though the direct causality is not known. In depth research in this area will certainly shed some light on the adverse effect of capacity utilization on export performance and will help to make predictions on SSA's performance.

2.2 Reasons for Stagnation and Decline: Demand and Supply side factors

The slow down of SSA's export growth has been tentatively explained by two largely opposing schools of thought. The first one emphasizes external factors such as both the slow growth in the volume of world primary commodity market and deteriorating terms of trade (Lewis, 1980; Chu and Morisson, 1984; Cable, 1988; and Wangwe, 1993). For instance, Wangwe's study of the EEC and US cocoa markets to which Africa contributes nearly 50 percent of exports showed that consumption grew by 12 and 19 percent, respectively over the twenty-year period of 1960/65-1980/85. This study also showed that export earnings from the nine major primary commodities (coffee, cocoa, cotton, tea, sugar, palm oil, groundnuts, tobacco and fresh fruits) of SSA fell by nearly 40 percent between 1977/79 and 1985/90, despite a 75 percent increase in the volume of exports. This suggests that the terms of trade deteriorated over the above-mentioned period of 1977/79-1985/90.

The other school underscores factors that are "internal" to SSA countries. The rationale of this school is that some African countries performed better than others in the continent, although the terms of trade significantly eroded over the years for most primary commodities (Balassa 1990). Even more important in this line of reasoning is the ability of other countries outside of SSA to expand their world market shares under the same unfavorable conditions that SSA faced. For instance, respective shares of world cocoa exports for Cameroon, Ghana, and Nigeria declined from 6.4, 16.3 and 12.2 percent in 1981-83 to 5.5, 14.3 and 7.2 percent in 1985-87. In the meantime, Indonesia and Malaysia have both increased their shares from .8 to 1.9 percent and from 4.1 to 6.9 percent respectively for the same periods (Commodity Trade..., 1986, 89-91).

The role of economic policies in adversely affecting SSA's export performance has been well

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For some important products, such as sugar, bananas, rum, and beef special preferential measures were adopted. Under the Lomé Convention, ACP countries also benefit from the Stabex and the Sysmin. The Stabex supports 49 agricultural and fishing products by compensationg for losses of earnings by ACP countries. The Sysmin supports mining activities, mainly in the public sector, in situation of temporary crisis. The Lomé IV convention in due to expire in 2000.

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documented. Tolley et al. (1982), the IMF (1989), and the World Bank (1989) have argued that internal factors such as excessive import protection, overvalued exchange rates and high rates of taxation on exports are to be blamed for SSA's lackluster export performance because they contributed to reduce domestic prices for export commodity producers. Schiff and Valdés (1988), summarizing the seminal work undertaken by a group of economists for the World Bank, noted that African farmers faced the world's heaviest rates of taxation that induced price distortions and disincentives in the agricultural sector. African farmers were taxed explicitly through producer-price fixing by marketing boards. Such was the case of cotton and coffee in Uganda, cocoa in Côte d'Ivoire and Ghana, tea in Kenya, and tobacco in Malawi and Zimbabwe. The aim of the parastatals was to stabilize domestic prices of exports. But, they eventually set domestic prices well below the international equivalent prices and ultimately they reduced the profitability of exports to producers. In addition to price fixing by parastatals, farmers incurred high export taxes that were an important source of government revenues. Agricultural inputs were also taxed, notwithstanding subsidies that were mostly enjoyed by a few large farmers. The explicit taxes were, according to Schiff and Valdés, highest in Ghana and averaged 27 percent. Meanwhile, they amounted to over 20 percent in Côte d'Ivoire. In both countries, they contributed to reducing African farmers' profitability.

Schiff and Valdés also showed that African farmers were taxed implicitly through overvalued exchange rates, which depressed the domestic prices they obtained for their exports. Implicit taxation was also caused by high levels of industrial protection which contributed to raise consumer prices. The evidence showed that the three broadly representative SSA countries (Côte d'Ivoire, Ghana, and Zambia) taxed their farmers over 50 percent, while the countries of the highest per capita income protected agriculture. In addition, the evidence indicated that these three Sub-Saharan countries taxed their farmers 70 percent more than the average for non-African developing countries. Similar results of the adverse effects of macroeconomic policies on the agricultural incentive structure were revealed by research undertaken by Oyejidi (1986), Tshibaka (1986), and Badiane (1994). As a result of the macroeconomic policies, SSA's average annual rate of agricultural growth declined from 2.2 percent in 1965-73 to a mere 1.0 in 1981-85 and its export market declined markedly (Cleaver, 1993).

There is another body of literature that credits the poor SSA's export performance to internal and external factors (Lyakurwa, 1991; ADB, 1993; and ECA, 1993). They argued that although shortcomings in macroeconomic policies were the predominant causes of the poor export performance of most SSA countries, the demand side affected adversely the level of exports. While the terms of trade index declined from 97 in 1982 to 71 in 1987, the purchasing power of exports declined from 72 to 58 over the same period. According to Erzan and Svedberg (1988), the price decline of primary products accounted for about a third of the overall world market share loss of sub-Saharan Africa. The remaining two-thirds was due SSA's failure to expand exports.

As a result of the sluggish exports, imports have been compressed and exacerbated further the declining export performance. Most SSA countries are highly import-dependent and output level is rigidly linked to imports of intermediate goods (including fuels) and of capital goods such as machinery and capital equipment. Thus, the lack of foreign exchange further compromised SSA's ability to produce for exports (The World Bank, 1992). That was the case for the mining sector which, as noted by the World Bank (1989), faced insufficient investment by the state-controlled enterprises to replace depleted reserves and to maintain and modernize the mining infrastructure. This has resulted in aging operations which are no longer competitive or able to respond flexibly to changes in market conditions. According to the World Bank, the reason for the low level of investment in exploration can be traced to the early 70s when state-controlled enterprises dominated

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the mining sector and inhibited private initiative. The state-owned enterprises imposed restrictions on ownership, cumbersome regulatory procedures, and unattractive taxation arrangements, even though mining depends on high-risk investment in exploration. As a result, many international mining companies turned away from SSA to the benefit of regions where the investment climate was more conducive to high-risk capital.

The World Bank (1989) noted further that stagnation in SSA's mining can be explained by not only low investment stemming from an unsupportive policy environment, but also management deficiencies, shortage of technical skills, and political interference. In addition, SSA's mining companies, unlike those of other regions of the world such as Australia or Canada, face difficult infrastructural problems and high exploration costs, owing to the need for technical expatriate staff, imported equipment, lack of local contractual services, and the total absence of support facilities. There are, nonetheless, better chances of discoveries in Africa.

A resurgence in Sub-Saharan African mining, in the export sector in general, will depend largely on the necessary enabling environment which will be put in place by African governments. The main elements of an enabling environment relate to realistic foreign exchange regime, taxation, repatriation of profits, and the regulatory and institutional framework. With a distorted policy and institutional environment, economic agents are given a powerful incentive to engage in rent-seeking activities that generally lead to smuggling and inefficient resource allocation. For instance, up to 98 percent of the profit earned by the Tanzania diamond industry are believed to come from sales of smuggled stones. Similarly, as much as 80 percent of the Zairian diamond annual output is believed to be smuggled abroad (Africa analysis 9 February 1996).

2.3 Impact of Structural Adjustment on Traditional Sub-Saharan African Exports

Against this background of deteriorating export performance and economic decay in SSA, structural adjustment programs (SAP) were introduced as a condition for assistance to put African economies on a growth path. Achieving this goal required altering the incentive structure by opening the economy to international trade to improve the competitiveness of the export sector and generate the badly needed foreign exchange to finance imports and economic development. The SAP relied on a host of policy instruments comprising: (1) devaluation and more flexible exchange rate; (2) reduction or elimination of export taxes; (3) easing or elimination of import controls; (4) reduction in the magnitude and variability of impart tariffs; (5) elimination of both price controls and restrictions on private marketing; (6) privatization or reform of government parastatals; and (7) reduction of public sector employment (Stryker et al., 1994).

The World Bank (1994), in a broad-based study designed to draw lessons from the SAP, found that nearly two-thirds of Sub-Saharan African countries have reduced the overall tax burden on the primary export sector. The assessment of this organization is that, although great efforts have been deployed to link producer prices to world prices, marketing boards still operate alongside private marketing agents in many countries. For instance, the Ghana Cocoa Board began privatizing its holdings in 1990 but few buyers were interested because the Cocoa Board retained a monopoly power over local purchases and control over exports. Complete liberalization has not, thus, been achieved in most countries and makes it difficult to gauge the impact of structural adjustment. The difficulty is compounded by the fact that many of the adjusting countries have experienced a severe decline in export prices, export earnings, and the terms of trade during the adjustment period (Stryker, 1991). For instance, the real international prices of SSA's two major exports, cocoa and coffee, dropped by

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almost 70 percent between 1980 and 1990. The real price of cotton, the third major export crop, fell by 28 percent during the same period (World Bank, 1994). Even though government market interventions in the form of marketing boards have been considered as a major hindrance to exports, because of the multiplicity of their roles withdraw should be gradual. In some instances their quick removal lead to a decline in the quality of exports. In Tanzania, liberalization has contributed to a fall in quality of export coffee threatening export markets.

2.4 Comparative Advantage in Primary Export Products

A vast body of literature has covered SSA's comparative advantage and competitiveness in export crops. Barry (1994 and 1992), Stryker et al. (1992 and 1987 a and b), SOGES and AIRD (1991), Barry et al. (1991), Holleman (1991), Kristjanson et al. (1990), Delgado (1990), and Stryker et al. (1987 a and b) have all shown that SSA has a strong comparative advantage in its traditional export commodities, namely cocoa, coffee, cotton, groundnuts, palm, rubber, etc. Yet, SSA was unable to take advantage of its agricultural resources and experienced a disappointing export performance over the years, especially during the 1980s. The reform programs described above are designed to lay the ground for exploiting and producing along the line of comparative advantage. SSA's future comparative advantage in these commodities will depend to a large extent on world market conditions in the long run, as shown by Kristjanson et al. and on the ability of the region to remove the supply constraints.

World market conditions differ sharply from one commodity to another. For instance, it is believed that continued growth in the market for natural fibers will contribute to brighten prospects for African cotton exporters. Cotton prices are anticipated to rise in the long term because of the increasing demand for natural fibers. The forecast for coffee market suggests a stronger market for robusta and arabica coffee, with overall prices increasing from levels that prevailed before the break down of the International Coffee Agreement (ICA). In contrast to cotton and coffee, it is believed that rapid growth in production of lower cost competitive vegetable oil will make the outlook less promising for African groundnuts.

Since SSA has lost important world market share and cannot influence world prices because it is a price taker, it must focus attention on reducing factor costs by making the necessary investments to improve productivity. Moreover, efforts should focus on improving distribution and processing efficiencies and designing policies that do not heavily tax producers and distort the incentive structure in favor of the import substitution sector. In this regard, countries that still rely on high-cost parastatals need to seriously assess the long-run benefits and costs associated with parastatal marketing services.

It appears from the survey of the mining sector that very little work has been undertaken to assess SSA's comparative advantage. Even though one may assume that SSA hold a comparative advantage in mining, research attention needs to focus on this sector to identify bottlenecks and propose measures to overcome constraints. Research in the mining sector can shed light on the debate over the scale of operations in which SSA can invest its limited resources. Some analysts have proposed that SSA invest in small-scale mining because it is labor-intensive and relatively affordable in view of the lack of both capital and managerial know-how in SSA. Others have argued that large-scale and capital-intensive production will be more beneficial for SSA since it will enable the region to import production techniques. The underlying assumption in the latter view is that large-scale production will enable SSA to acquire new techniques and capture economies of scale in the long-run. Even

though there is some truth and validity in each of the view, it will be important to undertake an analysis of SSA's comparative advantage to help heighten and focus the ongoing debate.

III. Trends in Sub-Saharan African Food Imports

Contrary to observed trends in most parts of the world, food production in sub-Saharan Africa has failed to meet the demand of its growing population. This region has seen many instances of famine and has been one of the most famine-prone regions in the world. According to Cleaver (1993), the population of SSA grew by 2.7 per cent per annum over the period 1965-80, while total food production increased by a mere 1.7 to 1.9 percent annually during the same period, thus precipitating a decline in per capita food production.

Matlon and Spencer (1984) and Stryker and Baird (1991) suggested that the decline in per capita food production is deeply rooted in the inadequate technologies used in SSA. The technological breakthrough that took place in Asia under the "Green Revolution" has had limited applicability in SSA. Technological packages of irrigation, improved varieties, fertilizers, and other chemicals, which were highly successful in Asia, have not proven to be as viable in Africa as in Asia. Investments in irrigation in SSA have proven to be expensive, often $20,000/ha higher in SSA than other regions. Returns to fertilizers have proven marginal given SSA's pricing system and its distorted incentive structure described earlier. Furthermore, SSA's supporting institutions and infrastructure necessary for distribution of improved inputs, as well as output, are extremely weak. As a result of the lack of inputs and the marginal returns to fertilizers, cultivated areas have expanded onto marginal land, while fallow periods are being reduced to respond to the increasing population pressure, thereby reducing further productivity.

Koester et al. (1990) estimated that SSA produced an estimated 90 percent of its cereal needs in 1970, but it satisfied only 76 percent of those needs in 1985 and its cereal coverage is projected to decline to 57 percent by the turn of the century. This decline, combined with rising urbanization, has resulted in growing food imports. For instance, total cereal import rose from 13.4 million tons in 1970-71 to 19.5 million tons in 1982-83 (Koester et al., 1990). Imports of food, especially cereals, were heavily concentrated in ten countries whose consumption pattern shifted from traditional staples to maize, rice, and wheat (ECA/FAO, 1994). These imports need to be distinguished, however, into commercial imports and food aid.

3.1 Commercial Food Imports

Countries belonging to the Organization of Economic Cooperation and Development (OECD) accounted for 72 percent of imports into SSA. These countries were the major suppliers of SSA's imported food grains, the most important of which are rice, wheat and maize between 1976/80 and 1981/84. Koester et al. (1990) estimated that the share of OECD countries in SSA's imports of rice, wheat and meslin, and maize was 36, 67, and 49 percent, respectively during the above-mentioned period. Together, these commodities increased their share of total imports from 20 percent in 1962/65 to 34 percent in 1981/84.

Following 1984 rice and maize were almost entirely imported from developing countries outside of SSA. These imports were particularly encouraged by the overvalued African currencies that penalized local production. While maize dominates food imports in Eastern and Southern Africa, the

bulk of rice, wheat and wheat flour is imported by West and Central Africa. For instance, rice, and wheat and wheat floor accounted for 57 and 36 percent of West African cereal imports in 1986, while the share of maize and other coarse grains was only 7 percent (INRA-IRAM-UNB, 1991). The share of coarse grain imports into West Africa is variable and contingent on rainfall level.

Food imports are significantly less concentrated than agricultural exports. The top five commodities accounted for 48 percent of total agricultural imports, compared with 72 percent of the top five export commodities.

3.2 Food Aid to Sub-Saharan Africa

Food aid has been a means to mitigate fluctuations in SSA's volatile food production. The United States is the most dominant food donor country. Mellor and Pandya-Lorch (1991) estimated that the US provides, for instance, two-fifths of the cereals food aid delivered to the member countries of MADIA (Managing Agricultural Development in Africa)[2]. The European Community is the second largest donor providing food aid to SSA. Food aid granted by both donors emphasized coarse grains in the 1970s. Since then food aid has shifted toward maize, and especially wheat and rice, a reflection of the shift in food consumption in SSA. The principal reason for the shift in food consumption toward rice and wheat, as noted by Delgado (1987), is the rapid urbanization which has resulted in a shift of consumer preferences toward more convenient food items.

IV- Trends in Manufacturing Products

4.1 Characteristics of the Manufacturing Sector under Import Substitution Policies and Impact on the Structure of Trade

In recent years, the manufacturing sector has contributed less than 10 percent to GDP for most SSA countries as shown in table 6 and has provided employment to only 9 percent of the population. Manufacturing growth appears to have stalled despite the promising signs it exhibited in the 1960s. During this period manufacturing value-added grew by over 8 percent per annum and it contributed over 15 percent to GDP (The World Bank, 1989). The standstill observed in the manufacturing sector is by in large caused by the strategies put in place by policy makers to accelerate industrialization in SSA.

(Stryker et al., 1994) identified two distinct industrialization strategies in SSA, notably resource-based industrialization and import substitution. The former, building on the base of a country's comparative advantage in the exports of primary products (mining, agriculture, forestry, and tourism), seeks to intensify, expand, or diversify those activities. On the other hand, political criteria rather than economic rationale have guided most investment, location and management decisions in the import substitution strategy.

Import substitution has relied on heavy protection (high tariffs and quantitative restrictions) to enable

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MADIA is a research project which was undertaken by the World Bank in collaboration with seven other donor agencies to determine the sources of agricultural growth in six Sub-Saharan African countries (Cameroon, Kenya, Malawi, Nigeria, Senegal, and Tanzania).

Table 6: Value Added in Manufacturing as a Percentage of GDP.

Sub-Saharan Africa excluding Nigeria	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992
Benin	4.6									
Botswana	4.1	5.9	4.8	5.2	6.0	5.1				
Burkina	9.7									
Burundi				7.7	8.4	9.6	9.8	9.2	9.7	
Cameroon	9.5	9.0					7.1	6.8		
Central African	3.0		4.6	2.4	3.0	3.7	3.9	4.8		
Congo		3.0	2.5	4.2	3.0	3.8				
Cote d'Ivoire	12.5									
Ethiopia	11.2	11.6	12.1	12.2	12.8	13.2	12.4	12.6		
Gambia, The	4.8									
Ghana	5.5	4.2	7.5	9.4	10.4					
Kenya	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	
Lesotho	3.8	9.4	8.6							
Madagascar	5.5	5.2	4.4	4.4	3.8	3.4				
Malawi	9.9	10.4	7.9	6.4						
Mali	9.8									
Mauritius	12.0	13.9	16.0	18.4	19.5	19.4	18.9	18.7	19.4	
Niger	1.2	7.0	7.1	7.5	8.4	8.3				
Nigeria		7.4	8.3							
Rwanda		4.7	9.0	9.9						
Senegal	8.8	8.8					6.5			
Seychelles	6.6	8.4	8.6	8.3						
Sierra Leone			3.6	2.7						
Somalia				1.4						
South Africa	23.0	23.3	22.4	20.9	21.4	21.9	22.3	22.3	22.0	
Tanzania	7.0	4.9	4.0	4.0	3.9	3.4				
Togo	3.7	3.5								
Uganda							3.0			
Zambia	20.1	19.8	22.1	21.9	27.1	28.2	26.5	23.6	29.9	
Zimbabwe	27.7	29.8	28.2	32.0	33.8	33.7	37.8	35.3	34.9	36.2

Source: African Development Indicators 1984-85, The World Bank, p. 258.

local industries to compete against more efficient foreign firms in the domestic urban market. To prevent unit costs from rising and make manufactured goods affordable to urban consumers, SSA governments have used extensive regulations and wage controls, and overvalued exchange to help domestic firms import the badly needed inputs. Import substitution has been characterized by political criteria rather than economic rationale to guide the choice of investment, location and management. Over time, this inward-looking strategy discouraged foreign investments and, as noted by Balassa (1989), it discriminated against exports and did not permit the development of manufactured exports.

In spite of the caution which must always go with examining the available data to compare SSA with other regions, there seems to be little doubt that the level of manufacturing development in SSA is the lowest in the developing world. The gap between SSA and the rest of the world appears to have widened considerably over time, especially in recent years. The evidence from Riddel's (1990) analysis, based on World Bank data, suggests that, while the ratio of manufactured exports from developing economies to world manufactured exports rose from 8.4 percent to 15.6 percent over the period 1965-86, the ratio of manufactured exports from SSA to world manufactured exports fell from 0.38 to 0.23 percent over the same period. Analysis of the same data also suggested that SSA's share of manufactured exports from all developing countries manufacturing export fell from 4.6 to 1.5 percent over the same period. These trends were confirmed by trade data compiled from UNCTAD.

Analysis of the data compiled by the United Nations Economic Commission for Africa seems to suggest that the performance of the industrial sector in terms of the growth rate of manufacturing value-added (MVA) was also disappointing. If a somewhat arbitrary 5 percent annual increase in MVA is taken as a norm against which to judge performance, the number of countries that exceeded this cut-off point declined drastically over the years. For instance, whereas in the first period (1963-73) 34 out of 43 of the countries had annual growth rates of MVA in excess of 5 percent, in 1973-9, the number dropped to 13. In 1979-86, the number of countries had fallen to just 10 countries. Over the entire period 1963-86, only four countries in SSA exceeded this rate of growth.

As with the breakdown of total MVA by country, Riddel (1990) indicated that the bulk of manufactured exports originated from only a handful of SSA countries. In 1986, only 8 countries contributed 63 percent of all manufactured exports from the region. Nigeria accounted for 38 percent of MVA in SSA. This country, combined with 6 other countries (Cameroon, Côte d'Ivoire, Ghana, Kenya, Zambia and Zimbabwe) account for 66 of MVA in SSA. At the other end, the combined MVA of 23 other countries amount to only 7 percent of the MVA of SSA.

As shown in table 7, the structure of manufacturing in terms of sub sector shares appears to have not changed much over time in SSA. Indeed, data compiled by the World Bank in 1985 to give a crude breakdown of manufacturing into broad sub-sectors suggested a low level of diversity of manufacturing in much of SSA. A complete absence of machinery and transport equipment and the dominance of food, beverages, textiles and clothing manufacture can be noticed. It appears that half of SSA's manufacturing was concentrated in the food, beverages and textiles branches in the mid-1980s. Chemical, and machinery and transport equipment accounted for 8 and 10 percent, respectively in the same period. The MVA of these latter groups of manufacturing was dominated by the top 7 countries, averaging 75 percent of the total SSA value-added in these sub-sectors. The remaining 25 percent originated from 40 countries.

Table 7: Structure of Manufactu[illegible]g Value Added of Sub-Saharan Africa, Exc[illegible]ng South Africa

	Food, bev. & tabacco			Textile &			Machin & transp. equipt.			Chemicals		
	1975	1980	1990	1975	1980	1990	1975	1980	1990	1975	1980	1990
Benin				15	14		0	0		3	6	
Botswana	0	43										
Burkina	62	59		13	19		2	3		2	1	
Burundi			83			9						2
Cameroon	49	56	61	16	9	-13	7	4	5	8	3	5
Central African Rep.	47	49	57	0	0	0	4	8	2	4	11	6
Congo	54			3			2					
Cote d'Ivoire	27	35		16	14		9	10				
Ethiopia	41	49	48	36	29	20	0	0	2	4	3	4
Gambia, The	95	35		1	2		0	0		1	3	
Ghana	34	37		14	11		4	2		5	5	
Kenya	34	34	38	10	12	10	12	15	10	10	9	9
Lesotho											4	
Madagascar	32	27		36	44		7	5		8	5	
Malawi	49	58		14	12		4	4		10	5	
Mali	32	29					3	8				
Mauritius	65	36	23	13	30	50	6	6	3	4	6	5
Niger		30			25			2			16	
Nigeria												
Rwanda												
Senegal	48	50		20	19		4	4		7	8	
Seychelles												
Sierra Leone												
Somalia	43			8						2		
South Africa				11	9	9	20	21	16	9	9	10
Tanzania	33	23		23	33		8	8		6	6	
Togo	37	47		33	13					4	8	
Uganda												
Zambia	42	44	44	9	13	13	10	9	7	10	9	11
Zimbabwe	20	23	29	16	17	16	10	8	7	10	9	8

Note: Sector does not add up to 100% due to unclassified others that are left out.
Source: African Development Indicators 1994-95, The World Bank, p. 259.

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Dominance of consumer rather than intermediate or capital-intensive manufacture seems to suggest that SSA's manufacturing is relatively simple in technique and that little structural change has taken place since independence.

4.2 Causes for the Poor Performance of Manufacturing

The conventional wisdom suggests that the poor performance of the manufacturing sector is due to its principal role assigned in SSA. Plants and factories were established to manufacture goods predominantly for the domestic markets, with the twin goal of replacing imports and reducing the overall import bill. This drive resulted in, as argued by Riddel (1990), the increasing isolation of the SSA enterprises from the dynamics of efficient change occurring elsewhere. Manufacturing in SSA suffered also from the unsustained imports of raw materials, spare parts and equipment, owing to lower levels of export earnings and restrictive access to foreign investment and commercial finance. As a result, productive efficiency in SSA lagged behind that of other regions and was increasingly determined by what were becoming obsolete techniques and out-dated machinery. The resulting inefficiency was exacerbated by a personnel which was out of touch with new techniques and lacked technical and managerial skills.

Manufacturing in SSA was also adversely affected by the low level of capacity utilization resulting from a narrow domestic market and a fall in real income, due to the decline in export earnings. Politically-motivated decisions rather than economic rationale to establish profitable firms and politically-inspired pressures to promote state-owned industries without both adequate overall planning, and supportive infrastructure and institutions contributed substantially to perpetuating inefficient industries. Apparently, the inward-looking industrialization failed to take into account how import substitution industries could be articulated with other productive sectors of the economy and failed to incorporate into its strategy the dynamic inter-linkages between manufacturing sub-sectors.

4.3 Prospects for Trade of Manufactured Products

With the advent of the structural adjustment programs most Sub-Saharan African countries have launched reforms to reverse the dismal performance of the manufacturing sector. In the near future, substantial and systematic expansion in manufacturing is likely to be constrained by shortages of foreign exchange necessary for the importation of new plants and equipment. The manufacturing sector will also be hampered by the poor investment climate and, in some countries, shortages of skilled labor. Continuing budgetary constraints will likely inhibit any major new financial initiative to subsidize manufacturing exports. The constraints highlighted are likely to continue in the near future.

Sub-Saharan Africa can draw useful lessons from the experience of the Newly Industrialized Countries (NICs), as shown by Eager/Trade survey paper 96 "Lessons from East Asia for Promoting Trade in Africa" by Engel. These countries have shifted their manufacturing sector toward high-growth and competitive enterprises by gradually setting the stage for competition. They have deregulated their economies to encourage domestic competition and opening their domestic markets to enable domestic firms to compete with foreign firms. In addition, they have created a stable policy environment and they have improved access to credit to permit medium- and long-term investments.

Balassa (1989), Lee (1981), Little (1981), and Datta-Chaudhuri (1981) have all shown that outward-oriented strategies can be a source of greater growth of productivity. Expanding beyond the domestic market can result in greater capacity utilization in industries in which the minimum efficient size of

plant is large relative to the domestic market. It can also induce greater horizontal specialization as each firm concentrates on a narrow range of products. Additionally, it can result in increasing familiarity and absorption of new technologies and greater learning-by-doing as long as this is a function of cumulative output. Increasing productive efficiency depends to a large extend on: (1) more appropriate machinery; (2) new management techniques; (3) research and technological capabilities; (4) innovative ways of raising labor productivity; (5) systematic attempts to enter new non-domestic markets with higher quality products packaged more attractively; (6) attempts to reduce comparative transport disadvantages, and (7) the provision of extension of export credit guarantees and facilities to minimize foreign-exchange risks. Finally, exports can permit greater output in industry and the stimulative effect of the need to achieve internationally competitive prices and quality.

Woldekidan (1994) has argued that expansion beyond the domestic market rests on designing sound macroeconomic policies and creating the enabling environment for competition in the output and factor markets. Even though these are necessary conditions, as noted by Tyler et al. (1994), they are not sufficient conditions to guarantee success in outward-looking industrialization. There exist a host of other elements to stimulate growth in the manufacturing sector. Attention needs to be paid to improving technical and managerial capability in order to master new technologies and raise productivity. Equally important is the need to invest in the physical infrastructure (roads, railroads, port, and telecommunication) to improve access to information and reduce transfer costs. Tyler argued further that simplification of regulations, improvement of customs procedures and institutional support are other important elements to increase supply response in the manufacturing sector.

The world Bank (1991) in a study to improve SSA's competitive position identified additional critical elements to make an outward-oriented industrialization successful. Collaboration between domestic and foreign firms can play a catalytic role in building a competitive edge in world markets. As argued by the World Bank, because SSA's firms generally lack the capacity to export, they should establish a close link with foreign firms to: (1) acquire technical, marketing and managerial know-how for starting up manufactured exports, (2) establish world market network, and (3) acquire financial resources for investment and working capital. This close collaboration is possible only if information on investment opportunities in SSA are disseminated and if there exist private match-making mechanisms to narrow the information gap between potential foreign investors and domestic firms.

Woldekidan (1994) observed that manufacturing exports can also be facilitated through various schemes for free trade, such as bonded manufacturing warehouses, duty-drawback systems, duty-exemption systems, and import licensing. For instance, the success of Mauritius' clothing industry was greatly influenced by the creation of the Export Processing Zones (EPZ) aimed at providing areas where scarce infrastructure could be concentrated and a free trade environment created for domestic and foreign firms producing for exports. He noted further that creation of the EPZ was, however, possible because Mauritius did not establish restrictions on foreign ownership in the manufacturing sector and more importantly capital, profits and dividends could be remitted abroad freely.

V- Regional Trade

5.1 Formal Trade

Since the early 1970s regional economic integration has received considerable attention among African policy makers to overcome the narrowness of the national economies. Notwithstanding all the rhetoric, little progress has been made to foster trade among Sub-Saharan African countries. The World Bank (1991 b) estimated that official trade among these countries has stagnated over time and accounts for a small share of their total trade. In 1991, overall regional trade amounted to a mere 6 percent of SSA's total trade, despite the existence of several regional organizations to promote Sub-Saharan African trade. Official regional trade appeared to be highest among members of the defunct Communauté Economique de l'Afrique de l'Ouest (CEAO), which included eight Francophone West African countries. Intra-CEAO trade accounted for 11 percent of the total trade of the member countries in 1989.

Several reasons have been put forward to explain the lack of progress in regional trade. The first argument has focused on differences in historical and cultural background. The colonial legacy and post-colonial differences in external relationships have endowed the region with varied administrative, legal, and economic traditions, and with different languages. Business relationships are easier and more frequent among Francophones and among Anglophones than they are between the linguistic groups (Berg, 1991). This factor may probably explain the relatively high intra-CEAO trade mentioned above.

Berg also noted that structural factors have also been blamed for the stagnation in official regional trade in SSA. Sub-Saharan Africa is characterized by great disparities in economic size and levels of economic development. This disparity accentuated the fundamental problem of unequal distribution of costs and benefits, which is found in all preferential trading arrangements. Usually, the more advanced countries benefit more and, often, more quickly from economic integration than the poor states. The latter find their national industrial structures menaced or their fiscal stability threatened, given their dependence on customs duties. So, they demand compensation. But, compensation arrangements are hard to work out because they reduce the benefits to the advanced members and the group as a whole. They also tend to undermine the economic efficiency rationales that are the main justification for economic integration.

Faezed Foroutan and Lant Pritchett have argued that the observed small proportion of intra-SSA trade is not less than one would expect. They contend that the low degree of intra-trade is completely explained by the low trade potential amongst the countries, primarily because of their low level of GDP. They further state that there is no evidence that intra-SSA trade flows are differentially low either because of policy or infrastructural weaknesses.

However, the view taken by the World Bank (1991 b) in explaining the lack of progress in regional trade stressed the inappropriate macroeconomic and sectoral policies. Most African countries have adopted overvalued currencies and distorted the economic structure through heavy government intervention in input and output markets to foster national industrialization. Agreeing with the World Bank's line of thought, Badiane (1991) noted that SSA's development policies, which are consistent with inward-looking industrialization strategies, are incompatible with integrated regional markets because they pursue specific national objectives that can hardly be regionalized. In the light of the Lomé IV convention about to expire regional trade is becoming increasingly important and inward-

oriented strategies offer limited scope for regional trade, for they emphasize industrialization and penalize agriculture in which most African countries appear to have a strong comparative advantage. Policy-induced distortions tend to encourage rather trade based on rent-seeking activities. These distortions also tend to drive traders to the unofficial and informal channel and may lead to unrecorded intra-regional trade.

5.2 Unrecorded Trade

Even though trade data show little official trade among Subs-Saharan African countries care must be used to make inferences from these data. A wide body of literature has documented the fact that data on official regional trade are unreliable and that this trade accounts for a small portion of trade taking place among African countries. Burfisher and Missiaen (1987) estimated that over 40 percent of intra-regional trade is unrecorded in Sub-Saharan African countries. The underestimation of total intra-regional trade can be explained, according to these authors, by the fact that African governments lack generally the personnel, logistic and resources to capture most cross-border transactions.

INRA-IRAM-UNB (1991), the Franco-African research team under funding from the Club du Sahel and CILSS, pointed a second reason for unrecorded trade. Sometimes, it would be too restrictive to follow official procedures (regulations, taxes, or simply the need to make a detour through a customs post). One example of this type of trade is the flows of sorghum and millet from Mali to Côte d'Ivoire, Senegal and Mauritania. These flows involve less than 3 percent of the region's total cereal output. Such is also the case for livestock trade in the central corridor of West Africa, as shown by Kulibaba and Holtzman (1990). This kind of unofficial border trade could be assimilated fairly easily by the formal sector, provided the constraints on traders are not excessive.

A third reason for unrecorded intra-regional trade is the complicity of some governments. Some products are imported from the world market by one country and then re-exported clandestinely to a neighboring country to enable the former country to derive economic benefits. Such trade stems from economic or monetary policy disparities. A case in point was rice trade between several West African countries, as shown by INRA-IRAM-UNB (1991), and Ndoye et al. (1989). In fact, most countries in West Africa grow rice. Some of these countries have decided to maintain an open door for rice trade, while others try to shield their domestic rice producers from relatively cheap world market rice. Protection is undertaken through quantitative restrictions or high tariffs and induces artificially high rice prices within their borders. As a result of this protection, rice prices are much higher in these countries than in non-protectionist countries. The price differentials resulting from trade policy disparities make it attractive for traders to engage in cross-border trade. According to INRA-IRAM-UNB, this type of trade accounts for more than 10 percent of total rice imports and certain smaller countries have made it a "national specialty." These countries purposely unrecorded such trade.

Unrecorded trade was mainly driven by policy disharmony than a reflection of comparative advantage. Such was the case for instance in West Africa before the devaluation of CFA franc (Barry et al., 1991; Salinger and Stryker, 1991). The challenge then is to create competitive market structures that will promote factor mobility and free movement of goods and services by the private sector. The ultimate goal is to encourage the private sector to engage in wealth-creating exchanges across borders rather than market conditions that promote rent-seeking activities. An important step toward wealth-creating regional exchanges is to dismantle government-induced distortions.

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When distortions do not encourage rent-seeking activities they often erect barriers to fruitful exchanges that are consistent with comparative advantage. A good example of the adverse impact of policy-induced barriers was the inability of Sahelian countries to export their livestock products to the West African coast. Sahelian countries lost an important regional market share, owing to the overvalued CFA franc prior to January 1994. This loss took place, despite a strong comparative advantage for Sahelian livestock production in competing with meat imports into coastal West Africa (Metzel and Cook, 1994).

Numerous informal barriers also stand in the way of intra-regional trade. These barriers include for example police and customs officials' harassment within and across borders. These constraints on trade have been documented by Josserand (1992), Savadogo (1992), Kulibaba and Holtzman (1990) and the West African Enterprise Network (1995). The Network also stressed the difficulty of monetary transfer across countries, as well as the condition of the physical transport infrastructure and the high transport cost, as major impediments of regional trade. Other structural barriers such as the lack of storage and refrigeration infrastructure, vacuum in contract enforcement and regional market information, the problem of access to trade finance, the political insecurity, etc. also hinder intra-regional trade (for details on these barriers, see survey papers on Structural Barriers to Trade, and Promoting Trade through Regional Integration).

Dismantling policy-induced distortions may expand regional trade to some extent. Encouraging intra-SSA trade should not, however, give the opportunity to Sub-Saharan African countries to erect barriers against third parties, for these countries may isolate themselves from the rest of the world. African countries should rather integrate themselves into the world economy to encourage adoption of new production and marketing processes, and promote more competition and more efficient resource allocation.

5.3 Comparative Advantage in Food Products and Livestock

A vast body of literature has been devoted to the analysis of comparative advantage of the West African agricultural sector. The means that was used more often to assess this comparative advantage has been the DRC/PAM method. The first application of this method was on rice. Then, it was extended to other commodities.

5.3.1 Rice

The first comprehensive study of West Africa's rice sub-sector was undertaken by the Food Research Institute (FRI) in the late 1970s, using the DRC/PAM method to evaluate the economic efficiency of rice production, processing and distribution (Pearson et al., 1981). This study grew out of concern with shocks that affected the sub-sector of rice, which is the principal staple food in West Africa. Following a long drought in West Africa and a sudden and marked price increase in the international rice market, couple with the quadrupling of petroleum price, all governments in this region began to reassess policies affecting production, consumption, and trade of rice. West African governments reacted to the international price hike by raising domestic rice prices to consumers and producers, though not always by the full extent of the rise in corresponding import prices. Consumers reacted to the higher prices by switching partially from rice to other foodstuffs. Producers who received higher prices for their paddy responded by increasing in output, while government agencies were created to import rice.

While this adjustment was taking place, the picture changed drastically in 1975. All of the sudden, there was an excess supply of rice and the importing agencies were forced to carry over stocks into 1975. Some countries became self-sufficient in rice and others even had small exportable supplies. The unstable market conditions led member countries of the West African Rice Development Association (WARDA) to commission a study that would assess the possibility of regional self-sufficiency in rice and eventually evaluate the prospects for future intra-regional trade in rice under alternative scenarios. This study focused on three countries (Côte d'Ivoire, Liberia and Senegal) which had imported relatively large quantities of rice, and two other countries (Mali and Sierra Leone) which had the potential to export rice within the region.

The results of the net social profitability (NSP), used as a measure of efficiency and comparative advantage, suggested that Côte d'Ivoire, Liberia and Senegal could not profitably substitute local rice for international rice in their capital cities, even under reasonably optimistic assumptions for production growth. Rice produced in production centers which were close to the coast were also found to be economically unprofitable in general. This conclusions raised importance questions on the policies adopted by the government of these coastal countries to increase rice production and marketing, in the face of increasing rice consumption in West Africa.

In contrast to the results for the coastal countries, the study suggested that Mali and Sierra Leone could supply rice efficiently to their respective capital cities. Mali had the highest NSP for two reasons: (a) labor cost in this country was much lower than that of other countries and (b) this country was favored by transport cost from the coast to its border. Positive NSP in Mali and Sierra Leone suggests that these countries might have a comparative advantage in exporting to other countries in West Africa. Revised NSP estimates for rice exported from Mali and Sierra Leone to several West African markets, using FOB value for rice, showed that there were profitable exports of rice from both countries, but the competitiveness of Malian rice could not go beyond Bouake, a city in central Côte d'Ivoire, owing to high transport cost.

Using the same method of measuring comparative advantage, Stryker et. al. (1987a) found similar results for Mali. Comparable results were generated by studies undertaken by Stryker et al. (1987b) for Nigeria, Holleman (1991) for Senegal and Barry et al. (1991) for Côte d'Ivoire, Mali and Guinea. Barry (1994), having extended the number of consumption points and used different assumptions, also found results similar to those of earlier studies. The results of all these studies, along with those of a study undertaken by Stryker et al. (1992) in Madagascar, suggested that large-scale irrigation was not a viable means of rice production under any circumstances. These conclusions may well be confirmed by the WARDA study which is under way in West Africa (see upcoming publications by Randolph). This large study aims to update the results of the previous WARDA work on Côte d'Ivoire, Mali and Senegal, and intends to assess the comparative advantage of the West African countries that were not included in the study of the late 1970s. Another study has also been launched by Michigan State University, under Dimithe's leadership, to evaluate the competitiveness of swamped rice production in Southern Mali. Preliminary results of this study will be available soon.

5.3.2 Other Food Products and Livestock

The DRC/PAM framework has been also used to assess the economic efficiency of food crop production and marketing in several Sub-Saharan African countries. Stryker et al. (1987 a and b; 1992), Delgado (1990), de Frahan (1990), Holleman (1991), Barry et al. (1991), SOGES and AIRD (1991), Barry (1992), Morris et al. (1992), Barry (1994), and Salinger and Barry (1996) have shown that coarse grains are generally produced efficiently by SSA countries, despite low productivity. It appears from the results of the above-mentioned literature that there is room for beneficial exchange between African countries based on their comparative advantage. Trade would be expanded further if on-farm yields could be enhanced markedly, suggesting that investment in research will be crucial for the well-being of African consumers.

In contrast to coarse grains, research on the comparative advantage of SSA in livestock products has been scanty. The only research available to date on livestock is the study undertaken by Metzel and Cook (1994) on West African livestock. The results of this study suggested a strong comparative advantage for Sahelian livestock production in competing with meat imports into coastal West Africa, and for delivery of milk products to local populations within the Sahel. This study seems to indicate that traditional ruminant production systems in the sub-humid zones of coastal West Africa are competitive in coastal markets, despite lower animal productivity than Sahelian systems. This competitiveness appears to be due to their closer proximity to the coastal markets, which reduces their marketing costs in reaching these markets. Only feed-intensive peri-urban dairy production appears to show weak economic profitability. According to the study, governments should focus attention on increasing productivity, which will require investments to improve feed supplementation, animal health and management.

Salinger and Barry (1996), Stryker et al. (1992), and SOGES and AIRD (1991) are some of the rare research on examining SSA's comparative advantage in non-cereals. Results provided by these authors indicated that some countries seem to have a comparative advantage in potatoes. But, this comparative advantage is very much linked to the dwindling international prices and more importantly to the unstable on-farm yields. Potato yields in SSA are very low by international standards. Increasing these yields may help to reduce unit costs if the problem of ringworm (right terminology for l'eigne?) could be addressed in the near future.

Economic research needs to be undertaken for other root crops which are an important part of people's diet in SSA. Particularly important among these are cassava, yam, sweet potatoes, etc. Economic research on these root crops, other food products, and livestock in other parts of SSA will shed light on the comparative advantage and contribute to address the bottlenecks encountered in the food sector.

VI Nontraditional exports

Many Sub-Saharan African countries have relied on, up to the early 1980s, a few commodities to generate foreign exchange earnings. These countries had lost a large share of the markets for traditional export commodities. The reforms programs that have been under way since the early 1980s have helped these countries to recapture some of the markets lost to non-Africa competitors. However, growth in these markets is blocked by supply and demand conditions. On the demand side, world market prospects for some traditional commodities, especially for vegetable oil, appear poor

and unstable. On the supply side, population growth is pressuring on the land suitable for livestock and cash crops. In the meantime, mineral deposits and forest reserves are being exhausted. As a result of unfavorable supply and demand conditions, future export earnings and growth prospects for SSA will have to rely increasingly on exports of nontraditional goods. These goods include high-value commodities (horticultural products, processed agricultural products, etc.) and labor-intensive manufactured products (Stryker, 1991).

6.1 Comparative Advantage and Prospects for NTX Following Structural Adjustment

African countries can diversify into nontraditional export products, such as horticultural commodities. Climatic conditions are in favor of Sub-Saharan African countries, on the grounds that they can grow these products all year round without interruption. Such is the case for Burkina Faso, the Gambia, Guinea, Kenya, Madagascar, Mali and Senegal. Countries along the coast such as Mauritania can also profitably export marine resources. Flexible supply conditions in SSA will be crucial for capturing a larger share of world market for high-value products. In this respect, it may be useful to review country case studies to determine where the supply factors adversely affect the ability of African countries to respond to market opportunities.

Diversification into labor-intensive products is also possible because SSA's labor has become relatively cheaper than that of other regions, owing to two major reasons. First, its labor force is rising due to the high population growth rate (Cilber, 1985). Second, its real per capita income has declined or at best stagnated, following the dismal economic performance. This, together with the expanding demand for Afrocentric products -- e.g., garments, home furniture, accessories--, is creating new market opportunities for much of Africa.

The prospects for nontraditional exports commodities appear promising for SSA. World demand for these products is expanding, owing to renewed growth in the developed economies and income increase in the newly industrialized countries and other developing countries. Experience has shown that as income grows consumers tend to diversify their consumption basket by moving more toward food products that have a high value. The ability of Sub-Saharan African countries to take advantage of demand expansion will depend largely on meeting demand conditions in the very competitive market for high-value products. In this respect, it may be useful to review selected country case studies to identify the supply constraints and bottlenecks.

6.2 Lessons Learned from Case Studies of Nontraditional Export Products

6.2.1 Madagascar

Madagascar's agro-ecological conditions and its location in the southern hemisphere give it a strong comparative advantage in the production or exploitation of agricultural, marine, wood and mining products. Madagascar has experienced growth in a number of nontraditional exports from both primary and secondary sectors, e.g. shrimp, dried beans, butter beans, luxury rice, sisal, cotton fiber, medicinal plants, meat, leather, cotton cloth, and garments. Madagascar appears to have a strong comparative advantage in these products. It has invested markedly in these products, following the establishment of both the new investment code and the Zone "Franche".

Despite these investments, the nontraditional exports declined sharply between 1992 and the end of 1993, owing mostly to the climate of political uncertainty. Stryker and Shaw (1994) showed that

nontraditional exports were also hindered by poor transportation and infrastructural decay, especially in telecommunication services. In addition, long distance from major international markets, high transportation costs, and lack of linkages between overseas markets and domestic production adversely affected the nontraditional sector. Furthermore, a host of policy and institutional factors, including complex administration of the processing of exports and imports, foreign exchange for exporters, implementation of duty and tax exemption schemes, access to financing, labor regulation, and contract enforcement stood in the way of nontraditional exports.

6.2.2 Ghana

Ghana has also a number of pre-conditions for successful nontraditional export growth. Favorable agro-ecological conditions give it a comparative advantage in the production of horticultural and other agricultural crops. Ghana is also rich in marine resources and its timber resources give it a comparative advantage in wood processing. It has a cultural tradition suitable for the production and export of Afrocentric products. Finally, Ghana has a reasonably high level of education by African standards, and it has an entrepreneurial class with a long history of investment in new undertakings.

According to data compiled by Stryker and Shaw (1994) from the Ghana Export Promotion Council (GEPC), nontraditional exports increased from $24 million in 1986 to $63 million in 1991. The share of these exports in total exports more than doubled between 1986 and 1990, increasing from 3.2 to 7 percent. The most rapid and consistent growth was in furniture and wood products, and handicrafts. The volume of horticultural products also increased. In addition, Ghana experienced rapid growth in exports of Afrocentric products such as cloth, garments, fashion accessories, household furnishings, and handicrafts (Biggs et al., 1994).

It appears, however, that Ghana's nontraditional exports encountered difficulties in recent years. According to Biggs, from delayed delivery schedule following a series of difficulties GEPC hindered the expansion of the nontraditional sector. Difficulties in coordinating input supplies, poor quality, and packaging problems stood also in the way of fostering the expansion of this sector.

6.2.3 Kenya

Kenya is another SSA country which has actively participated in the international trade of high value products. Kenya specializes in vegetables and has the most SSA's successful trade in "off-season" vegetables to niche markets in Western Europe (Nurul Islam, 1990). The export value of vegetables steadily increased from $2.3 million in 1970 to $47.7 million in 1988-89 (Steven Jaffee et al., 1993). Kenya's competitive advantage originates from low costs of production, a broad product base, and a counter seasonality of supply. The implementation of institutional arrangements linking producers with exporters, processors and foreign agents as well as contractual coordination and ownership integration were also instrumental in establishing and maintaining market access. The long term contractual ties provided critical market information allowing exporters to quickly adjust to new opportunities reduced uncertainties regarding payments. Steven Jaffee further reports that prior development of complementary industries and new transport facilities are the primordial factor contributing to the initial vegetable exports take off from 1968-1975.

6.3 Barriers and Approaches to Expanding Nontraditional Exports

This quick review of SSA's nontraditional export sector seems to suggest that SSA has done fairly well in world market (Biggs et al., 1994). However, SSA is constrained by a host of factors that prevent it from maximizing it exports. Lack of adequate physical infrastructure such as transport, warehouses, telecommunication and research facilities, stands in the way of African exports. SSA's exports are hindered by the limited technical and managerial know-how which makes it difficult to adapt available foreign technology to local conditions or to adequately understand the functioning of the market. This understanding is even more difficult because of the lack of market information system.

African nontraditional exports are also hampered by the lack of a viable legal and judicial environment that contributes to relatively high transaction costs. Serious distortions in the institutional structures are also hindering the expansion of the nontraditional sector and include: (1) restrictions on exporters' retention of foreign exchange earnings, (2) lack of duty-free access to imported inputs, (3) slow and costly procedures for exports and imported inputs, (4) lack of access to term finance for fixed investment, (5) lack of access by smaller firms to working capital, (6) problems in the implementation of special incentive schemes, (7) lack of competition for air and sea freight, (8) excessively complicated or restrictive regulations regarding land and labor, and (9) problems in contract enforcement with overseas importers (Stryker et al., 1994).

Governments in SSA may draw useful lessons from the study undertaken by Jaffee and Gordon (1993) on the success stories of some developing countries in exporting high-value commodities. They need to focus their attention on encouraging foreign and joint venture investments to facilitate transfer of production and processing technologies to SSA. Achieving this goal will require that governments streamline foreign investment procedures, set up investment incentive programs, and reduce tariff and non-tariff barriers to make it easy for the private sector to import technology-embodied inputs and agribusiness operations. Governments also need to invest in both human capital to improve technical and managerial skills, and support physical infrastructure. Government should not, however, meddle into the marketing activities and should leave them to the private sector which is better equipped in general to response to market opportunities.

Conclusion

This research has shown that SSA has lost an important share of the world market for primary products. Even though bad weather and the dwindling terms of trade may have contributed to this decline, policy-induced factors played a more significant role in SSA's lackluster export performance. Distortions introduced by macroeconomic and trade policies made primary export products unprofitable to producers and as a result, they retracted from making the investment necessary to enhance productivity and supply. These policies also adversely affected the food sub-sector. They discouraged domestic food production and encouraged commercial food imports and food aid to fill the gap between the declining per capita food production and the surge in food demand, resulting from the increasing population growth.

Macroeconomic policies geared toward import substitution and inward-looking strategies had a heavy bearing on SSA's manufacturing sector. The policy-induced distortions encouraged the creation of inefficient industries that could compete in domestic markets only, thanks to heavy protection. The

inability of this sector to compete in foreign markets was compounded by the lack of technical and managerial skills that made it difficult to adapt available foreign technology to local conditions. In addition, they suffered from the lack of adequate physical infrastructure and telecommunication facilities.

The policy reforms initiated in the early 1980s to make SSA's economies more flexible and competitive have resulted in relatively efficient nontraditional export products: horticulture and labor-intensive goods. SSA can diversify into horticultural products because it has at its disposal the natural conditions to supply these products all year round without interruption, thus making it possible to take advantage of the opportunities provided by the niche markets. Diversification into labor-intensive products is also possible because SSA's labor has become relatively cheaper than that other regions, owing to its rising labor force resulting from the increased population. Moreover, the lackluster economic performance in SSA, in contrast to economic growth in other regions, has induced declining or at best stagnating wages. However, some factors, in addition to the constraints mentioned for the manufacturing sector, hinder the nontraditional export products: (1) the lack of marketing finance; (2) the lack of market information system to help exporters understand the functioning of world markets for nontraditional products; and (3) a weak institutional base that contributes to high transaction costs.

In light of the findings of the paper, it is recommended that SSA's governments invest in both human capital (formal education and on-the-job training) and physical infrastructure (transport, port, railroads, etc.), create the enabling environment to induce competition in factor and output markets, and avoid meddling in the marketing activities because the private sector is generally better equipped to response to market opportunities. Moreover, SSA's governments need to focus their attention on encouraging foreign and joint venture investments to facilitate transfer of production and processing technologies to SSA. Achieving this goal means streamlining foreign investment procedures, setting up investment incentive programs, and reducing tariff and non-tariff barriers to make it easy for the private sector to import efficient technologies.

Attempt to capture world markets does not preclude SSA to promote intra-regional trade. Trade among countries in SSA can serve to learn how to compete in the non-African market. Yet, the level of intra-regional trade is still marginal, notwithstanding the comparative advantage of different countries in different agricultural commodities. There is, however, a vacuum in comparative advantage studies in livestock and mining products. Future research in these products may shed some light on the extent to which intra-regional trade may be promoted. Additional research in the manufacturing sector is also needed, on the grounds that specific bottlenecks have not been identified and that very little is known about SSA's present and future comparative advantage.

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TRADE AND DEVELOPMENT IN AFRICA

J. Dirck Stryker

INTRODUCTION

During the past decade and a half, numerous countries in Africa have undertaken extensive policy reforms designed to free up markets and orient their economies in a more outward-looking direction. Reforms have included deregulation of markets for goods, labor, and capital, as well as reduction or elimination of taxes and subsidies in these markets. Reforms in trade and exchange rate policy have comprised the following: devaluation, the establishment of more flexible exchange rates, the dismantling of quantitative restrictions on imports, the lowering and harmonization of import tariffs, the reduction in or elimination of taxes on exports, and the establishment of preferential regimes regarding credit and taxation of imported inputs used in the production of exports.

The reforms have been designed to induce growth through the reallocation of resources away from inefficient production of import-competing goods and nontradables and towards the production of goods for export. This should lead to static economic gains resulting from trading in accordance with comparative advantage and exploitation of economies of scale. There are also a number of dynamic ways in which trade may contribute to economic growth. These include having trade and associated investment serve as a conduit for technological transfer, increasing the efficiency of enterprises forced to compete to a greater extent in foreign and domestic markets, expanding the commercial and managerial competence of entrepreneurs, augmenting the skills of the work force, creating a market for labor in the face of growing population pressure, and increasing foreign exchange earnings that can be

used to import capital equipment. In addition, according to the new "endogenous" growth theory, openness to trade increases the returns to innovation and encourages specialization in "research-intensive" production[1].

The empirical evidence for developing countries largely supports the theoretical arguments concerning the favorable impact of outward-looking, market-oriented policy reform on trade and growth.[2] The recent experience in Africa, however, has been disappointing. Despite a substantial record of policy reform in many African countries during the 1980s, output per capita fell by 0.6 percent from 1987 to 1994, virtually the same performance as during the previous ten years[3]. Lack of economic growth may reflect the failure of reforms to be fully implemented or sustained, or it may be due to structural factors such as landlocked location and natural resource abundance.[4] It is also possible that many African countries lack the physical infrastructure and human capital in the form of education and institutional development that would allow them to take full advantage of the potential opened up through policy reform. Thus, policy reform may be a necessary but not sufficient condition for expanded trade and growth, and the length of time required for these beneficial effects to occur may be longer where there is less infrastructure and other conditions necessary for development are lacking.

Two arguments, in particular, merit special attention because they have been raised relatively recently in the literature. The first, which has been put forth by Robert Bates, relates to the failure in

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[1] Ann Harrison, "Openness and Growth; a Time Series, Cross Country Analysis for Developing Countries," background paper for the 1991 World Development Report, Washington, DC: World Bank,1991.

[2] For a review of much of the evidence relating policy to trade and growth, see Sebastian Edwards, "Openness, Trade Liberalization, and Growth in Developing Countries," *Journal of Economic Literature,* 31 (1993), pp. 1358-1393. An important recent study is Jeffrey D. Sachs and Andrew Warner, "Economic Reform and the Process of Global Integration," *Brookings Papers on Economic Activity*, 1995, pp. 1-118.

[3] Jeffrey D. Sachs, "Growth in Africa: It Can Be Done," *The Economist,* June 29, 1996, pp. 19-21.

[4] Recent evidence suggests that natural resource abundance may have a negative influence on growth, perhaps because of a Dutch Disease effect or because it makes exports less sensitive to policy (Jeffrey D. Sachs and Andrew Warner. "Natural Resource Abundance and Economic Growth," Harvard Institute for International Development, Development Discussion Paper No. 517a, 1995.). The Dutch Disease refers to the tendency for the real exchange rate to be overvalued because of rapid expansion of a few primary product exports. This makes it

Africa for reform to become sufficiently imbedded in the political fabric so that it has retained widespread support.[5] Prior to reform, according to Bates, entrenched interests associated with the state maintained a policy environment that destroyed producer incentives and heavily penalized the rural sector, while benefiting the urban population upon which the state depended.[6] Because of the erosion of producer incentives, the productive base of these economies ultimately broke down, and the states were forced to turn to the International Monetary Fund and the World Bank for assistance. This shifted power towards the executive branch of government and, in particular towards the bureaucrats in the central bank and finance ministry. Once the initial rounds of reforms had been achieved, however, the old special interests began to reassert themselves without substantial opposition from those who would benefit materially from the reforms, especially producers of nontraditional exports, unless the latter were able to forge new alliances with the technocrats. In many countries this did not happen, and backsliding ensued.

Africa also suffer from a poorly developed institutional base. This is expressed in numerous ways. For example, the very weak tax base makes it very difficult for governments to raise the revenue that they need without excessively taxing the small formal sector and destroying its incentives to expand. This creates inflationary fiscal pressures, which are hard to control because weak financial institutions make the implementation of monetary policy very difficult. Weaknesses in the financial system also make it hard for firms that want to expand to raise the necessary capital. Other institutional problems relate to an inadequate legal, regulatory, and judicial environment (LRJ), excessive

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difficult to diversify the export base to include a broader range of agricultural and manufactured goods.

[5] Robert Bates, "The Politics of Economic Policy Reform: a Revue Article," *Journal of African Economies*, 2(3), August, 1993, pp. 417-33.

[6] Robert Bates, *States and Markets in Tropical Africa; The Political basis of Agricultural Policy*, Berkeley: University of California Press, 1981.

administrative controls on foreign trade, and weak commercial and marketing institutions. The importance of this institutional environment in the modern world economy has been stressed by Mancur Olson, who deems it the most critical factor in establishing the preconditions for investment, trade, and growth.[7]

Case studies of individual country experience in Africa suggest that the ability of these countries to take advantage of outward-looking, market-oriented reforms depends at a minimum on the following factors. First, the reforms must be substantial, well implemented, and sustained. Second, the country must have markets capable of reallocating resources in line with comparative advantage based on resource endowments, productivity levels, and input prices. Third, there must be adequate infrastructure in transportation, telecommunications, energy, water supply, and other areas essential to competitive export activity. Fourth, there is the need for mechanisms to acquire and distribute information on market opportunities, production technologies, and other areas through professional and trade associations, agricultural research organizations, training and educational institutions, radio and television coverage of markets, etc[8]. Fifth, countries must have the human capital capable of taking advantage of new opportunities for trade[9]. Finally, there is the role of the public sector and the institutions that surround it vis-à-vis the private sector. Especially important in this regard is the incentive structure imposed by the tax system, a stable macroeconomic environment, a strong LRJ environment, and a politically and militarily secure society within which economic activity can prosper.

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[7] Mancur Olson, "Big Bills Left on the Sidewalk: Why Some Nations are Rich, and Others Poor," *Journal of Economic Perspectives*, 10 (2), Spring, 1996, pp. 3-24.

[8] The importance of institutions for facilitating the expansion of trade has recently been emphasized by Judith M. Dean, Seem Sesai, and James Riedel, "Trade Policy Reform in Developing Countries since 1985: A Review of the Evidence," World Bank Discussion Paper No. 267, Washington DC: World Bank, 1994.

[9] William J. Baumol, Richard R. Nelson, and Edward N. Wolff, (eds.), *Convergence of Productivity: Cross-Natural Studies and Historical Evidence*, New York: Oxford University Press, 1994.

EAGER PROJECT

The EAGER (Equity and Growth through Economic Research) Project, financed by the U.S. Agency for International Development (USAID), has been contributing to the identification of priorities regarding the conditions required for expanded trade and growth. This has involved economic and social research and analysis related to these priorities and its use by decision makers in the public and private sectors for the formulation of sustainable policies and strategies to promote economic growth with equity in Africa.[10] The Associates for International Resources and Development Group (AIRD) consortium is responsible for the implementation of this project and has been working closely with African policy makers, business leaders, and researchers to identify the key issues related to trade and growth in Africa, to prepare proposals for specific research projects to be undertaken by teams of expatriate and African researchers, to implement these research projects in close cooperation with policy makers and the private sector, and to ensure that the results of the research are widely disseminated for use by decision makers in both public and private sectors.

This paper presents some of the preliminary results of this research. These results relate to the following themes identified as priority concerns:

1. factors influencing trade, growth, and poverty;
2. barriers to cross-border trade among African countries;
3. effects on trade of monetary, fiscal, and exchange rate policy;
4. regional integration and industrial competitiveness.

Each of these themes is examined here in turn, and the principal results of the research to date are

[10] The prime recipient of the cooperative agreement used to implement the Trade Regimes and Growth component of the EAGER project is Associates for International Resources and Development (AIRD). Other members of the group include International Business Initiatives (IBI), the Harvard Institute for International Development (HIID), Purdue University, and the University of Laval.

presented. The final section of the paper offers a few conclusions.

RESEARCH RESULTS

Factors Influencing Trade, Growth, and Poverty[11]

To explore some of the factors influencing trade and growth, as well as those affecting poverty, a statistical analysis was conducted across a broad spectrum of developing countries. Overall, the data base comprises 87 countries of which 34 are in sub-Saharan Africa. Most of the results reported here apply to the entire range of the sample, though research is currently underway to investigate the extent to which Africa may be "different".[12]

Variables

For the estimation of the regressions to test the factors that influence trade, growth, and poverty, the following variables were selected from different available databases:

GDPCAP = per capita Gross Domestic Product (GDP) (measured in 1985 Purchasing Power Parity (PPP) world prices in U.S. dollars)

TRADE = ratio of exports plus imports to GDP (current prices, local currency)

TT = ratio of taxes on imports plus taxes on exports to the value of exports plus imports (current prices, local currency)

PO = ratio of parallel exchange rate to official exchange rate

OP = years of open policies

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[11] This study is being undertaken by J. Dirck Stryker (The Fletcher School of Law and Diplomacy, Tufts University and AIRD) and Selina Pandolfi (AIRD).

[12] Apart from differences between Africa and other developing countries in the magnitudes of the explanatory variables, we are exploring whether the parameters of the relationships vary through the use of dummy variables for shifts in the constant term and the slope coefficients.

POVALL = indicator of poverty alleviation, consisting of an index which includes school enrollment at the primary level, life expectancy at birth, infant mortality, access to health facilities, access to safe water, literacy rate, and prevalence of child malnutrition

CPI = consumer price index (1987=100)

RAWGDP = ratio of exports of primary products to GDP

TOT = terms of trade index (ratio of prices of exports to prices of imports, 1987=100)

SCHOOL= average years of schooling per adult member of the population

INST = institutional development, as measured by the ratio of money supply (M2) to GDP[13]

RL = ratio of roads (km) to arable land area (square km)

LOCK = whether a country is landlocked or not

POPDEN = ratio of population to arable land area

POP = total population

URB = ratio of urban population to total population

Most variables are constructed from as many years of annual data as are available for four five-year periods (1974-78, 1979-83, 1984-88, 1989-93), each of which represents a somewhat different world policy environment.[14] In some instances, a base year period was used, such as with GDPCAP70 (per capita income in 1970) or RAWGDP70 (ratio of primary product exports to GDP in 1970). When

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[13] Countries vary in the degree in which commercial and financial institutions are developed. The ratio of M2 to GDP is a good indicator of the level of development of such institutions. Gillis, Perkins, Roemer, and Snodgrass argue, for example, that the increase in liquid assets that accompanies growth of per capita income is a good measure of financial deepening, or the growth of financial intermediation. It also appears that where financial deepening occurs, there is strengthening of commercial and other institutions associated with development. In African countries the ratio of financial assets to GDP is significantly lower than in Asia, Latin America ,or the developed economies. The measure M2/GDP also has the advantage that it is available for most countries. Malcolm Gillis, Dwight H. Perkins, Michael Roemer, and Donald R. Snodgrass, *Economics of Development*, New York: Norton , 1996.

[14] The period 1974-78 was one of relative ease for most developing countries, which experienced high export prices at the beginning of the period and were able to borrow capital on international markets relatively easily towards the end. The subsequent period, 1979-83, was one of severe balance of payments crisis for many countries. This was followed by initial structural adjustment during 1984-88 and somewhat easier adjustment during 1989-93.

we tested the impact of the different variables on poverty alleviation, we also used the variable "grGDPCAP10", which measures the growth rate of per capita income during the ten years preceding the observation of the indicator for poverty alleviation.

Most of the variables are drawn from the World Bank, World Data 1995, with few exceptions. GDP per capita (GDPCAP) is drawn from the Penn World Tables (Mark 5.6) and is expressed in 1985 international prices (dollars) adjusted for inflation and distortions in the exchange rate using the Purchasing Power Parity approach.[15] Openness (OP) is defined as the number of years during which each country is considered open in Sachs and Warner (1995), which classifies countries as open or closed according to the black market exchange rate premium, the influence of export marketing boards, the coverage of quotas on imports of intermediate and capital goods, and the presence of a socialist government. Landlocked (LOCK) measures the geographical bias against trade, i.e., landlocked countries with no direct access to the sea are assigned a value of 1 while countries with direct access to the sea are assigned a value of 0. Finally the poverty alleviation indicator POVALL is an unweighted average of indices (from 0 to 100 across the sample) for the indicators listed.[16]

Methodology

The methodological approach used in this study involved two steps. First, the study developed a number of hypotheses regarding linkages between policy reform, trade, growth, and poverty. Second, regression analyses were undertaken using the cross-country data described above to test these

[15] For a discussion of the way in which PPP and GDP are estimated in the Penn World Tables, see Robert Summers and Alan Heston, "The Penn World Table (Mark 5): An Expanded Set of International Comparisons, 1950-1988," *Quarterly Journal of Economics*, 106(2), 1991. The Penn World Tables have been updated (Mark 5.6) to include observations through 1992.

[16] For many of the countries in our sample the availability of data for some of these indicators is quite limited, so that averaging the indices avoids a significant reduction of the sample size. This may bias the indicators to the extent that the data for a particular variable are available only for richer countries but are assumed in the index to extend across the entire sample.

hypotheses and to investigate the circumstances under which these linkages operate.

Structural variables were introduced into the equations in order to better explain the dependent variables and to reduce the possibility of bias. These structural variables included the level of GDP per capita (GDPCAP), the size of the country as measured by population (POP), the ratio of population to area of arable land (POPDEN), the degree of urbanization of the population (URB), access to the sea LOCK), the terms of trade (TOT), and the ratio of primary product exports to GDP at the beginning of the period as a measure of the natural resource endowment of the country (RAWGDP).

In addition, several variables were introduced into the analysis as indicators of the degree of development of the economy. These included the ratio of the money supply (M2) to GDP as a measure of institutional development (INST), years of schooling per adult member of the population as a measure of investment in human capital (SCHOOL), and the ratio of road mileage to arable land area as a measure of investment in infrastructure (RL). Finally, three separate policy indicators were introduced to reflect distortions in the foreign exchange market (PO), distortions introduced by taxes on trade (TT), and the degree of openness of the economy to trade (OP).

The results of the analysis are summarized in Table 1. The first two equations show the effects of structural, development, and policy variables on the relative magnitude in the economy of trade. They confirm the vital importance of minimizing distortions in the foreign exchange market, low rates of trade taxation, and other policies to promote an open economy in influencing the extent to which that economy trades on the international market. All three policy indicators demonstrate this independently. Furthermore, as shown by the second two equations, an increase in the share of trade in GDP contributes substantially to increased economic growth, suggesting

that the outward-looking, market-oriented policy reforms that have been undertaken in Africa should contribute to both trade and growth. Finally, the evidence points to the vital importance of economic growth for the alleviation of poverty. Outward-oriented trade policies also appear to have a positive impact on poverty alleviation over and above their effect on trade and growth.

So why has Africa not performed better? One reason appears to be weakness of institutional development. As noted earlier, most African countries are highly deficient in the development of the legal, financial, fiscal, commercial, marketing, and administrative institutions that are necessary to enable them to take full advantage of the opportunities presented by a more open policy environment. World markets today are highly demanding in terms of quality control, prompt delivery, secure financing, market awareness, and a host of other areas in which firms compete[17]. Africa is just beginning to catch on. This is partly because African industries have lived for many years behind highly protective trade barriers from which they are just beginning to emerge. It is also due to the fact that in the past most African exports have consisted of basic primary products, which do not require the same level of institutional support. Our research, in fact, suggests that whereas a strong primary product orientation contributes to the importance of trade in the economy by increasing significantly the volume of exports, it has a negative effect on economic growth, possibly because this leads to overvaluation of the currency (Dutch Disease), which makes it more difficult to diversify exports and expand them into manufacturing, which has a more growth-enhancing impact.

There is also evidence that levels of human capital, represented in our analysis by average years of schooling, are low in Africa and that this has a negative effect on trade, and therefore on

growth. This is partly because the requirements of the world market mentioned above demand not only basic literacy and numeracy but also particular technical and management skills that are difficult to acquire without formal schooling. Education, along with institutional development, also appears to have a positive impact on poverty alleviation.

Rather surprisingly, trade and growth in Africa do not seem to be handicapped by lack of physical infrastructure in the same way that they are disadvantaged by inadequate institutions and low levels of education.[18] This may be partly because of the relationship between road infrastructure and population density, a variable that is positively correlated with trade and growth. For example, a given network of roads satisfies a larger demand for transportation in countries with high population density compared with those in which that density is low. But higher population density also contributes to trade and growth in other ways (e.g., by facilitating market exchange). Once the effect of population density is taken into account, the effect of road infrastructure on trade and growth is relatively insignificant. This is especially important in Africa, where there are vast areas with very low population density.

In contrast, road infrastructure has a strong positive effect on poverty alleviation. This is partly because of the measure of poverty alleviation used in the analysis. This measure consists of an index combining primary school enrollment, life expectancy at birth, rate of infant mortality, access to health facilities, access to safe drinking water, and prevalence of child malnutrition.[19] Many of these

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[17] Lynn Salinger, Deirdre Murphy Savarese, and Anatolie Amvouna, "New Trade Opportunities for Africa: A Survey of Literature and Experience," paper presented at the EAGER Workshop in Washington, July 17-19, 1996.

[18] It should be noted that the indicator for infrastructure used here is relatively limited because of the need to have data on this indicator for most countries. Road density satisfies this need rather nicely but is probably particularly relevant for rural areas. An indicator that would be much more important for trade is one related to telecommunications. We are currently looking into the availability of such an indicator, but have no results yet to report.

[19] The indicator does not include any measure of income because of the problem of comparing data and data sources across countries. This

components relate closely to the provision of public services, and these are much easier and cheaper to provide if there is a good road network.

There are a number of interesting findings associated with the structural variables. First, both total population and per capita GDP are negatively correlated with the importance of trade. This is because these variables are related to market size, and the larger the internal market a country has, the less it needs to trade with the outside world to exploit economies of scale and of agglomeration.[20]

Second, total population has a positive impact on economic growth. Other things equal, larger countries grow more quickly. This is a rather surprising finding and one that needs to be explored further. Exploitation of economies of scale and agglomeration may be one reason, though the ability to avoid the limitations of market size through external trade, as noted above, tends to reduce the importance of these. Another possible explanation is that communication among people and firms is greater within, rather than across, national boundaries. To the extent that this communication results in substantial learning and sharing of information, this may be an important source of growth.

While the absolute size of the population has a negative influence on trade, the effect of population density is positive. Countries in which the population is pressing more on the resource base are forced to trade. In addition, as noted earlier, these countries also enjoy certain advantages associated with higher population density that encourage trade, such as less need for infrastructure and

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problem is being worked on by the World Bank, which has developed a data bank of household budget and consumption surveys. See Klaus Deininger and Lyn Squire, " A New Data Set Measuring Income Inequality," *The World Bank Economic Review*, 10, 1996, pp.565-91; Martin Ravallion and Shaohua Chen, "What Can New Survey Data Tell Us About Recent Changes in Living Standards in Developing and Transitional Economies?" Research Project on Social and Environmental Consequences of Growth-Oriented Policies, Working Paper No. 1, World Bank, 1996.

[20] Economies of scale are achieved where average costs per unit of output within a firm decrease as output increases. Economies of agglomeration refer to the gains that are achieved though specialization, exploitation of economies of scale, building up of pools of skilled labor, and other means that are related to the size of the market and are passed on to other firms within the agglomeration. This is an important advantage of urbanization , though it may be offset by diseconomies associated with congestion if the urban area grows too large or too dense.

greater market integration. On the other hand, higher population density has a strong negative impact on poverty alleviation, especially if we control for urbanization, which tends to benefit the poor if for no other reason than it gives them greater access to social services. This supports widespread evidence that most of the poor in Africa live in rural areas[21] and suggests that the poor are worse off in rural areas where population density is higher.

The other structural variable that influences economic growth is changes in the terms of trade. African countries have suffered from a deterioration in their export prices compared with the prices of their imports, and this has had a detrimental effect on growth. The relationship is not strong, however, and it is much less important than that which links trade and growth to outward-oriented policies and to investment in education and strengthening of institutions. In contrast, being a landlocked country without direct access to the sea does not appear to be an important variable in explaining trade and growth[22].

There is one other variable of interest in this analysis -- time. In each relationship studied, time was introduced as a proxy for missing variables that might have changed over time. The analysis suggests, for example, that, other things equal, the mid-1970s was a period of more rapid unexplained growth in GDP per capita. While this growth could be explained by high primary product prices during this period, such a change should be picked up by the terms of trade variable. A more likely explanation is that this was also a period when many countries in Africa borrowed heavily on the international capital market. The limits on this borrowing were quickly reached, however, and the

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[21] David Sahn, *Fiscal and Exchange Rate Reforms in Africa: Considering the Impact upon the Poor*, Cornell Food and Nutrition Policy Program, Monograph 4, Ithaca: Cornell Food and Nutrition Policy Program, 1990.

[22]While most of our findings tend to confirm the results obtained by Sachs and Warner in their study on sources of growth in African economies, the landlocked nature of some of these economies appears not to be a significant variable in our regression, while it is in theirs.

situation reversed itself sharply during the 1980s, when these countries had to rein in their economies and begin the process of structural adjustment. The constraints on international borrowing would account for slower growth during the later period.

The other interesting finding with respect to time is that poverty alleviation has by and large increased steadily in Africa over the past two decades after taking into account the effects of per capita income growth, urbanization, improved roads, institutional development, and more open trade policies. This supports the finding of Berg, *et al* that the satisfaction of basic human needs has improved over time in Africa and Latin America, even where there is some indication that per capita income may have decreased[23]. This is at least partly because of vaccination campaigns and the introduction of new technologies such as oral rehydration. It also may reflect the increased focus that has been placed during the last twenty-five years on aiding the poor.

Barriers to Cross-Border Trade among African Countries

A number of the studies being conducted under the EAGER project deal with barriers to cross-border trade among African countries. These barriers, which have a major inhibitory impact on overland trade, are both pervasive and persistent. They range from illegal roadblocks established every ten to thirty kilometers, through bribes and inconvenience associated with customs clearance, to high-level prohibitions on trade to assure national food security or to assuage special interest groups. The EAGER project is undertaking a number of studies in this area, elements from three of which are

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The reasons for this difference are currently being investigated. Jeffrey D. Sachs and Andrew M. Warner, "Sources of Slow Growth in African Economies," Harvard Institute for International Development, Development Discussion Paper No. 545, July 1996.

[23]Elliott Berg, Graeme Hunter, Tom Lenaghan, and Malaika Riley, "Poverty and Structural Adjustment in the 1980s: Trends in Welfare Indicators in Latin America and Africa," Development Alternatives Incorporated, Consulting Assistance on Economic Reform Discussion Paper No. 27, 1994.

reported here.

Mali's Rice Exports to Neighboring Countries[24]

The Office du Niger in Mali is a large irrigation scheme dating back to the 1930s, which recently has begun to show substantial increases in rice yields -- rising from an average of a little more than two metric tons per hectare in the early 1980s to over four and one-half tons today. This remarkable achievement has led some to ask whether Mali could re-establish its role as an exporter of rice, the principal crop in the Office du Niger, to the West African region.

Comparative advantage analysis was conducted to estimate the profitability of exporting Malian rice to neighboring countries. The analysis showed that this is feasible, but questions have been raised concerning the adequacy of supply, especially during the season just before harvest. Rising prices and shortages of rice within Mali at this time of the year have prompted the government to prohibit rice exports in order to maintain self-sufficiency. This has seriously disrupted private trade. The policy issue is whether 1) to rely on free trade, which would in most years result in rice being exported after harvest, when domestic prices are low, and being imported during the rest of the year, when prices are high; or 2) to restrict rice exports, storing the surplus rice at harvest time in order to put that rice on the market later in the year. The second alternative requires costly storage and reduces the efficiency of the market in meeting varying needs during the year and from year to year.

The issue here is an important one in much of Africa. Typically, each country wants to be self-sufficient in each basic food. This requires costly storage and interferes with the development of effective market networks that can move food to where it is needed at any time of the year -- often across national boundaries. The EAGER project will estimate the cost of storage relative to

[24] This study is being undertaken by Abdoul Barry (AIRD), Daouda Diarra (CEF, Mali), and Salifou Diarra (SIM-OPAM, Mali).

dependence on the market as an input to policy makers who must decide which strategy to pursue.

Developing Malian Livestock Exports[25]

Along with many other Sahelian countries, Mali has a strong comparative advantage in livestock production for export to the coastal West African countries. Exploitation of this advantage was frustrated, however, by overvaluation of the CFA franc up until January 1994, when the CFA franc was devalued from fifty to one hundred CFA francs per French franc. Following this devaluation, it was expected that Malian livestock exports would be much more competitive with meat being imported into the coastal countries from overseas. Yet there remained fears concerning Mali's ability to keep up with demand in the coastal countries.

The EAGER study is addressing these issues by investigating sources of potential growth in livestock production and determining how value added can be profitably increased in the export sector. A major finding is that there is little likelihood of increasing significantly production in the pastoral zone, but there is strong potential for growth in the agro-pastoral zone, where animals can be fed crop residues and by-products, or even crops raised specifically for this purpose. In fact, there is already evidence that animal fattening is profitably taking place in this zone.

On the other hand, the study indicates that slaughtering of animals in the Sahel for shipment in refrigerated trucks to the coast is not profitable, largely because the market for animal by-products is fairly thin in the Sahel. This situation has not been improved by recent government actions to tax or prohibit rawhide exports in order to make rawhide available at lower prices to local tanneries. These actions smack of recidivism, given the importance of eliminating export taxes and quantitative restrictions as part of the policy reform that took place a few years ago. Rawhide exporters are

protesting, and the resulting struggle will be an interesting case study of the political economy of policy reform.

Small-Scale Mining in Tanzania[26]

Small-scale mining of gold, diamonds, and other gems is a very important activity in Tanzania, as well as in a number of other African countries. It is estimated that this sector has accounted for an expansion of employment in Tanzania by fifty per cent in the last few years, since the sector was liberalized. Incomes in the sector are estimated at six times those in agriculture.

The government's major concern is how to tax the sector without encouraging widespread smuggling. This is a major problem because of the ease with which smuggling can occur. One of the purposes of the study is to investigate the extent to which expansion of the sector results in an increase in taxes collected from other sources, such as taxes on imports or on local business activities in the mining towns, obviating the need to collect taxes directly.

Another issue is the extent to which value added is kept within Tanzania or is diverted to neighboring countries as a result of smuggling. Preliminary evidence suggests that at least seventy-five per cent of value added remains at home. Even so, there are problems concerning the non-Tanzanian nationality of the traders involved.

Other issues relate to the most efficient and equitable distribution of mining permits between small and large firms. The tax issue is involved here, as well, since it is much easier to collect taxes from large firms. On the other hand, small firms or individual miners provide more benefits in terms of employment, and they may also be more efficient at exploiting smaller or shallower deposits.

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[25] This study is being undertaken by Jeffrey C. Metzel (AIRD), Abou Doumbia (Ministry of Rural Development and Livestock, Mali), Lamissa Diakite (IER, Mali), and N'thio Alfa Diarra (CMDT, Mali).

[26] This study is being undertaken by Lucie Phillips (IBI), Roger Sezinga (TanDiscovery, Tanzania), Samuel Wangwe (ESRF, Tanzania), Haji Semboja (ESRF, Tanzania), and Alec Misangu (ESRF, Tanzania)

Effects on Trade of Monetary, Fiscal, and Exchange Rate Policy[27]

Research in the area of monetary, fiscal, and exchange rate policy has grown out of the realization that trade policy is intimately linked with macroeconomic policy. One of the major problems facing African countries is how to maintain macroeconomic and balance of payments equilibrium given 1) weak tax administration and a low tax base; and 2) poor control of the supply of money and credit in the face of persistent fiscal deficits. Because of weaknesses in the tax system, the tendency has been to rely excessively on indirect taxes, particularly trade taxes, because they are easier to collect. But this creates biases in the incentives facing producers, penalizing exports vis-à-vis goods produced for the domestic market.

Other problems relate to the exchange rate. Persistent inflation requires continual adjustment in the exchange rate to avoid harmful appreciation of the real rate of exchange. Where most transactions in foreign exchange pass through the exchange market, this market can be relied upon to adjust relatively easily. But where transactions are dominated by the central bank, as they are in Ghana, the market does not necessarily make the proper adjustment, especially when the exchange rate becomes a political football because the government does not want to admit that the macroeconomy is in disequilibrium.

Even where most exchange transactions are in the hands of the private sector, external shocks may create major disturbances. Such was the case, for example, when the coffee boom in Uganda in 1994 caused the exchange rate to appreciate, severely injuring exporters of products other than coffee. The central bank tried to intervene by buying foreign exchange, but this led to an expansion of the

[27] Those currently working in this area include Charles Jebuni (CEPA, Ghana), J. Dirck Stryker (AIRD), Samuel Ashong (CEPA, Ghana), Ndaya Beltchika (AIRD), Stephen Ameyaw (Bank of Ghana), Franklyn Sackey (CEPS, Ghana), and Kassim Yahya (Ministry of Trade and Industry, Ghana).

domestic money supply which the Bank of Uganda was unable to offset through the sale of Treasury bills and bonds due to the thinness of the securities market. Consequently, the government was forced to place a tax on coffee exports, which severely discouraged coffee exporters.

Research on these subjects is just beginning. It is useful, however, to summarize the experience of Ghana, the country that has been studied the most in this area thus far.

Monetary and Exchange Rate Policy in Ghana

In the initial days of reform in the mid-1980s, and because of the major need for rehabilitation of the country's infrastructure, Ghana's fiscal strategy was to increase government expenditures through increasing revenues. This was to be achieved by broadening the tax base and strengthening tax administration. Supported by foreign funding and excess capacity for production, once critical spare parts and imported inputs were made available after the elimination of restrictions on imports, this strategy seemed to work. By 1987, a surplus was recorded in the government budget. Throughout this adjustment period, Ghana pursued broadly restrictive monetary policy. In the initial phases, this was done through direct controls (i.e., the setting of global and sectoral credit ceilings), but after 1990 these were increasingly replaced with indirect methods of monetary control -- largely open market operations. However, starting in 1992, a presidential election year, government expenditures rose more rapidly than tax revenue. As budgetary complications unfolded, it was increasingly difficult for monetary policy to contain the monetary and inflationary effects of these fiscal deficits

Many of the economic policy reforms had been designed to improve incentives by reducing distortions in the foreign exchange market and allowing exporters to determine the disposition of their earnings of foreign exchange. These reforms included devaluing the currency, legalizing the parallel market for foreign exchange, establishing an interbank exchange market, and allowing exporters to

retain their export earnings in Ghana or abroad in the form of foreign exchange. While these reforms helped to improve export incentives, the foreign exchange market continued to reflect only imperfectly the true value of foreign exchange. In part this is because the market is segmented into an interbank market and a foreign exchange bureau market. The participants in the interbank market are limited to the Bank of Ghana (BOG), the commercial banks, and a few other financial institutions; the foreign exchange bureaus are explicitly prohibited from participation. Furthermore, the interbank market is dominated by the Bank of Ghana, through which approximately eighty-five percent of total foreign exchange earnings flow[28].

There is little evidence that the Bank of Ghana currently operates in the interbank market for the purpose of maintaining incentives to exporters, particularly nontraditional exporters for which the exchange rate is a critical variable in determining profitability. This is partly because the BOG is under political pressure to avoid excessive depreciation of the *cedi* due to the influence that this has on the standard of living of consumers. In addition, wage and other price increases are often pegged to changes in the exchange rate, so depreciation of the *cedi* has both a direct and an indirect effect on inflation. Finally, the actions of the Bank of Ghana in the foreign exchange market are circumscribed by the effects that these actions have on the domestic money supply and by the limited ability of the Bank to control that supply without the use of direct controls on credit.

The result has at times been devastating for exporters, who are heavily affected by movements in the real exchange rate. During 1995, for example, the Consumer Price Index rose by about seventy percent while the *cedi* depreciated by only about forty percent. This implied a thirty percent

[28] Inflows of foreign exchange passing directly through the Bank of Ghana include earnings from gold exporters and the Cocoa Board, which has a monopoly on cocoa exports, as well as inflows of foreign aid. Outflows include payments for petroleum, transfers for government services abroad, other import purchases by the government, and the servicing of the external public debt. Center for Policy Analysis (CEPA). *Macroeconomic Review and Outlook*. Accra, Ghana: CEPA, 1996, Pp. 60-61.

appreciation of the real exchange rate, rendering unprofitable a number of nontraditional exports.[29] The result was a strong disincentive to invest in the sector that should today be most dynamic, following the policy reforms of the recent past.

This study is assisting the government to understand better the functioning of the foreign exchange market and the impact that major participants in that market, especially the Bank of Ghana, have on the real exchange rate facing exporters and importers. Included in the study will be a review of the evolution of the foreign exchange market in Ghana over the past decade and a half, emphasizing the important role that monetary and fiscal policies have played in determining the real exchange rate. The study will also estimate the influence of structural and monetary variables on the real exchange rate in order to assist Bank of Ghana officials in determining the appropriate level of the exchange rate and how to achieve that level.

Trade Tax Regime and Producer Incentives

Ghana's economy has made tremendous improvements following the implementation of structural adjustment programs in 1983. However, although exports have expanded in recent years, several factors have generated a strong bias against them. Among the most important of these is the magnitude of taxes on trade collected for revenue purposes. Revenues from import, export, sales, and excise taxes on international trade amount to almost one-half of total government tax revenue[30]. Even if these taxes are maintained primarily for revenue and not for protective purposes, they induce a strong bias in favor of import substitution and away from exports. In addition, the production of

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[29] Bank of Ghana, *Quarterly Economic Bulletin*, October-December, 1995.

[30] Center for Policy Analysis (CEPA), *Macroeconomic Review and Outlook*, Accra, Ghana: CEPA, 1996, p. 34.

nontradable goods and services is encouraged at the expense of exports because of overvaluation of the exchange rate resulting from taxation of imports.

The situation is made more complicated by a number of other factors. Preliminary analysis of the fiscal regime in Ghana has led to the following conclusions:

1. Only a limited number of larger firms avail themselves of the opportunities that exist for tax relief on inputs used in the production of exported goods. There is a bias against smaller exporting firms and domestic producers of inputs used in the production of exports caused by the fact that many importers of inputs -- especially the smaller enterprises -- are unable to make use of the complex duty drawback system that would provide them with incentives for the production of exportables.

2. Tax exemptions on imports result in an erosion of tax revenues and adversely affect the elasticity of revenues with respect to the tax base. These exemptions result from benefits granted to firms under the investment code as well various ad hoc exemptions. This results not only in a loss of revenue but also in a bias against domestic producers of similar goods who are required to pay these taxes.

3. Sales and excise taxes are not necessarily neutral with respect to trade. Trade is more easily taxed than is domestic production, especially for smaller firms, and this tends to increase the protective effect of the indirect tax regime beyond that resulting from import and export taxes.

4. The Ghanaian tax system is not well diversified, and this is affecting its buoyancy. According to the National Revenue Secretariat (NRS), the buoyancy of the Ghanaian tax system is quite low because of dependency upon revenues from taxes on a small number of commodities, which contribute about fifty percent of the revenues collected by the Customs, Excise, and Preventive Services (CEPS): cocoa (about 20%), petroleum (12 to 15%), and tobacco and alcohol (15%).

5. Non-tariff barriers are still present in the tax regime. Though most imports are subject to per-shipment inspection (PSI) requirements, the Ghanaian Custom, Excise, and Preventive service still inspects imports on arrival in Ghana, arguing that the PSI valuation is often inaccurate. At the same time the Commissioner of Custom has discretion to value those shipments which due to lower value do not require PSI. The procedures that are involved in this valuation process are long and cumbersome and can delay significantly the entrance of imports into the country. Furthermore, the Commissioner's valuation may be increased for protective purposes.

More generally, the current tax system in Ghana, as in many other African countries, while considerably improved over the past few years in terms of reduced complexity and increased efficiency, still suffers from its inability to generate adequate revenues for the government and the biases it creates for producer incentives that are not conducive to economic growth. The bias against exports, noted above, is one of these biases. Another is the tendency, because of problems of tax administration, to overtax the formal urban sector and undertax much of agriculture and the informal urban sector. Yet there is strong recent evidence in Africa that suggests that future growth, in terms of both income and employment, is likely to come more from medium to large-scale firms in the formal sector than from small-scale or micro enterprises in the informal sector[31].

There are a number of elements that should be considered to improve producers' incentives without decreasing revenues. First, there is a need to assure that taxes have as few distortionary effects as possible. This is generally achieved by keeping rates low and relatively uniform. Second, it is important that the tax structure not result in a strong bias against exports. This implies that tariff rates

[31]Tyler Biggs and Pradeep Srivastava, "Structural Aspects of Manufacturing in Sub-Saharan Africa; Findings from a Seven Country Enterprise Survey," World Bank Discussion Paper No. 346, Washington: World Bank, 1996.

should be as neutral as possible with respect to trade. Sales and excise taxes are mainly aimed at increasing revenues without protecting domestic production. But sales and excise taxes may become protective by being paid to a greater extent on imports than on domestic production. These and other issues are being studied as part of the EAGER project.

Regional Integration and Industrial Competitiveness[32]

The EAGER project is examining questions related to regional integration and industrial competitiveness as an ensemble. New opportunities for trade are arising for manufactured goods and nontraditional primary products, but these opportunities can be seized only if firms are competitive. Markets for these products include those overseas and in neighboring countries. Some countries are better poised than others to enter world markets for these products; others are better able to take advantage of regional markets. As a result, new regional trade blocs are forming. Some of the most important of these are in southern Africa, where South Africa is emerging as a major economic power. This presents both opportunities and challenges for that country and for its neighbors.

Regional Integration versus Regional Cooperation

Recent analysis has suggested that regional integration may not be in the best interest of some of the countries involved.[33] First, there is the problem of trade diversion, where a country that was previously importing from a more efficient third-country supplier will import from a less efficient partner after integration has been achieved, due to the absence of a tax or tariff on the regional trade

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[32] Those working for the EAGER project in this area include Lynn Salinger (AIRD), Abdoul Barry (AIRD), John Cockburn (Laval, Canada), Eckhard Siggel (Laval, Canada), Daniel Ndlela (ZIMCONSULT, Zimbabwe), Haroon Bhorat (UCT, South Africa), and Brian Bowen (Purdue).

[33] Regional integration can take many forms. A free trade area is created, for example, when partner countries agree to eliminate tariffs between them but do not create a common external tariff. A customs union is a free trade area with a common external tariff. Finally, a common market includes not only a free market for flows of goods and services but also a free market for labor and capital.

partner's goods. Second, regional integration usually results in loss of tax revenue for interior countries within the region because they no longer have direct access to customs revenue, and providing adequate financial compensation has often proved very difficult. Finally, there is a tendency under regional integration for new investment to flow to countries that are more developed, since these can then export freely to the lesser developed countries in the region.

An interesting case in point is southern Africa[34]. This region already has a functioning customs union, the South African Customs Union (SACU), made up of South Africa, Namibia, Botswana, Lesotho, and Swaziland. There are also a number of other regional organizations, such as the South African Development Community (SADC) and the Common Market for Eastern and Southern Africa (COMESA), as well as several bilateral arrangements between South Africa and neighboring countries. As a result of the accord signed by South Africa to join the World Trade Organization (WTO) and to subscribe to the General Agreement on Tariffs and Trade (GATT), South Africa is in the process of reducing and simplifying its tariffs. This will have repercussions for neighboring countries. These issues are being studied by the EAGER project.

While regional integration may not always be desirable for all countries concerned, regional cooperation is much more likely to be beneficial[35]. One example is the sharing of electrical power. Purdue University, through the EAGER project, is currently assisting the countries of southern Africa to develop a model for the sharing of power. This will enable these countries to make substantial savings by relying more on cheaper hydroelectric power instead of being forced to build more

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[34]Merle Holden, " Economic Integration and Trade Liberalization in Southern Africa," World Bank Discussion Paper No. 342, Washington: World Bank, 1996.

[35]Steven C. Radelet, "Regional Integration and Cooperation in Sub-Saharan Africa," paper presented at the EAGER Workshop in Washington, July 17-19, 1996.

expensive thermal plants. Sharing of power is necessary because of seasonal and annual fluctuations in rainfall and because not all countries have the hydroelectric resources they require. However, sharing of power will require acceptance of regional interdependency, which may have its political costs.

Garment and Textile Industry

Africa is poised to enter world trade in a major way through the garment and textile industry. Firms that have for years been based in Asia have now found that labor costs there have risen to the point that they must find other regions in which these costs are lower. Many are beginning to invest in Africa because it can offer this type of competitive environment. A recent study by the World Bank made comparisons of wage rates, labor productivity, and unit labor costs between China and several African countries. The study found that although labor productivity in China is somewhat higher than in Africa, this is more than offset by lower wages in Africa[36]. So the problem is not labor costs.

Rather the major problem is lack of institutional development as described above. Competitiveness on the world market for garments and textiles requires "just-in-time" delivery, strong quality control, flexible production schedules, good market connections, rapid telecommunications, and a host of other elements in which Africa is weak. The legal, regulatory, and judicial environment is also inadequate in important areas such as laws and regulations affecting labor and capital markets. This does not mean that these problems cannot be overcome, but it does require the definition of priorities and a strong effort to deal with the most important of these constraints. The EAGER project

[36]Biggs and Srivastava, op. cit.

is conducting research on this in a number of countries, including Ghana, Kenya, Madagascar, Mali, South Africa, Uganda, Zambia, and Zimbabwe.

The research involves not only looking at competitiveness on world markets but also how African countries can cooperate through trade and investment in the garment and textile industry. For example, to what extent might South Africa, with its longer production lines and greater economies of scale, be able to furnish textiles to countries such as Madagascar, which seem to have a greater comparative advantage in the production and export of garments? How might this natural pattern of comparative advantage be influenced by the lack of competitiveness of the South African textile industry, which has been shielded for years behind high protective barriers?

SUMMARY AND CONCLUSIONS

The results of the research conducted thus far suggest some of the reasons for the limited response of many African countries to the improved policy environment. Much of this has to do with the fact that announcing a policy change at a high level does not necessarily mean that incentives change dramatically for producers. Lack of macroeconomic control and severe fiscal weaknesses have played havoc with inflation and real exchange rates. The bias against exports that exists because of Africa's dependence on taxation of trade persists even though trade tax rates have been simplified and reduced. Barriers to cross-border trade remain ever present despite major efforts to identify and eliminate them. As the Mali livestock study suggests, perhaps this is because an alliance has yet to be struck between the exporters who benefit from the policy reforms and the technocrats who were instrumental in undertaking them.

A recurring theme again and again in these studies is the weak state of institutional development in Africa. This shows up in the econometric analysis and in the country studies alike. A limited tax base and weak tax administration lead to low revenue, fiscal imbalance, inflation, and disincentives to producers. Poorly developed financial institutions limit access to capital, especially by small and medium-size firms. An inadequate LRJ environment contributes to uncertainty, discretionary government intervention, and discouragement of investment. Lack of information about markets, inability to meet quality standards and production schedules, and delays in clearing customs contribute to poor competitiveness on world markets.

Changing all of this requires a continuing effort to determine where the bottlenecks are and to inform policy makers, the public, and special interest groups of their impact on and cost to the economy. The premise underlying the EAGER project is that sound economic research can play an important role in this process. This requires working closely with public officials and private sector leaders to make certain that the research is relevant to policy decisions, is methodologically sound, and is disseminated in such a way as to inform the greater public and contribute to the formulation of well-conceived policies that have a foundation of broad support.

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THE URUGUAY ROUND AND AFRICA: A GLOBAL, GENERAL EQUILIBRIUM ANALYSIS

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THE URUGUAY ROUND AND AFRICA: A GLOBAL, GENERAL EQUILIBRIUM ANALYSIS

ABSTRACT

Using a 10-region, 12-sector model of the global economy, projected forward to 2005 with and without implementation of the Uruguay Round (UR) trade agreements, we confirm earlier expectations that Africa is likely to be the only major region of the world to lose from UR implementation--but find that UR-induced costs would be far outweighed by the gains from catching up with other low-income countries in agricultural productivity and in transport costs. Furthermore, we find that implementing the UR accelerates a resource-driven shift in Africa's comparative advantage towards agriculture (as opposed to mining or manufacturing) and towards trade with Asia (as opposed to Europe). Recognizing and supporting this "Asia/agriculture" development strategy will be a key to raising African incomes over the coming decade.

THE URUGUAY ROUND AND AFRICA: A GLOBAL, GENERAL EQUILIBRIUM ANALYSIS

I. INTRODUCTION

This paper quantifies the impact of implementing the Uruguay Round (UR) trade agreement on African economies,[1] using a general-equilibrium model of the world economy to identify changes by commodity and trading partner. Several previous studies have addressed the global impact of UR implementation,[2] and a few studies have addressed Africa-specific issues associated with the Round, notably Fontagné and Péridy (1995), Harrold (1995) and Sorsa (1996). Here, we provide a substantially richer analysis of UR impacts on Africa than has been previously available. Among our innovations are (a) including likely changes in productivity and resource endowments during UR implementation, (b) incorporating the erosion of Africa's preferential access to Europe under the Lomé Convention, (c) using new data on the bilateral import quotas imposed on textile and garment trade under the Multifibre Agreement (MFA), and (d) considering Africa's own responses to the Round during its implementation. Through these innovations we provide substantially improved estimates of global UR impacts, as well as detailed evidence on its effects in Africa.

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1. For brevity we use the term "Africa" to mean "Sub-Saharan Africa", including South Africa, unless a distinction with North Africa is needed.

2. The few studies that are directly comparable to this one are Brown et al. (1996), Francois, McDonald and Nordstrom (1996b), Goldin and van der Mensbrugghe (1996), Harrison, Rutherford and Tarr (1996), and Hertel et al. (1996). Excellent surveys of this literature are provided by Martin and Winters (1996) and Francois, McDonald and Nordstrom (1996a). In addition, several studies were undertaken on the likely outcome of the Round before it was completed, including Goldin and Knudsen (1990), Page, Davenport and Hewitt (1991), and Goldin, Knudsen and van der Mensbrugghe (1993), and many other papers address important aspects of the Round's impacts without attempting a global analysis, such as Sadoulet and de Janvry (1992) or Anderson (1997).

Our analysis begins with an exhaustive accounting of Africa's role in world production, consumption and trading patterns for the most recent available year (1992), using the publicly available database developed by the Global Trade Analysis Project (GTAP).[3] Because the UR agreement will be phased in gradually, we then project forward the most likely changes in each region's productivity, population, physical capital and human capital to a common target date (2005), and use the GTAP modeling framework to capture how production, consumption and trade in each sector are likely to adjust to these changes.

Using the projections for 2005 as a baseline, we simulate the consequences of alternative policies, starting with the implementation of the Uruguay Round agreement and then moving on to African responses. Careful accounting of how each policy is implemented, along with an explicit model of how production, consumption, and trade adjust to economic changes, provides the most realistic possible laboratory in which the effects of possible choices can be simulated. To motivate the model and our experimental design, we provide a brief overview of past policies and economic performance, which sets the stage for the model itself, the data, policies being simulated, and results.

Past policies and economic performance

After independence in the 1960s, many African governments embarked on ambitious drives for economic self-sufficiency. In Jeffrey Sachs' (1996, p. 20) memorable phrase, the continent "took itself into self-imposed economic exile." At the outset of the independence period in 1961, Africa provided almost 9 percent of the world's agricultural exports, and 3.7 percent of all merchandise exports; by 1988, these shares had shrunk to 3.5 percent and 1.2 percent

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3. The Global Trade Analysis Project (GTAP), based at Purdue University, supports a global data base (McDougall, 1997) and modeling framework (Hertel, 1997) currently used by more than 150 researchers on 5 continents. It is supported by a consortium of 12 national and international agencies. Updated details are available on the GTAP web site, at www.agecon.purdue.edu/gtap.

respectively (authors' calculations, from FAO data).[4] African governments restricted trade using many of the same instruments that had been developed earlier for colonial control, such as monopoly marketing boards, state trading companies, and trade taxes, superimposing some new policies such as foreign exchange restrictions. The result of these interventions was a strong disincentive to export and import, compounded by high transport costs within Africa and for external trade.

Africa's trade barriers reduce not only the volume of trade, but also its diversity. Exports are limited to the most profitable items and destinations: in recent years just four items (crude petroleum, precious stones, cocoa and coffee) have accounted for two-thirds of Sub-Saharan Africa's exports to OECD countries, and over half of all exports have gone to the European Union, double the share of other developing countries (Amjadi *et al.*, p. 6-8, see also Table 6 below).

With limited access to gains from trade, African economies have been dependent on their own physical productivity. But the bulk of Africa's labor and capital is employed in agriculture, and for a variety of reasons the worldwide "green revolution" bypassed the continent. For example, between 1960 and 1988 African grain yields remained around 700 kg/ha, while the total for other developing countries almost doubled from 820 to 1500 kg/ha (authors' calculations, from FAO data).

Restricted trade and weak agriculture prevented any significant growth in productivity or wealth. Consumption levels rose during the 1970s as African economies were able to finance imports with low-cost foreign borrowing, but after world interest rates rose in 1981 the continent fell into economic crisis. Capital inflows to finance trade and fiscal deficits were increasingly costly, forcing a decline in living standards along with socially disruptive policy reforms. Thus the

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4. During this period, the market shares of other low-income regions also declined, but not as much as for Africa. For example, South Asia's market shares fell in half, while Africa's shares fell to one third of their 1961 levels.

1980s were a disaster for most Africans, recovery has occured slowly, and the long-term outlook remains uncertain (see, for example, Husain and Faruqee 1994 and World Bank 1994). In this study, we help quantify Africa's prospects by projecting the interactions between changing resources, technology and policy, in the context of a global general equilibrium model.

II. MODEL AND DATA

Applied general equilibrium models have become a standard tool for assessing the impact of large-scale changes in the world economy, as detailed in Francois and Shiells (1994) for NAFTA and Martin and Winters (1996) for the Uruguay Round. Such models combine economywide coverage with disaggregation by sector and by country, capturing many of the most important links between government policies and economic conditions. Our work is based on the GTAP database and modeling framework, using version 3 of the GTAP database which disaggregates global activity into 30 regions and 37 sectors. For this study we aggregate the database to 10 regions (shown in Table 1) and 12 sectors (Table 2).

The GTAP database is distinguished not only by its level of detail but in the concordance of high-quality national input-output data, the reconciliation of contradictory reports on partners' trade, and the specification of policy interventions, as detailed in McDougall (1997). The model structure, detailed in Hertel (1997), uses constant returns to scale technology and nested constant elasticity of substitution (CES) production functions. An important innovation is the use of a constant-difference elasticity (CDE) demand system, to capture differences in the price and income elasticities of consumption by region. All markets are assumed to be competitive, and international trade is linked through Armington substitution among goods differentiated by country of origin. Policy interventions are modeled as *ad-valorem* taxes, tariffs and subsidies, or quantitative restrictions.

Projections to 2005

Because the UR will be phased in gradually, we begin by simulating the key changes in global economic conditions that are likely to take place during its implementation. To capture

changes in relative resource endowments, we project forward each region's population, labor force and human capital, physical capital stock and productivity (or real GDP) as shown in Table 1. The stock of agricultural land was held constant throughout the analysis. Population and labor-force growth rates are based on UN/World Bank projections. The human capital (skilled labor) projections were based on the growth in the stock of tertiary education as projected by Ahuja and Filmer (1995). Capital stock projections were generated by adding investment in each year and subtracting depreciation using the methodology of Nehru and Dhareshwar (1994). Finally, the World Bank's real GDP projections are used to estimate aggregate factor-neutral total factor productivity (TFP) growth for each region, by subtracting the growth in total factor inputs from GDP growth. To capture sectoral differences in TFP growth, we follow Bernard and Jones (1997) and Gehlhar *et al.* (1994) and set each region's agricultural TFP growth to be 0.7 percent per year above the average rate for the region as a whole.

From the annual growth projections in Table 1, it is clear that there are substantial differences between Africa and some of the other developing countries in their rates of factor accumulation. Most notably, Sub-Saharan Africa (SSA) has the highest projected rate of population growth (2.8 percent per year, or 44 percent over 13 years), and because so many Africans are children a high share of Africa's population is projected to remain outside the labor force. In contrast, labor force participation rates will be rising much faster in South Asia and low-income East Asia. In those areas, past declines in fertility have led to sharp increases in average age and labor force participation.

Not only is Africa's labor force growing quickly (averaging 3.1 percent per year over the period), but the continent's capital stock is expected to grow slowly (by only 1.1 percent), so Africa's capital stock per unskilled worker is expected to fall.[5] In contrast, the capital stock per unskilled worker is expected to rise quickly almost everywhere else, particularly in Asia. Combined with the changes in workforce participation rates noted above, these trends in resource

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5. Africa is projected to see rapid growth in skilled labor, but from a very low initial level.

levels create a "tyranny of numbers" (Young 1995) that plays a major role in determining patterns of comparative advantage and trade.

Government policies and the Uruguay Round

To capture the impact of the Uruguay Round or other policy reforms, we must include in the model those policies that are to be changed, but also include any remaining policy interventions that influence the economy's response (Anderson 1997). Almost all policy instruments are modeled here as *ad valorem* taxes and subsidies, applied to domestic activity and international trade. Interventions in agriculture are based on Producer Subsidy Equivalent (PSE) estimates, including both tariff and nontariff measures. The only quantitative restriction we include in this case represents the Multifiber Arrangement (MFA), a system of quotas on textile and apparel exports from developing countries to North America and Europe. Prior to the UR the MFA included specific rates at which each bilateral quota would grow over time, and we use these growth rates to specify the quotas that would have been in place in 2005 had the Uruguay Round not occured. Using these quota levels, and holding constant all of the *ad-valorem* interventions observed in 1992, we construct a model of the world economy in 2005 without the Round.

Having established a benchmark scenario, we are now in a position to assess the Round's impact. We focus here only on the quantifiable effects of changes in import restrictions and export subsidies announced in the UR agreements on manufactures, textiles and clothing, and agriculture. This clearly understates total impacts by omitting the less quantifiable impacts of the UR, including the agreements on services, investment and intellectual property, as well as the Round's effects on savings and investment, productivity growth or market structure.

The Round's reduction in most import restrictions are specified in our model as the change in trade-weighted aggregate bilateral rates of protection from pre-UR levels to the level implied by individual countries' UR offers, as calculated by Reincke (1997) for tariffs and Ingco

(1997) for non-tariff barriers in agriculture.[6] Table 3 shows the resulting cut in import tariff and tariff-equivalent protection conferred by national policy, computed as the difference between with-UR and without-UR protection levels on each region's trade with Sub-Saharan Africa. Entries in this table are expressed in terms of millions of 1992 US dollars, with the implied average change in import prices given in parentheses. The dollar value and percentage cuts are shown are grouped by trading partner and by commodity for both imports into Sub-Saharan Africa and exports from SSA.

Examination of the import columns in this table shows that African import prices will be little affected by the Uruguay Round tariff cuts in this region. Percentage price cuts range from a high of 0.8 percent on textiles and apparel to virtually no change for many of the extractive sectors. As a consequence, the total trade-weighted value of these cuts is only about US$200 million at 1992 prices, with more than half of this coming in grains. The effect of the grains cuts will be overwhelmed by the impact of higher export prices from Africa's primary grains sources, NAFTA and the EU, where export subsidies are due to be cut. The distribution of cuts on African exports is heavily weighted towards Asia. On a commodity basis, these UR cuts are largest for African exports of grains.

In addition to the reductions in import barriers listed in Table 3, the simulation includes elimination of MFA import quotas on textiles and apparel trade.[7] As shown in Table 4, these quotas impose far less restriction on African than on Asian exporters.[8] Africa's exports to Europe are totally unrestricted, and Africa's quotas were scheduled to grow rapidly enough for their

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6. In those cases where UR bindings are above pre-UR applied rates, it is assumed that no change actually occurs.

7. The UR agreement in this area consists of a set of complex formulae for quota relaxation, culminating in complete elimination of quotas at the end of 2005. Although some uncertainty remains about the final outcome, we assume here that abolition is successful. Alternative scenarios are explored in Elbehri *et al.* (1997).

8. Although not shown on the table, Africa's MFA quotas actually restrict only three countries: Kenya, Egypt and Mauritius. For most African countries, no restriction is imposed at all.

restrictiveness to remain low, while the corresponding quotas on competitive Asian suppliers would have become increasingly restrictive by 2005. Consequently, when these quotas are relaxed in our UR simulation, we expect to see a dramatic change in the sourcing of textiles and apparel in Europe and North America towards increased imports from the previously most restricted countries.

The final part of the UR implementation in this study involves a cut in the *ad valorem* equivalent export subsidies on agricultural exports as reported to the WTO during the pre-UR period. In practice, the constraint on these subsidies entails both a quantitative target and an expenditure target, only one of which will be binding. For purposes of this study we have used only the expenditure constraint, with a 36% cut in the rate of subsidization. This cut is uniform across subsidizing exporters.

III. RESULTS

Model results can be viewed from many perspectives. Here we focus first on the UR's implications for African trade by partner (Figure 1), self-sufficiency in key commodities (Figure 2), output and trade levels by sector (Table 5), and aggregate income and welfare (Table 6). We then turn to the impacts of Africa's own policy responses on production and trade (Table 7) as well as income and welfare (Table 8). To summarize, we examine growth prospects for key sectors across all scenarios considered in the study (Figure 3).

Impact of the UR on African trade by partner

One of the most important findings of our study is illustrated in Figure 1, showing Africa's geographic composition of trade by partner. Asia's share of African exports is projected to rise from 16 percent to 21 percent in the absence of policy change, and to 24 percent after UR implementation. In contrast, while more than half of SSA exports went to Europe in 1992, model results indicate that this share would have fallen to 47 percent by 2005 in the absence of trade policy changes, and is likely to go down to 44 percent as the UR is implemented. The UR reforms bring Africa's trade patterns closer to global averages, although the EU's share of African

trade is still roughly twice the EU's share of global trade, perhaps due to its geographic proximity and the lasting effects of colonial ties.

Impact of the UR on African self-sufficiency in key sectors

To begin assessing the UR's impact on African trade by sector, it is most convenient to focus on self-sufficiency ratios, or the economy's degree of specialization, as shown in Figure 2. Only the sectors with significant changes are shown in the figure.[9] A striking result is that export specialization in non-grain crops rises sharply from 1992 to 2005 even without the Round, and with the Round grows so much that by 2005 this sector is projected to be almost as export-oriented as energy -- partly because the energy sector itself becomes relatively less export-oriented over time. The model suggests that, by 2005, over 45 percent of the value of nongrain crops will be exported, up from 25 percent in 1992. The nongrain crops sector is highly diverse, including both traditional exports (cotton, beverage and tree crops, groundnuts) and new ones (flowers, vegetables, fruits), but the continent's increasing comparative advantage in this broad area is clear. The UR is also expected to increase the export-intensity of Africa's forestry and fisheries sector, but this does not fully offset a decline over time due to other factors. Textiles and apparel, and to a lesser extent light manufacturing, are importing sectors which are expected to become increasingly import-intensive over time, a trend which is reinforced by the UR agreement.

Impact of the UR on output and trade values by sector

Table 5 reports our estimates of changes due to the Round in the total value of production and trade in 2005 for each type of commodity. Again, one of the most striking results is UR's impact on African agriculture. Nongrain crops, for example, are projected to have their output increased by 1.5 percent and their exports raised by 6.6 percent, with imports declining by a similar amount for a net foreign exhange gain of over US$1.1 billion. The forestry and fisheries

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9. The sectors whose self-sufficiency remain unchanged are Other Minerals (a self-sufficiency ratio above 1.3), Livestock/Meat and Utilities, Housing and Construction Services (both of which retain a self-sufficiency ratio of 1.0), Other Food and Other Services (around 0.98), and Heavy Manufacturing (around 0.76, by far the most import-dependent sector).

sector also expands, as does the grains sector, and services other than utilities, housing and construction. In contrast, a dramatic decline in the textiles and apparel sector is projected, along with smaller declines in manufacturing. Overall, both exports and imports are projected to decline -- and Africa is the only region of the world for which this is the case.

Impact of the UR on real income and welfare by region

The effects of the UR on real income or welfare in all regions of the world are shown in Table 6. Low income East Asia is the biggest winner, both in proportional and absolute terms, with a real income gain of 3.6% per year valued at over US$65 billion. South Asia is the next biggest gainer in proportional terms at 1.6 percent of real income, valued at US$9 billion. Sub-Saharan Africa, along with North Africa and the Middle East, are the greatest losers, while the economies in transition (Eastern Europe and the Former Soviet Union) are projected to lose slightly.

To help explain these changes, the table also provides a breakdown into external terms-of-trade effects and domestic allocative-efficiency effects. This reveals that the gains in low-income East Asia come entirely from domestic allocative-efficiency improvements (worth US$99 billion), which more than offset a substantial worsening of their terms of trade in foreign markets (worth US$28 billion). South Asia's terms of trade improve slightly, but most of the gains are due to allocative efficiency. For both of these low-income regions the principal source of gain is their own liberalization, which dramatically raises their trade volume. Additional gains are earned from eliminations of MFA quotas against their textile and apparel exports.

For the world as a whole, gains are estimated at 0.6 percent of real income, worth US$192 billion. This figure is only slightly smaller than the figure obtained in the most comparable previous study (Hertel *et al.* 1996). The difference is likely to be due to our using more recent values for the MFA quotas and for macroeconomic projections, as well as having incorporated the Lomé Convention trade preferences in the without-UR scenario, and to having aggregated the East Asian countries thereby blunting the welfare gains from their reforms.

The only regions that are projected to lose from implementation of the Round are Sub-Saharan Africa and the Middle East and North Africa, both of which have real income declines of around one-tenth of one percent, valued at US$569 and US$734 million respectively. Most of this decline is due to a worsening of allocative efficiency: African governments did not take advantage of the Round to reduce their own trade barriers very much, and barrier reductions elsewhere cause trade patterns to shift away from Africa. Africa's volume of exports and imports actually decline, and since these are relatively highly taxed activities there is a loss to the economy as a whole. This change in quantities that increases the costs to Africa of its own policy distortions is substantially greater than the external terms-of-trade effect, which is estimated in the model to cost Sub-Saharan Africa about US$200 million per year in 2005.

Impact of African policy responses

Although the Uruguay Round negotiations have been completed, African governments can still respond with policy reforms of their own. Here we identify two major areas of reform which might help the region overcome the UR's negative effects and take advantage of the changing structure and increasing openness of world markets. For simplicity, we focus on two very low-cost initiatives, involving institutional reforms aimed at catching up with performance in other low-income regions. We look first at trade and transport reforms, to lower costs incurred in handling goods for international trade, and then examine agricultural productivity, to catch up with worldwide improvements in cereal grain genetics and crop management.

Trade and transport costs

Africa's relatively high internal and international transport costs pose a large barrier to trade and market efficiency. Amadji *et al.* (1996) report that average nominal freight rates on Sub-Saharan Africa's exports (outside of oil) are about 20% above those for other developing countries. Some of this cost difference may have arisen because of relatively small shipment volumes, in an industry with significant economies of scale. But much of Africa's cost disadvantage is due to delays in customs-clearing, problems in coordination and logistics, and high mark-ups by monopoly transporters serving small markets. All of these barriers to trade could be

reduced by institutional reforms. Such changes have relatively little financial cost, but are often postponed because they would harm politically-favored individuals and institutions.

The policy reforms needed to reduce transport costs involve simplifying import regulations to make tariff obligations more transparent and speedy, management reforms or privatization of transit facilities such as ports and airports to make operations more accountable to users, and domestic-carrier reforms to eliminate national preferences and create an Africa-wide market for trade and transport services. A key factor in transport costs is economies of scale, both in the size of individual shipments and in the size of the network in which shipment occurs. Currently both are restricted by the need for shippers to have close links to national customs and transit systems. Without such country-of-origin restrictions, carriers would compete with one another over several countries. Although reforms might lead to growth in the average size of each successful firm, they would compete over larger geographic areas so each would have less market power in any one location.

We explore the consequences of reforms in the trade and transport sector by introducing a 20 percent reduction in bilateral trade and transport costs, applied to non-energy products originating in the SSA region. The cost reduction is applied only to international trade and transport. Even more important cost reductions might be possible to achieve in domestic markets, but we have little evidence on the magnitude of cost reductions that reform in this sector would bring. Our scenario assumes simply that, between the time reforms are implemented and the year 2005, the cost differences identified by Amadji *et al.* are eliminated entirely. We assume no change in the international transport costs for Africa's imports since these services are mainly arranged from the country of origin.

Agricultural productivity growth

The second policy response we consider is the possibility of accelerating agricultural productivity growth, towards levels observed on other continents. Given the difficulty in estimating past rates of total factor productivity growth, it is necessary to use partial productivity

measures such as per-hectare yields of cereal grains. For the whole 35-year period from 1960-94, grain yields in Africa grew at only 0.5 percent per year, while those of South Asia grew at around 2.5 percent annually (authors' calculations, from FAO data). Outside of Africa, cereal yield growth rates are even higher for the 20-year period of 1965-84 during which the "green revolution" semi-dwarf, fertilizer-responsive rice and wheat varieties spread around the world. In Africa, however, cereal grain yields remained stagnant during this period, retarding economic growth throughout the economy.

In the decade after 1984 yield growth in African cereal grains did recover, thanks to adoption of early-maturing varieties and labor-intensive management techniques (Sanders et al. 1996, Masters et al. 1997). These innovations help raise total factor productivity, which could be further improved through more efficient input and product markets to reduce transaction costs and permit greater specialization. It is not clear what rate of productivity growth Africa can realistically achieve, with appropriate reforms in research and extension, or seed systems and agricultural markets.[10] With little evidence to go by, we use the plausible rate of one percent per year, sustained over the 1992-2005 period of our projection, for a cumulative TFP gain of 13.8 percent applied to the grains sector only. We keep other TFP growth rates at the levels used in the base case projections, in order to focus on the particular technology deficit associated with late development of appropriate "green revolution" techniques for food grains.

Impact of African reforms on production and trade

The impact of trade and transport reforms on production (in the first column of Table 7) is projected to be greatest for nongrain crops, reflecting the importance of high international

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10. Block (1994) estimates total factor productivity (TFP) growth using a variety of methods, with the most plausible results being annual growth rates of +1.45 percent for 1963-68, -0.10 percent for 1968-73, -0.46 percent for 1973-78, -0.02 percent for 1978-83, and +1.63 percent for 1983-88. Block identifies numerous sources of bias and error in his data and so discourages direct use of these estimates--but they are broadly consistent with the grain yield data presented above, and also with the work of Frisvold and Ingram (1993) who estimated African TFP growth to be close to zero for the 1973-5 to 1983-5 period.

transport costs to the growth of this sector. When international trade margins for all nonfuel exports fall by 20 percent, production of nongrain crops rises by 2.6 percent, exports by over 8 percent, and although imports also rise net foreign exchange earnings go up by US$1.68 billion. The other sectors that expand under this reform scenario are livestock and meat, forestry and fisheries, and nonfuel mining.

The impact of agricultural productivity reforms is even greated than that of transport reforms. The reform scenario involves productivity growth only in grains, but substitution and income effects permit almost all sectors to expand. In the grains sector, output rises by 4 percent and exports rise by 200 percent, for a net foreign exchange gain of US$2 billion. Most of the gains, however, are passed on to consumers as domestic grain prices fall and resources flow to other activities. All agricultural sectors expand, and although income growth leads to higher imports the net gain to the economy as a whole is a substantial increase in output and foreign exchange earnings.

Impact of African reforms on income and welfare

Table 8 shows the income and welfare effects of the reforms, including their disaggregation into domestic allocative efficiency and foreign terms-of-trade effects. The real income gain from lowering trade and transport costs is projected to be 0.27 percent, while the gain from raising agricultural productivity is 1.43 percent. Both of these are far larger than the UR cost of 0.1 percent. In value terms, the UR cost was estimated at US$569 million, whereas the estimated gain from lower trade and transport costs is over US$1 billion, and from increased agricultural productivity is over US$6 billion.

Growth prospects for key sectors

The results presented above focus on how African policy reforms, if undertaken, would affect economic conditions in the year 2005. All figures represent increases or decreases that would be reaped every year beyond that, if all variables were to remain at their projected 2005 levels. Here, in Figure 3, we present the model's implications for growth rates over time in each

sector's output and factor employment. These growth rates are relevant for a wide range of investment and planning decisions, in both the private and public sectors.

From Figure 3, it is clear that UR sharply reduces growth prospects for the textiles and apparel sector, from an average rate of 3.8 percent per year during this period without the Round, to 3.3 percent with the UR being implemented. What is most important to note, however, is that both policy reform scenarios we simulate result in a complete reversal of the UR's effect, restoring growth prospects in this sector to about 3.8 percent per year. In all scenarios, growth prospects are greatest in nongrains agriculture, at around 4.4 percent per year.

V. CONCLUSIONS

This study quantifies the impact on African economies of the Uruguay Round and possible policy responses. Several key aspects of the analysis go much farther than previous studies, most notably in capturing the impact of eroding Africa's Lomé Convention privileges, and of eliminating the restraints on Africa's competitors imposed by MFA quotas on textiles and apparel trade. At the global level, our study is distinguished by using projections of resource endowments, including human capital based on regional differences in education rates, so that UR impacts are measured at the end of its implementation period in 2005.

The principal results of the study can be summarized as follows:

(a) The Uruguay Round agreement, once fully implemented in 2005, is projected to have a small but negative impact on economic welfare in Africa, worth about one-tenth of one percent of real income or $569 million per year in 1992 US dollars (Table 8). In contrast the Round generates welfare gains almost everywhere else, with total worldwide gains estimated at about six-tenths of one percent of real income, or US$190 billion per year. The greatest gains are in low-income East Asia (i.e. Southeast Asia and China), whose combined gains are estimated to be 3.6 percent of real income, or $66 billion per year.

(b) The costs of the Uruguay Round in Africa are mainly due to worsening allocative efficiency, that is the increased cost of Africa's own trade restrictions. Africa's competitors undertook far more liberalization than Africa, so world trade increasingly bypasses the continent. Africa is the only region for which UR implementation actually reduces export and import volumes. In addition to the volume-related allocative efficiency effect, some welfare cost is also incurred due to worsening terms of trade. This arises chiefly from displacement of African exports in European markets by Asian competitors, resulting from erosion of Lomé privileges and elimination of MFA quotas.

(c) The negative impact of the Uruguay Round in Africa is projected to be felt most heavily in the textile and apparel sector. Implementation of the UR is projected to make output in this sector over 10 percent smaller than it would otherwise be in 2005, with net imports in this sector being over $2 billion higher. In contrast UR implementation causes a significant expansion of African agriculture, most notably in nongrain crops whose production expands by 1.5 percent and net foreign exchange earnings rise by almost $1.2 billion, as well as forestry and fish whose production rises by 1.7 percent and net foreign exchange earnings by almost $0.6 billion. Much of these increases in farm exports are projected to be sold to Asia, as their import demand rises due to reduced import barriers, higher incomes and structural transformation.

(d) The effect of the Uruguay Round in providing increased incentives for African agriculture adds to an even larger cause of increased farm production, which is Africa's own rapid rate of growth in the farm labor force. The Uruguay Round helps improve prospects for this sub-population, raising the incomes of many of Africa's poorest people. Thus, changes in the international environment from the Uruguay Round and trends in domestic resource levels both point in the same direction, which is increased use of agriculture to provide labor-intensive employment and meet domestic food demand.

(e) The output losses from UR implementation, which are concentrated in textile and apparel, could be more than offset by domestic reforms in either the trade and transport sector, or

foodgrain productivity. In both sectors Africa lags significantly behind other low-income countries, and institutional reforms could provide major gains at low cost. Trade and transport reforms would consist of more transparent and speedy customs systems, more reliable transit facilities, and less restrictive rules on competition among carriers. If such reforms could bring shipping margins on nonfuel exports down by 20 percent, into line with costs in other developing countries, the resulting welfare gains would be approximately twice as large as the welfare losses from the UR. Foodgrain productivity gains would be driven by an increased research and development effort to identify and diffuse appropriate seed varieties, as well as reforms to make input and product markets more competitive. If such reforms add 1 percent per year to total factor productivity growth in the African foodgrain sector, the resulting welfare gains would be over ten times as large as the losses due to UR implementation.

The implications of these results for economic strategy are clear. Implementation of Uruguay Round commitments around the world over the coming decade -- along with simultaneous changes in underlying economic conditions -- will induce significant changes in the composition of African economies. Exports will be increasingly diversified towards Asia rather than concentrated in Europe, and will increasingly consist of farm products rather than manufactures.

Following the "Asia/agriculture" strategy that emerges from this analysis, African governments which seize opportunities to open trade with Eastern partners and which invest in agriculture will see those efforts rewarded under conditions of rising demand for their products. In contrast, those governments that try to resist these changes with protective policies and subsidies to existing industries will only compound their losses, as the Uruguay Round reduces their growth prospects.

Among the key elements of almost any country's Asia/agriculture strategy would be institutional reforms in the key areas of international transport and foodgrain production. In both areas Africa has fallen far behind other developing areas. The high cost of transport to overseas

markets is particularly restrictive on high margin goods such as fisheries, forest products, and non-grain crops that might go to Asia. In addition, while low productivity growth in foodgrains has restricted production of other food and cash crops that might be exported.

The simulation results presented in this study suggest that economically low-cost institutional reforms in both areas could bring major bursts of economic growth, far larger in magnitude than the costs of the Uruguay Round. Taken together, such reforms could boost real incomes in Sub-Saharan Africa by about 1.5 percent per year or almost US$7 billion annually by the year 2005. The net present value of such reforms (at a 5% real rate of discount) is $140 billion. These gains are over ten times larger than the costs imposed on Africa by other countries' implementation of the Uruguay Round, and can be achieved with minimal outside assistance.

A general Asia/agriculture strategy, along with specific reforms in the trade and transport sector and in foodgrain production, constitute a new approach based on Africa's unique situation in the world economy. Relying on external or historical models such as an "Asian tiger" pursuit of labor-intensive manufacturing exports can be misleading. Analysis of the data shows that, because of Africa's high and rising comparative advantage in agriculture, attempts to grow by exporting manufactures are very unlikely to succeed, while exports of farm goods will yield large gains from trade. Taking account of these prospects in designing policy and guiding investment may yield high payoffs, and demonstrate the importance of understanding the complex linkages across sectors and countries that drive the global economy.

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Figure 1. Impact of the UR on African Exports by Destination

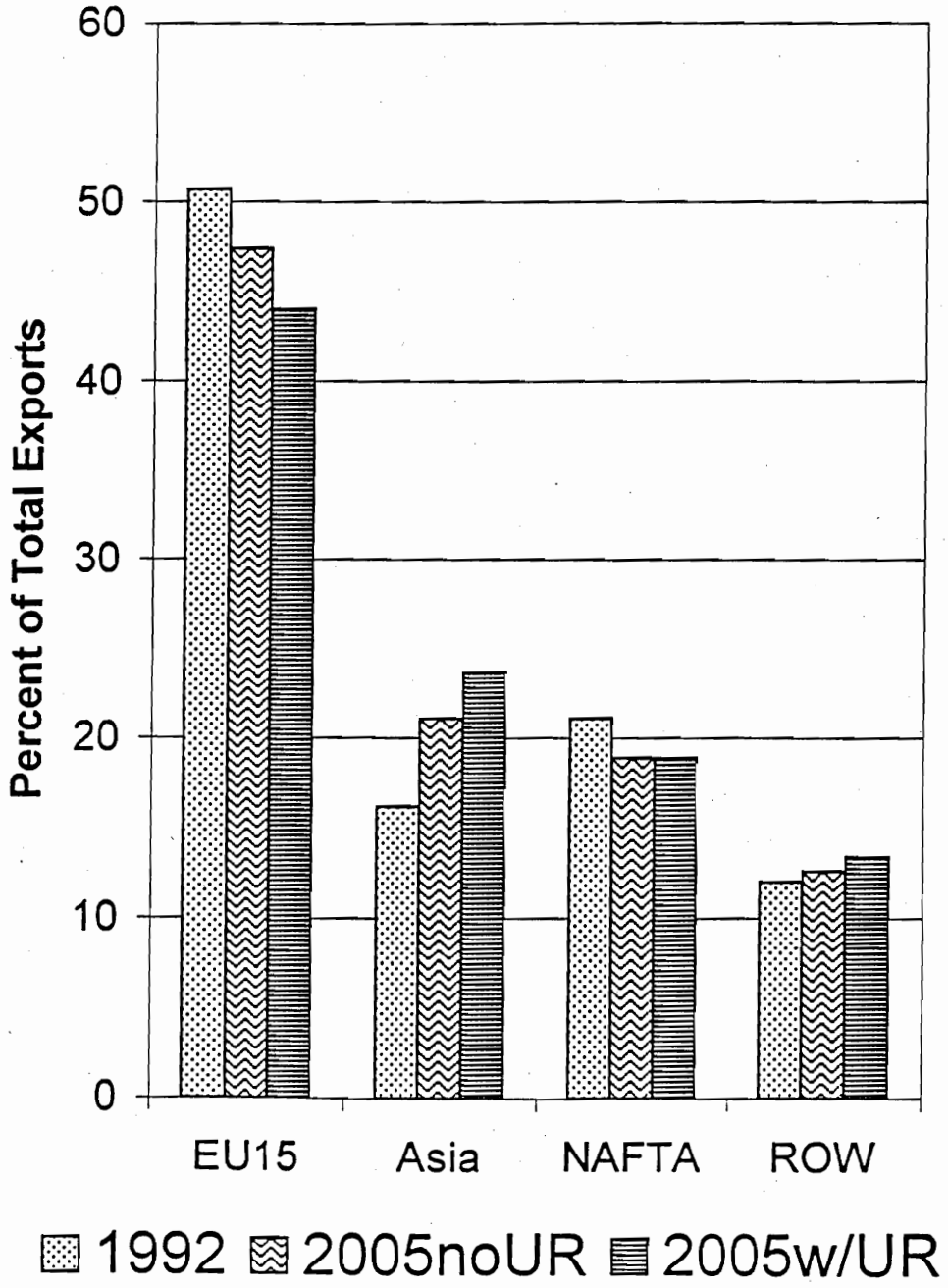

Figure 2. Impact of the UR on African Trade in Selected Sectors

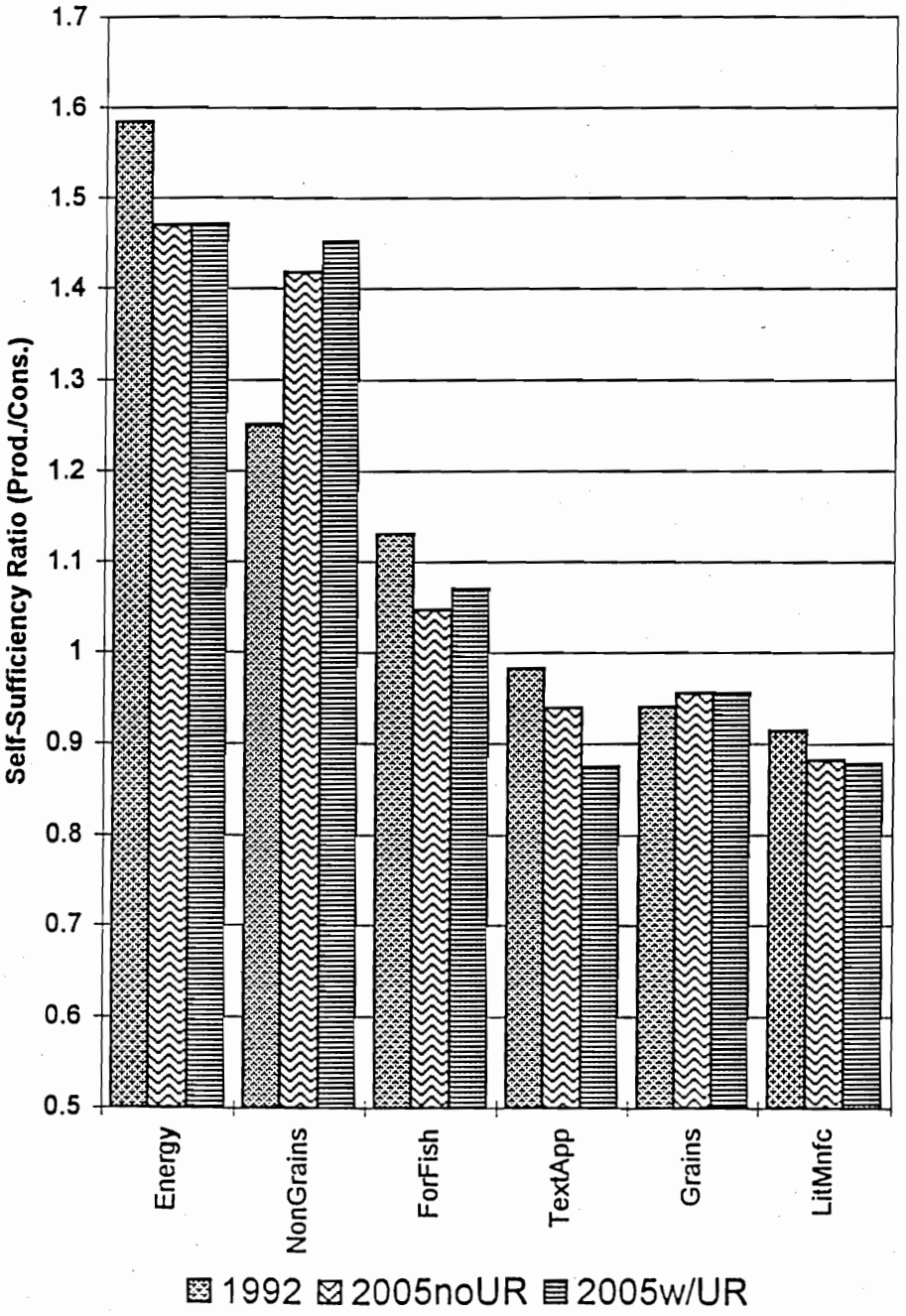

Figure 3. Projected annual output growth in selected sectors, 1992-2005

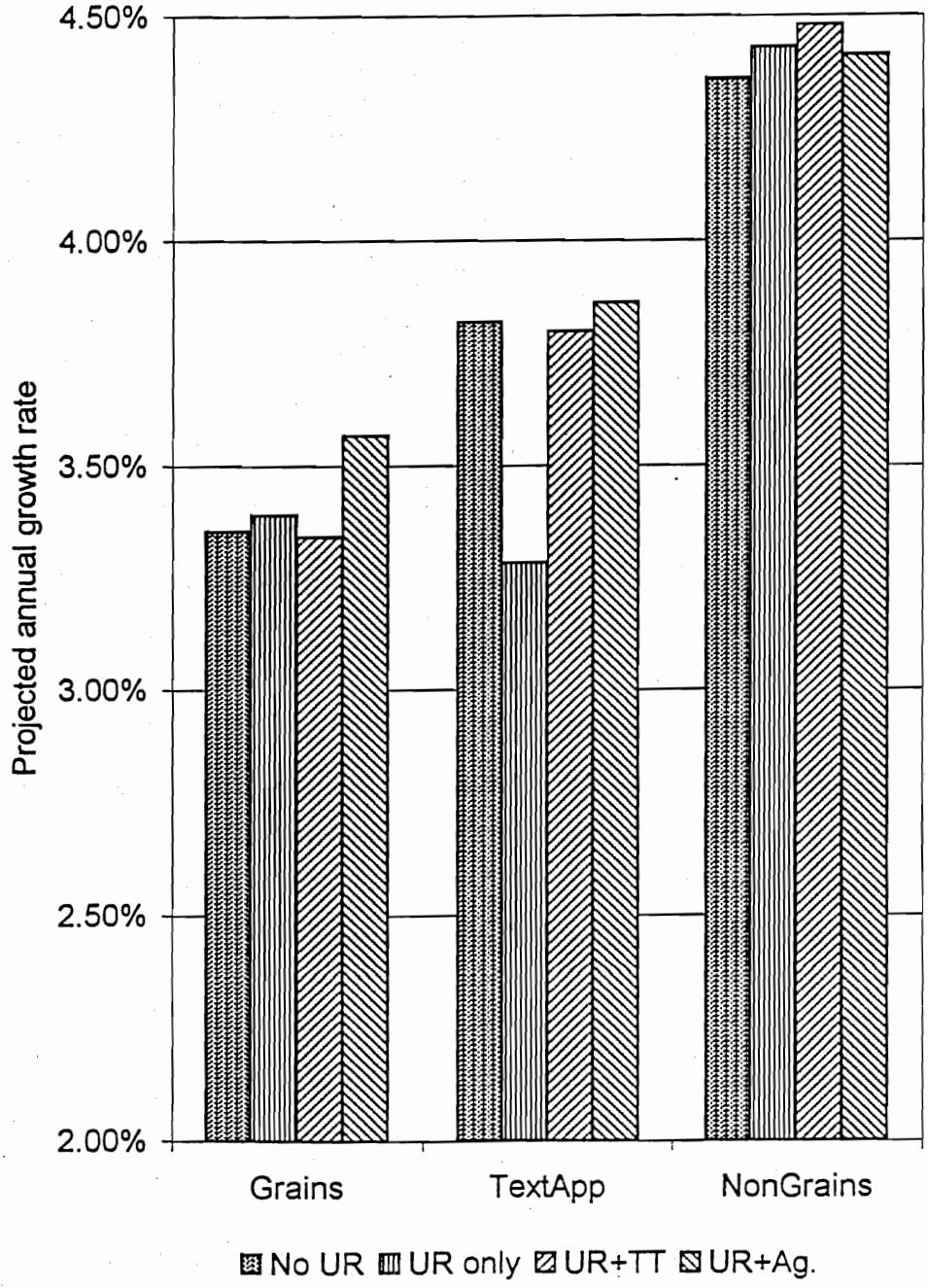

Table 1. Projected annual growth in factor endowments by region, 1992-2005

Name	Description	Population	Unskilled Labor	Capital Stock	Skilled Labor	Real GDP
SSA	Sub-Saharan Africa	2.8	3.1	1.1	7.2	3.3
MEA	Mid-East & North Africa	2.6	3.2	2.6	8.0	2.8
EU15	European Union	0.2	0.1	2.5	6.0	2.5
LTN	Latin America (ex. Mexico)	1.5	2.2	3.7	6.5	3.7
NAFTA	US, Canada & Mexico	1.1	1.3	3.3	4.6	2.8
EIT	Economies in Transition (CEA & FSU)	0.4	0.5	0.7	1.6	1.6
SAsia	South Asia	1.8	2.3	5.6	5.8	5.3
EAsiaH	East Asia - High Income	0.4	0.3	4.8	3.8	3.3
EAsiaL	East Asia - Low Income	1.0	1.4	9.4	5.9	8.7
ROW	Rest of the World	1.7	2.0	3.1	7.4	3.0

Source: Authors' calculations.

Table 2. Definition of Sectors and Commodities

Sector	Commodities
Grains	Paddy rice, processed rice, wheat, other grains
NonGrains	Non-grain crops (e.g. cotton, oilseeds, coffee, etc.)
LstkMeat	Meat products, wool, other livestock
OthFood	Milk products, beverages and tobacco, other food products
ForFish	Forestry and fishery
Energy	Petroleum and coal, oil, gas
OthMin	Nonmetallic minerals, other minerals
TextApp	Textiles and wearing apparel
LitMnfc	Leather, lumber, fabricated metal products, other manufacturing
HvyMnfc	Pulp paper, chemicals rubber and plastics, primary ferrous metals, nonferrous metals, transport industries, heavy industries, machinery and equipment
UHCServ	Electricity water and gas, construction, ownership of dwellings
OthServ	Trade and transport, other services (private and government)

Source: GTAP, version 3 database (McDougall 1997).

Table 3. Uruguay Round Cuts in Barriers to African Trade

	BY PARTNER			BY COMMODITY	
	Imports to SSA	Exports from SSA		Imports to SSA	Exports from SSA
SSA	7.19	7.19	Grains	103.62	105.38
	(0.21)	(0.21)		(0.45)	(0.69)
MEA	0.83	0.83	NonGrains	0	33.99
	(0.1)	(0.05)		(0)	(0.02)
EU15	129.32	10.06	LstkMeat	82.95	18.05
	(0.34)	(0.02)		(0.16)	(3.17)
LTN	4.93	3.74	OthFood	1.37	17.25
	(0.23)	(0.24)		(0.03)	(0.01)
NAFTA	53.85	22.43	ForFish	0	22.41
	(0.56)	(0.15)		(0)	(0.03)
EIT	0.47	1.56	Energy	0	0.50
	(0.12)	(0.43)		(0)	(0)
SAsia	0.57	28.74	OthMin	0	3.17
	(0.06)	(2.19)		(0)	(0)
EAsiaH	9.65	172.00	TextApp	30.31	14.28
	(0.08)	(2.16)		(0.81)	(0.02)
EAsiaL	10.11	34.01	LitMnfc	0	14.20
	(0.33)	(1.96)		(0)	(0.01)
ROW	9.84	42.69	HvyMnfc	8.51	94.07
	(0.31)	(2.36)		(0.02)	(0.01)
			UHCServ	0	0
				(0)	(0)

Note: Main entries are the total value of UR cuts in millions of 1992 US dollars. Numbers in parentheses are average percentage cuts in prices paid for imports.

Source: Authors' calculations, from GTAP version 3 database.

Table 4. MFA Quota Premia on Textile and Apparel Trade by Region

	IMPORTER			
	European Union (EU15)		North America (NAFTA)	
EXPORTER	1992	2005	1992	2005
SSA	0	0	4	4
MEA	0	0	8	8
LTN	14	17	16	16
EIT	0	0	10	10
SAsia	21	25	22	25
EAsiaH	12	12	14	14
EAsiaL	25	30	26	31
ROW	0	0	6	6

Note: Data shown are tariff-equivalent percentages of fob value.
Source: GTAP, version 3 database for 1992; Authors simulation results for 2005.

Table 5. Impact of the UR on African Production and Trade

	Output (%)	Gross Exports (%)	Gross Imports (%)	Change in Trade Bal. (US$ m.)
Grains	0.7	44.5	0.4	32
NonGrains	1.5	6.6	-6.7	1157
LstkMeat	0.0	5.9	2.7	-22
OthFood	-0.2	-11.4	-7.7	-255
ForFish	1.7	27.9	8.1	568
Energy	0.0	0.1	-1.3	-9
OthMin	-0.3	-0.5	-0.5	-43
TextApp	-10.6	-65.6	1.9	-2355
LitMnfc	-0.8	-2.1	0.5	-75
HvyMnfc	-0.6	-1.6	0.1	-214
UHCServ	-0.1	0.6	0.0	3
OthServ	0.2	5.3	0.1	1116
Total	n.a.	-0.2	-0.3	0

Note: All changes are for the year 2005, expressed in 1992 US dollars.
Source: Authors simulation results

Table 6. Impact of the Uruguay Round on Income and Welfare

	Percent Change in Income	Value of Change in Welfare	Decomposition of Welfare Effect		
			Terms of Trade	Allocative Efficiency	Residual*
SSA	-0.1	-569	-205	-377	13
MEA	-0.1	-734	-171	-571	8
EU15	0.5	42300	11082	32142	-924
LTN	0.1	726	-2228	2981	-27
NAFTA	0.4	31495	16382	15498	-385
EIT	0.0	-310	-545	229	6
SAsia	1.6	8923	1281	7885	-243
EAsiaH	0.8	42738	4793	39028	-1083
EAsiaL	3.6	65843	-28213	99059	-5003
ROW	0.1	1633	-2171	3835	-31
World Total	0.6	192045	5	199709	-7669

Notes: All data shown are changes in 2005 relative to no-UR projections
All values are expressed in 1992 US dollars.
Residual welfare change is due to changes in marginal utility of income.

Source: Author's simulation results.

Table 7. Impact of African Policy Reforms on Production and Trade by Sector

	TRADE & TRANSPORT				AGRIC. PRODUCTIVITY			
	Output (%)	Gross Exports (%)	Gross Imports (%)	Change in Trade Bal. (US$ m.)	Output (%)	Gross Exports (%)	Gross Imports (%)	Change in Trade Bal. (US$ m.)
Grains	-0.2	0.7	3.4	-90	4.2	209.0	-42.4	2005
NonGrains	2.6	8.4	2.6	1683	1.1	-0.2	2.2	-52
LstkMeat	0.1	4.6	4.1	28	1.6	13.8	-5.3	164
OthFood	-0.1	2.5	3.0	-20	3.7	16.4	-4.5	974
ForFish	0.7	9.1	7.6	214	0.4	-7.2	6.1	-257
Energy	-1.0	-2.4	0.8	-624	-0.6	-2.6	1.6	-686
OthMin	1.2	5.2	3.9	395	-0.6	-2.8	1.8	-248
TextApp	-0.4	9.5	3.5	-85	0.9	-2.2	2.4	-166
LitMnfc	0.0	7.6	3.2	27	0.0	-3.8	2.5	-254
HvyMnfc	-0.3	5.9	2.2	-78	0.9	1.0	0.8	-297
UHCServ	0.0	-5.4	2.3	-38	0.6	-2.9	1.7	-22
OthServ	-0.4	-4.2	2.5	-1404	0.6	-2.2	2.7	-1107
Total	0.1	2.0	2.6	8	1.3	0.2	0.1	54

Note: All changes are for the year 2005, and expressed in 1992 US dollars.
Policy reform changes are relative to conditions with the UR in place.

Source: Authors simulation results.

Table 8. Impact of African Policy Reforms on Income and Welfare

	Percent Change in Income	Value of Change in Welfare	Decomposition of Welfare Effect			
			Allocative Efficiency	Terms of Trade	Technical Change	Residual*
Trade & Transport						
SSA	0.27	1177	366	834	0	-23
World	n.a.	1673	746	0	976	-48
Agric. Productivity						
SSA	1.43	6207	215	28	6171	-206
World	n.a.	7179	1244	0	6171	-235

Note: All changes are for the year 2005, and expressed in 1992 US dollars.
Policy reform changes are relative to conditions with the UR in place.
Residual welfare change is due to changes in marginal utility of income.

Source: Authors simulation results.

Table A1. African Trade Shares by Region (percent of total)

	DESTINATION OF EXPORTS						ORIGIN OF IMPORTS					
	SUB-SAH. AFRICA			WORLD			SUB-SAH. AFRICA			WORLD		
	1992	2005 no UR	2005 w/ UR	1992	2005 no UR	2005 w/ UR	1992	2005 no UR	2005 w/ UR	1992	2005 no UR	2005 w/ UR
SSA	5.5	5.2	5.4	2.2	2.0	1.9	4.7	4.8	5.0	2.0	2.0	1.8
MEA	2.0	2.0	2.1	5.9	5.2	4.9	1.1	1.1	1.1	5.2	4.8	4.4
EU15	50.7	47.4	44.0	27.0	23.9	23.3	52.1	50.6	51.4	26.7	24.6	23.7
NAFTA	21.1	18.9	18.9	24.3	22.7	22.3	13.0	12.2	12.8	23.0	21.6	21.2
LTN	2.2	2.3	2.3	4.4	4.4	4.3	2.9	3.2	3.3	4.1	4.2	4.0
EIT	0.5	0.5	0.5	3.4	2.7	2.6	0.5	0.5	0.5	3.2	2.8	2.6
SAsia	1.8	2.5	2.7	1.3	1.6	1.9	1.3	1.8	1.1	1.3	1.6	2.0
EAsiaH	11.3	12.8	13.7	17.7	19.1	19.1	15.9	14.3	13.4	20.1	18.9	18.7
EAsiaL	2.4	5.8	7.3	6.7	11.6	13.3	4.2	7.1	6.9	7.4	12.8	15.1
ROW	2.5	2.6	3.1	7.1	6.8	6.4	4.3	4.3	4.5	7.2	6.8	6.5
Total (sha	100	100	100	100	100	100	100	100	100	100	100	100

Source: GTAP, version 3 database for 1992; Authors simulation results for 2005 noUR and 2005 with UR.

Table A2. African Trade Shares and Self-Sufficiency Ratios by Commodity

	EXP. FROM AFRIC.			IMPORTS TO AFRICA			GLOBAL TRADE			SELF-SUFFIC. RATIO		
	1992	2005 no UR	2005 w/ UR	1992	2005 no UR	2005 w/ UR	1992	2005 no UR	2005 w/ UR	1992	2005 no UR	2005 w/ UR
Grains	0.2	0.3	0.5	3.2	2.4	2.5	0.9	0.8	1.2	0.94	0.96	0.96
NonGrains	11.4	16.2	17.4	1.2	0.9	0.9	2.2	2.1	2.0	1.25	1.42	1.45
LstkMeat	0.8	1.0	1.0	0.7	0.6	0.6	1.2	1.0	1.8	1.00	1.01	1.01
OthFood	5.6	5.3	4.8	5.8	5.5	5.2	3.5	3.1	3.1	0.98	0.99	0.98
ForFish	3.0	2.1	2.8	0.4	1.0	1.1	1.2	1.4	1.5	1.13	1.05	1.07
Energy	31.3	27.0	27.2	1.7	2.1	2.1	8.5	8.7	8.1	1.58	1.47	1.47
OthMin	8.2	7.7	7.8	2.0	2.2	2.2	2.8	3.1	2.9	1.32	1.30	1.30
TextApp	2.6	3.4	1.2	5.2	5.2	5.3	6.0	5.9	7.8	0.98	0.94	0.88
LitMnfc	3.5	2.8	2.8	5.2	5.5	5.6	8.0	8.2	8.0	0.92	0.88	0.88
HvyMnfc	18.6	18.0	17.8	50.4	51.2	51.2	47.7	48.4	47.4	0.76	0.76	0.76
UHCServ	0.7	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.2	1.00	1.00	1.00
Othserv	14.1	15.6	16.1	23.8	23.1	23.0	17.7	17.0	16.0	0.97	0.98	0.99
Total	100	100	100	100	100	100	100	100	100			

Notes: Self-sufficiency ratio is calculated as (1+trade balance)/domestic use. Trade shares are percentages of total exports or imports. Shares of global trade are equal for imports and exports.

Source: GTAP, version 3 database for 1992; Authors simulation results for 2005 noUR and 2005 with UR.

Table A3. Projected annual change in output and factor employment by sector, 1992-2005

	No Uruguay Round					Uruguay Round Only				
	Output	ULabor	SLabor	Capital	Land	Output	ULabor	SLabor	Capital	Land
Grains	3.4%	2.4%	4.2%	1.4%	-0.3%	3.4%	2.4%	4.3%	1.4%	-0.3%
NonGrai	4.4%	3.4%	5.2%	2.4%	0.4%	4.4%	3.5%	5.3%	2.5%	0.4%
LstkMeat	3.4%	2.6%	4.8%	1.3%	-0.5%	3.4%	2.6%	4.8%	1.3%	-0.5%
OthFood	3.5%	3.3%	6.9%	1.3%	0.0%	3.5%	3.3%	6.9%	1.3%	0.0%
ForFish	2.6%	4.1%	5.9%	3.1%		2.7%	4.2%	6.0%	3.3%	
Energy	2.3%	4.9%	8.6%	2.8%		2.3%	4.9%	8.6%	2.8%	
OthMin	2.6%	4.2%	8.1%	2.0%		2.6%	4.2%	8.0%	2.0%	
TextApp	3.8%	3.9%	7.9%	1.6%		3.3%	3.3%	7.6%	0.9%	
LitMnfc	2.6%	2.9%	6.6%	0.8%		2.6%	2.9%	6.6%	0.8%	
HvyMnfc	3.1%	3.5%	7.4%	1.3%		3.0%	3.4%	7.4%	1.2%	
UHCServ	2.4%	2.7%	6.9%	0.4%		2.4%	2.7%	6.9%	0.4%	
OthServ	3.8%	3.1%	7.6%	0.5%		3.8%	3.1%	7.6%	0.6%	

	UR with Trade & Transport Reform					UR with Agric. Productivity Reform				
	Output	ULabor	SLabor	Capital	Land	Output	ULabor	SLabor	Capital	Land
Grains	3.3%	2.4%	4.2%	1.4%	-0.3%	3.6%	1.9%	3.8%	0.7%	-0.6%
NonGrai	4.5%	3.6%	5.3%	2.6%	0.4%	4.4%	3.5%	5.2%	2.5%	0.5%
LstkMeat	3.4%	2.6%	4.8%	1.3%	-0.5%	3.5%	2.7%	4.8%	1.4%	-0.3%
OthFood	3.5%	3.3%	6.9%	1.3%	0.0%	3.7%	3.5%	7.0%	1.6%	0.0%
ForFish	2.6%	4.1%	5.9%	3.2%		2.6%	4.1%	5.9%	3.1%	
Energy	2.3%	4.8%	8.5%	2.7%		2.3%	4.9%	8.5%	2.7%	
OthMin	2.7%	4.3%	8.1%	2.2%		2.6%	4.2%	8.0%	2.0%	
TextApp	3.8%	3.8%	7.9%	1.6%		3.9%	3.9%	7.9%	1.6%	
LitMnfc	2.6%	2.9%	6.7%	0.9%		2.6%	2.9%	6.6%	0.8%	
HvyMnfc	3.1%	3.4%	7.4%	1.3%		3.1%	3.5%	7.4%	1.3%	
UHCServ	2.4%	2.7%	6.9%	0.4%		2.5%	2.8%	6.9%	0.4%	
OthServ	3.8%	3.0%	7.6%	0.5%		3.8%	3.1%	7.6%	0.6%	

Note: All data are average annual compound growth rates for the 1992-2005 period, under the specified scenari

Source: Author's simulation results.

Table A4. Impact of the UR and African Reforms on Total Trade by Region

	Volume Index of Merchandise Exports				Volume Index of Merchandise Imports			
	Proj.	UR	TT	Ag.	Proj.	UR	TT	Ag.
SSA	53.5	-0.2	2.0	0.2	47.4	-0.3	2.6	0.2
MEA	37.0	-0.4	0.0	0.0	41.3	-0.3	0.0	0.0
EU15	46.4	5.8	0.1	0.0	38.5	7.6	0.1	0.0
LTN	61.5	5.7	0.0	0.0	56.2	4.7	0.0	0.0
NAFTA	48.3	6.9	0.0	0.0	46.4	8.4	0.0	0.0
EIT	33.9	1.8	0.0	0.0	27.6	1.7	0.0	0.0
SAsia	99.6	38.3	0.0	0.0	82.5	32.1	0.0	0.0
EAsiaH	46.6	7.3	0.0	0.0	68.6	7.6	0.0	0.0
EAsiaL	184.2	29.8	0.0	0.0	170.6	23.4	0.0	0.0
ROW	48.5	3.9	0.0	0.0	46.9	3.9	0.0	0.0

Notes: All data shown are percentage changes.
Results for projection ("Proj.") are cumulative changes from 1992 to 2005.
All other results are changes in 2005, due to global implementation of the Uruguay Round (UR), or to African reforms in trade & transport (TT) and agricultural (Ag.) productivity.

Source: Author's simulation results.

Table A5. Impact of the UR and African Reforms on Relative Prices by Region

	Price Index of Merchandise Exports				Price Index of Merchandise Imports			
	Proj.	UR	TT	Ag.	Proj.	UR	TT	Ag.
SSA	2.4	-0.2	0.7	0.0	-0.3	0.0	0.0	-0.1
MEA	7.4	0.0	0.0	0.0	-0.2	0.1	0.0	0.0
EU15	0.0	-0.4	0.0	0.0	0.5	-1.6	0.0	0.0
LTN	0.4	-0.9	0.0	0.0	0.4	-0.2	0.0	0.0
NAFTA	0.6	-0.4	0.0	0.0	0.5	-1.8	0.0	0.0
EIT	3.1	-0.1	0.0	0.0	0.5	0.2	0.0	0.0
SAsia	-2.2	-0.9	0.0	0.0	1.9	0.1	0.0	0.0
EAsiaH	1.4	0.0	0.0	0.0	0.8	0.1	0.0	0.0
EAsiaL	-4.9	-3.7	0.0	0.0	0.7	0.4	0.0	0.0
ROW	1.6	-0.5	0.0	0.0	0.4	-0.2	0.0	0.0

	Terms of Trade				Rate of Return on Capital			
	Proj.	UR	TT	Ag.	Proj.	UR	TT	Ag.
SSA	2.3	-0.2	0.7	0.0	18.1	-0.4	0.7	0.8
MEA	5.7	-0.1	0.0	0.0	-1.7	0.1	0.0	0.0
EU15	-0.1	0.5	0.0	0.0	-1.7	-0.6	0.0	0.0
LTN	-0.2	-0.7	0.0	0.0	-1.1	0.0	0.0	0.0
NAFTA	0.1	0.9	0.0	0.0	-4.2	-0.4	0.0	0.0
EIT	2.7	-0.3	0.0	0.0	4.7	-0.1	0.0	0.0
SAsia	-3.9	0.7	0.0	0.0	-1.0	5.1	0.0	0.0
EAsiaH	0.9	0.2	0.0	0.0	-6.2	1.0	0.0	0.0
EAsiaL	-5.2	-2.3	0.0	0.0	0.2	5.4	0.0	0.0
ROW	1.0	-0.4	0.0	0.0	-5.8	-0.5	0.0	0.0

Notes: All data shown are percentage changes.
Results for "Projection" are cumulative changes from 1992 to 2005.
All other results are changes in 2005, due to global implementation of the Uruguay Round, or to African reforms in trade & transport (TT) and agricultural (Ag.) productivity.
Terms of trade are prices received for exports over prices paid for imports.

Source: Author's simulation results.

APPENDIX: MODEL DOCUMENTATION

The GTAP database and modeling framework is fully documented in a book entitled *Global Trade Analysis: Modeling and Applications*, Thomas Hertel, editor (Cambridge University Press, 1997). The GTAP model is currently applied by over hundred researchers in more than 30 countries on five continents. In addition to the book, the database is documented in a separate publication *Global Trade, Assistance, and Protection: The GTAP Database version 3.0* (Robert McDougall, editor). Up to date information on the GTAP Project and a variety of materials including technical papers can be easily accessed through the Internet Home Page: "http://www.agecon.purdue/gtap/"

In addition to the manuscript, we have also enclosed a software package for reviewing the model and replicating the simulations reported in the present study. The entire code of the model can be found in a text file: GTAP94WD.TAB. For an in-depth review of the model structure, there is a correspondence between the various equations in GTAP94WD.TAB and those described in the book.

To replicate the experiments presented in the paper it is safe to have 200 MB or more of hard disk space on a 386 or better PC, and a minimum of 16 MB of RAM. The executable version of the model sent with this manuscript is a stand alone format and doesn't require the GEMPACK software suite (Harrison and Pearson, 1994) which runs the GTAP model. Two diskettes (3 ½ inch) are provided. Diskette 1 contains the model and other files and diskette 2 contains a utility program, VIEWSOL, to view the solution files. Once the attached zip files are copied into a designated directory, the various files can be extracted by the pkunzip program. The program utility can be installed as a window icon using installation instructions included in the VIEWSOL.ZIP package.

To run the model, type the name of the program, GTAP94WD, at the DOS prompt and follow the instructions described below and which can also be found in a readme file.

Our experiments are designated as follow:

E1	Implementation of the UR (from a base without the UR)
E2	Implementation of trade and transport reforms (from a base with the UR)
E3	Implementation of agricultural productivity reforms (from a base with a UR)

The initial data set (DAT0-ECA.UPD) that goes into these experiments represent the 2005 benchmark without the Uruguay Round. This data set was created by running the model using growth projections shocks from 1992 to 2005. These projections are based on relatively small number of exogenous shocks, including projections of regional endowments of agricultural land, physical capital, human capital, the state of technology, population, and labor force. These are derived from a combination of historical data and World Bank projections for the growth of population, labor force, real GDP and investment (for more details on the methodology used to carry out these projections see Hertel, et al. , and Anderson, et al.). In addition to projections, this benchmark experiment also explicitly modeled quotas for clothing and textile using the Pre-

Uruguay MFA quota growth rates (for more information on how the quantitative trade restrictions like quotas are modeled in GTAP see the GTAP Technical Paper No. 4 (Bach and Pearson, 1996) which can be downloaded from the GTAP Home Page.

REPLICATING THE EXPERIMENTS

1. DATASETS

DAT0-ECA.UPD	Input data for simulation E1 (UR implementation)
DAT1-ECA.UPD	Output data set from E1 and input for simulation E2
DAT2-ECA.UPD	Output data set from E2 and input for simulation E3
DAT3-ECA.UPD	Output data set from E3

Since not all the variables are processed in any single simulation of the model, the output datasets are processed through a utility program, GTAPVIEW, to generate expanded output datasets which are:

VIEW05UR.HAR	Post-E1
VIEW05TT.HAR	Post-E2
VIEW05GR.HAR	Post-E3

Data sets are organized in header array format (with either .HAR or .UPD extensions) and to view these headers, the utility program VIEWHAR (Hooridge) is used. This program runs on a Windows framework independently of the GTAP model. Simply create a Windows icon to implement VIEWHAR.EXE, provided in this package (diskette 1).

2. MODEL and FILES

To run the GTAP model GTAP94WD, a number of files are needed and are described below:

COMMAND	These are the experiment-specific files that contain all the instructions needed by the model to run a simulation. These are E1-ECA.CMF, E2-ECA.CMF, and E3-ECA.CMF, for experiments E1, E2, and E3, respectively.
SETS	[SET3-ECA.HAR] This file specifies the sectors, commodities, and regional aggregations used in this study
PARAMETERS	[PAR3-ECA.DAT] This text file contains the parameters for income elasticities, elasticities of substitution and other parameters used in the model.
SHOCKS	The shocks files contain data used to implement specific policy shocks. In experiment E1, implementing the Uruguay Round was done using the

following shocks files: URTMSHAT.SHK, URTXSHAT.SHK, and TXSHAT.DAT.

MODEL [GTAP94WD.TAB] This is the standard GTAP 94 model augmented with Welfare Decomposition. The model is implemented via TABLO program to create an executable version: GTAP94WD.EXE.

3. RUNNING THE MODEL:

The following commands describe how to run an experiment (in this case E1, but the same goes for the other experiments).

C:\..\ This is the working directory where all the provided files are located.

```
C:\..\GTAP94WD      [Enter]
    CMF             [Enter]
    E1-ECA.CMF      [Enter]
```

====> Solution file: E1-ECA.SL4

To view the solution file simply open the VIEWSOL icon and select the solution file of your choice: E1-ECA.SL4, E2-ECA.SL4, or E3-ECA.SL4.

THE WTO AGREEMENT AND FINANCIAL SERVICES IN AFRICAN COUNTRIES: A REVIEW OF POLICY AND RESEARCH ISSUES

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EXECUTIVE SUMMARY

The financial systems of most African countries are weak and underdeveloped. This hampers their ability to mobilize savings, and stimulate domestic and foreign investment. They are not able to allocate capital efficiently to foster private sector development and sustained economic growth. Reforms over the last decade have resulted in only very limited progress in the development of financial sectors.

Multilateral trade and investment initiatives such as the GATS/WTO Agreement on financial services present opportunities for African countries to build stable and well-functioning financial systems, integrate domestic financial markets with global markets, and attract foreign investment. There is also the concern, however, that globalization could result in even further marginalization. The challenge for African countries therefore is to determine how they can best take advantage of available opportunities and reap benefits from the globalization of trade, finance, and investment. They need to formulate and implement appropriate policies and strategies for their financial services sectors. A range of multilateral and regional initiatives to coordinate policymaking exist, creating a complex decision-making arena for individual governments. Those countries which succeed in making available direly needed financial services in various sectors of the economy will help to boost productivity and competitiveness in international trade and foster equitable economic growth and poverty alleviation.

This study provides a review of the literature and identifies the relevant policy and research issues that need to be addressed in this regard:

1. The liberalization of capital flows, investment, and financial services in both developed and developing countries over the last decade has resulted in an increasingly integrated global financial system that is characterized by:

- high speed, large volume, and sophisticated financial transactions and information flows;
- rapid and sometimes volatile cross-border capital flows;
- increased co-movements of securities markets;
- intense competition in many financial markets;
- increased globalization of the activities of financial institutions;
- worldwide sourcing of capital for firms;
- global investment opportunities for individual and institutional investors;
- immense resources and influence wielded by institutional investors;
- remarkable strides in financial innovation, such as derivatives and securitization, resulting in a greater variety of financial products.

This has presented developing countries with opportunities to attract much needed foreign capital to finance economic growth. Countries must, however, meet the challenge of creating and maintaining conducive economic, regulatory, and institutional environments that will enable

them to attract and retain private capital and utilize it to foster equitable economic growth. In a rapidly integrating world economy, a strong level of integration of a domestic financial market with international financial markets has become essential and inevitable for all nations. Such integration ensures that firms, individuals, and governments have access to global capital at the lowest cost and under the best terms obtainable in the global markets.

2. African financial sectors remain underdeveloped for several reasons, namely:

- persistent financial repression;
- weak prudential regulation and supervision;
- unnecessary and harmful political control and interference;
- slow progress on restructuring and privatization;
- inadequate physical and human infrastructure;
- limited competition and diversification;
- underdevelopment of capital markets; and
- a poor environment for private investment by financial services providers.

Even in the most developed and diversified African financial sectors need more diverse financial intermediaries, other than commercial banks. Their savings and investment climates could improve quickly with viable venture capital funds; finance and leasing companies; contractual savings institutions (pension funds, insurance companies); securities firms; investment funds; and investment banks.

3. Foreign investment in African financial services sectors, through the establishment of subsidiaries, joint ventures, or full branches, can help to foster the development of more stable and efficient financial systems. Recent trends in global trade and investment in financial services indicate that investment in developing country financial markets by foreign financial services providers can facilitate competition that helps to bring about greater efficiency in financial services delivery. It would introduce new and innovative financial instruments, products or services and improve access to global capital markets and sophisticated financial services. Savings and investment, both domestic and foreign, would increase. Foreign-owned financial services institutions would facilitate the transfer of much-needed financial and management expertise and technology. They would bring diversity and greater stability to African financial systems.

4. The investment environments in most African countries, however, remain uncompetitive relative to other developing regions. The continent continues to be perceived as highly risky and therefore has been unable to attract significant diversified foreign investment. Oil and mining have dominated recent investment, sectors that provide quick and high returns. In particular, African countries are unable to attract critical long-term capital required for infrastructure development. Firms' capital projects rarely find funding and venture capital is scarce for financing small and medium-size businesses.

5. In light of the emerging globalization trends and the weak and fragile political, economic, and social environments in much of the continent, African countries face a daunting challenge with regard to developing their financial services sectors and fostering private investment. This challenge needs to be addressed with the utmost urgency and dedication, especially as Africa is still seriously handicapped by lack of good leadership and governance and poor education, health, and social welfare infrastructures. To ensure that they benefit optimally from the WTO and other multilateral initiatives on trade and investment in financial services, African countries must take the risk of formulating and implementing sound policies and strategies to open up their financial services markets. This is crucial for attracting foreign investment and building globally integrated sound financial systems. Equity considerations must be taken into account. To ensure long-term political, economic, and social stability, policies must be designed to foster equitable economic growth and improvement in the economic conditions of the poor, who constitute the majority of the African population. This requires effective financial services delivery to the private sector, including the informal sector, in areas that can have a direct impact on poverty alleviation, for example: the growth of small- and medium-sized businesses, export trade, micro enterprise development, infrastructure development, agricultural and rural enterprise development, housing and transportation.

Policies and strategies should focus on:

- Elimination of the impediments to the proper functioning of financial systems and to private investment, so as to foster entrepreneurial risk-taking by prospective financial services providers. Strategies for opening up financial markets to foreign financial services providers and liberalization of cross-border capital flows face some difficult questions: How much opening? How quickly? How should capital flows be managed?

- Determination of how the WTO Agreement and other multilateral and regional initiatives can best facilitate financial sector development and foreign investment. Countries have to study the multilateral context and determine how it affects their opportunities. Unilateral liberalization is not necessarily incompatible with participation in multilateral trade and investment groups, and African regional integration efforts, but the conflicting provisions of accords often pose a problem of harmonization.

6. There is therefore a need for research that examines the relevant issues and provides thorough and comprehensive analyses and insights that will help African countries to formulate and implement appropriate policies and strategies.

Specifically, such research, in the form of case studies of individual countries or regions, should focus on the following issues:

a. The prospects for the evolution of competitive environments for private investment in financial services, including a substantial improvement in the political, economic, legal, regulatory, institutional, and social environments. The investment response by domestic and

foreign investors needs to be closely monitored.

b. The opportunities represented by innovations in financial services and the prospective returns to investors from investment opportunities;

c. Trends in multilateral and regional trade/investment initiatives, foreign investment, and international financial markets, and their implications for African countries

d. The experiences of other developing regions--Asia, Latin America, and Central/Eastern Europe--countries in trade/investment and financial liberalization and the relevance and applications of lessons learned to African countries.

Such research, analysis and strategic policy thinking should lead to recommendations regarding the following:

a. the types of financial intermediaries, innovation, and regulatory structures that are necessary for the development of a strong financial infrastructure that truly serves the countries' key economic sectors;

b. the areas of financial services delivery in which foreign investment should be particularly encouraged;

c. the creation of a conducive financial and investment environment to stimulate domestic and foreign investment in the financial sector and facilitate entrepreneurship and innovation in financial services;

d. integration of domestic financial systems with international financial markets, through removal of restrictions on cross-border capital flows and provision of market access to financial services providers;

e. regional financial integration and coordination within the context of African regional trade liberalization and economic integration initiatives such as the SADC, ECOWAS, AEC. These have the potential to create larger integrated markets, harness resources, improve negotiating capacity and leverage in the multilateral arena, and facilitate integration with global markets;

f. the best strategies for African countries for participation in the WTO, the OECD's Multilateral Agreement on Investment (MAI), and other multilateral agreements.

Prudent recommendations on these issues should include clear definitions of the proper role for governments and policymakers. This would help African countries to develop and implement strategies to benefit from global trade and investment in the financial services sector.

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I. INTRODUCTION

The development of well-functioning, efficient, and stable financial systems is critical to the evolution of vibrant private sectors that can spur economic growth in developing countries.[1] However, the financial infrastructures in most African countries are weak and underdeveloped, thus hampering their ability to mobilize savings, stimulate domestic and foreign investment, and allocate capital efficiently to bring about sustained economic growth.

Therefore, as they reform their economies, financial sector development remains an important challenge facing African countries. The emerging trends in the globalization of trade, finance and investment present opportunities for African countries to develop their financial systems, integrate them with international financial markets, and attract foreign investment. Thus, policies must include innovative trade, investment and financial liberalization that will enable them to take advantage of these opportunities.

Liberalization and integration of a country's financial system with global financial markets implies the elimination of barriers to inflows and outflows of capital, as well as allowing unrestricted entry and exit of foreign financial services providers that wish to establish commercial presence. However, while liberalization can provide substantial benefits, there are potential dangers in the form of financial crises and macroeconomic destabilization, if reforms are not designed or implemented properly. Financial liberalization remains a difficult and perilous endeavor even for more advanced countries. Given the fragile nature of African financial and economic systems, it is therefore critical that African countries carefully and prudently develop and implement policies that will produce strong financial infrastructures that are appropriate for their respective economies.

The General Agreement on Trade in Services (GATS), which emerged out of the Uruguay Round and is now part of the World Trade Organization (WTO), is aimed at liberalizing international trade and investment in services (such as financial services; telecommunications; information technology; transport; tourism; engineering; and consulting). Similar liberalization efforts are also in progress under other multilateral and regional initiatives such as the OECD's Multilateral Agreement on Investment (MAI) and the European Union (EU). The GATS grew out of a recognition during the Uruguay Round of the growing importance of cross-border trade and investment in services to global economic growth. Trends in globalization point to huge future growth of the services sector and predict that the GATS/WTO Agreement and similar initiatives will largely define world trade and investment in services.

The current round of WTO negotiations on financial services, scheduled to be concluded in December 1997, seeks to eliminate barriers (domestic laws, regulations, and other restrictive

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[1]See, for example, King and Levine (1993), DeGregorio and Guidotti (1995) and Levine and Servos (1996).

measures) that deny market access to foreign financial services providers. According to the WTO, the objective is to establish "a rules-based multilateral playing field for financial services and investment - rather than a cat's cradle of discriminatory bilateral or regional deals - [that will foster the emergence of a] strong global financial system to support a strong global economy" (Ruggiero, 1997a).

Clearly, these developments have important implications for African countries as they seek to become more integrated with the global economy. A major issue in this regard is how African countries can benefit from the WTO and other multilateral trade and investment initiatives, and globalization trends in general. There remains the concern that globalization could result in even further marginalization of Africa in global trade and economic activity.[2] It is therefore critical that African countries pursue policies and strategies that will ensure that they benefit optimally from the WTO and other multilateral initiatives. In recognition of this imperative, for example, a meeting of African trade policy experts was recently held on the theme, "Building the Capacity of African Governments to Examine the World Trade Organization." The meeting made recommendations on how members of the Organization of African Unity (OAU) and the African Economic Community (AEC) "could effectively contribute to the shaping and designing of the rules and regulations governing international trade relations under the WTO and to engage effectively in trade negotiations."[3]

The challenge therefore is to determine how African countries can best participate in multilateral and regional initiatives to facilitate the development of strong financial systems, financial innovation, and the efficient delivery of financial services to individuals and businesses (especially microenterprises and small- and medium-sized businesses). The availability of direly needed financial services in various sectors of the economy--such as export trade, rural development, agriculture, housing, transportation, and infrastructure development--will help to boost productivity and competitiveness in international trade and foster equitable economic growth and poverty alleviation.

This study provides a review of the literature and identifies the relevant policy and research issues that need to be addressed in this regard, with respect to the implications of the GATS/WTO Agreement in financial services and related trends in international trade, finance, and investment for African countries. The study thus provides the framework for a research project on these issues based on case studies of selected African countries. There is currently no published study on this subject, since the issues are relatively new. Thus, the proposed project, which will be one of the pioneering studies (if not the first) on the subject, will be timely and important with regard to policy-making in African countries, the EAGER research agenda, and USAID's objectives on financial and private sector development in Sub-Saharan Africa (SSA).

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[2]As would be expected, this concern was repeatedly expressed by African governments in their speeches at the first WTO Ministerial Conference in December 1996.

[3]"Mechanism Urged to Aid African States in WTO Negotiations," Xinhua News Agency, 14 April 1997.

This report is organized as follows. Section II provides the context for the study by reviewing the trends in the globalization of trade and investment in services, with particular regard to the WTO Agreement. Section III reviews the recent trends in the liberalization, globalization, and integration of financial markets and services. In Section IV, the financial and investment environment, reform efforts, and private investment in African countries are examined within the context of globalization trends. In Section V, the policy and research issues arising from the discussion in the previous sections are presented.

II. THE EMERGING WORLD TRADE ORDER IN SERVICES

II.1 The Globalization of Trade in Services

As economies have become increasingly integrated globally, the services sector has provided the critical linkages between economies and markets. Thus, spurred by the rapid innovations in communications and information technology, world trade in the services sector has grown substantially in the last decade and is expected to grow at an even higher rate in the future. Sauve (1995), for example, notes that "promoting greater efficiency in service industries, including first and foremost a strong services infrastructure, is indeed what the processes of economic growth and development seem to be all, or increasingly, about.....The size, increasing tradability and high degree of protection, characteristic of most countries' services sectors, suggest that the liberalization of international trade and investment in services holds the potential for major gains in economic growth and efficiency."

The globalization of trade in services and the associated advances in communications and information technology present both opportunities and challenges for developing countries.[4] There are opportunities for developing new services-related exports and attracting foreign direct investment (FDI), which is the primary mode of international delivery of services. FDI, of course, facilitates the transfer of technology and expertise, thus enabling development of advanced services infrastructures in developing countries. Also, liberalization of trade and investment regimes enables domestic firms to have access to more efficient and diversified services in global markets. Competition resulting from liberalization also helps to improve the efficiency of domestic services providers. By providing access to efficient services (such as financial services and telecommunications) which are important inputs to other sectors of the economy, a robust and efficient services sector, in addition to facilitating innovations and the development of new exports, enhances productivity and international competitiveness in traditional export sectors such as agriculture and manufacturing. However, as Braga (1996) observes, "a major challenge facing developing countries is the design of appropriate regulatory environments for service industries. ...Other challenges include undertaking necessary

[4]Braga (1996) provides a detailed discussion.

investments in modern information technology networks and adapting educational systems to the information age."

II.2 The General Agreement on Trade in Services

The GATS/WTO Agreement and other multilateral, regional, and bilateral initiatives are aimed at liberalizing international trade and investment in services. The GATS was the first attempt to establish, on a global scale, a legally enforceable multilateral elimination of barriers that discriminate against foreign services providers and deny them market access. While investment *per se* was not specifically part of the initial agenda of the Uruguay Round, the GATS Agreement grew out of the recognition during the Round of the growing and already immense importance of services to global economic growth and the obvious relationship between trade and investment in an increasingly globalized economy.[5] According to Renato Ruggiero, Director General of the WTO, the fact that trade and investment were "ever regarded as separate or alternatives was more an historical and political aberration than a practical reality. They are closely intertwined and all the more so in the context of globalization. Businesses trade to invest and invest to trade." Thus, the GATS was "largely founded on the notion that services suppliers need to invest and establish themselves within markets in order to supply those markets" (Ruggiero, 1996a).

The main features of the GATS at the conclusion of the Uruguay Round in 1994 are as follows:

(1) A framework of general concepts, principles and multilateral rules and obligations governing trade and investment in services that apply to all member countries; this includes (a) a basic most-favored-nation (MFN) treatment obligation (with provisions for specific exemptions[6]), and (b) transparency with regard to relevant domestic laws and regulations relating to trade and investment in the services sector;

(2) National schedules (rather than general obligations) of specific binding commitments on national treatment (non-discrimination against foreign providers) and market access. (Each

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[5]To a large extent, trade in services involves investment (FDI in particular)--because of the nonstorability of many services, foreign services providers often have to establish operations in a country (in other words, "commercial presence") in order to provide services (such as telecommunications or financial services). Brewer and Young (1997) note that "FDI is no longer merely one of the so-called 'new issues' along with services and intellectual property in international economic negotiations; it has become one of the central issues." They also point out that investment is not really a 'new issue' in trade, as it was at the center of the multilateral economic agenda as early as 1945.

[6]Conditions for such exemptions are included as an annex and provide for reviews after five years and a normal limitation of ten years on their duration.

member's schedule specifies the services sectors in which it makes commitments.) Annexes to the Agreement set out unique provisions relating specifically to individual services sectors, such as telecommunications services and financial services.

The GATS defines trade in services in terms of four modes of supply:

Cross-border Supply: Services are supplied from the territory of one member into the territory of another, for example, software services provided by a supplier in one country by electronic means or mail to consumers in another country.

Commercial Presence: Services provided through a business establishment of one member in the territory of another, for instance, a U.S. bank or insurance firm establishing a branch in South Africa.

Consumption Abroad: Services provided in one country to consumers from another--often requires the movement of the consumer; tourism is an example.

Presence of Natural Persons: Services supplied by nationals of one country in the territory of another--consulting, for example.

The Agreement also recognized the need to facilitate increased participation of developing countries in world services trade through negotiated commitments on access to technology, improvements in access to distribution channels and information networks, and the liberalization of market access in sectors and modes of supply of export interest.

At inception, most countries made commitments not to impose new restrictions against foreigners, but did not commit to significant liberalization in important sectors such as telecommunications, financial services, and air and maritime transportation. The Agreement therefore established the basis for progressive liberalization in the services area through successive rounds of negotiations at the WTO and the development of national schedules. It also permitted, after a period of three years, parties to withdraw or modify commitments made in their schedules. And in cases where agreement cannot be reached, compensation would be decided by arbitration.

In effect, the establishment of the GATS was important more for the fact that it brought the services sector, which is highly protected in most countries (both developed and developing), under global trading rules, and putting in motion the process for significant multilateral liberalization.

Several assessments of the GATS following the conclusion of the Uruguay Round generally determined that, while the Agreement was a good start, it was still far from achieving its goals. Sauve (1995), for example, concluded that (a) the framework Agreement "is unfinished,

generally weak and contains too few obligations of a truly general nature," (b) the approach for securing liberalization commitments was deficient, and (c) the Agreement could yield only "modest gains by way of new or expanded business opportunities, potentially depriving itself of the support of sectoral constituencies that will be central to its long-term prosperity." Braga (1996) notes that while the immediate liberalization under GATS may be limited, it "paves the way for future multilateral liberalization." Similarly, Hoekman (1995) characterized the GATS as a "tentative first step" and notes that, given the nature of impediments to trade in services (regulatory barriers), the sectorally-driven nature of negotiations and allowances for MFN exemptions limit

the potential impact of the GATS. In particular, he states that the implications of the Agreement for developing countries "are limited. The GATS imposes few limitations on national policy, only requiring that no discrimination across alternative sources of supply occurs. Many developing countries have been able to accede to the GATS with only minimal specific commitments." Mattoo (1997) highlights the deficiencies inherent in the national treatment provisions, while Wang (1996) examines and points out flaws in the MFN treatment under the GATS and its application to financial services. [Sorsa's (1997) analysis and critique of the Agreement on financial services is discussed in Section III.]

In general, because of the complexity of the agreement, namely, commitments through service sectors and modes of supply, economic assessment of the impact of GATS is difficult (Sorsa, 1997; Braga, 1996; Hoekman, 1995). The potential impact of the GATS will be dependent on the success of the negotiations which will continue for several years. As Mattoo (1997) notes, "the specific commitments on market access and national treatment are the core of the GATS, and the impact of the Agreement depends to a large extent on the commitments made by the members." Sauve (1995) opines that the journey to free trade in services, as with the GATT, "may be expected to be equally long, winding and occasionally bumpy...."

In February 1997, after two years of negotiations, the first sectorally-based agreement, in basic telecommunications, was concluded. The current round of negotiations on financial services, which has been indicative of the difficulties inherent in negotiating multilateral liberalization initiatives, is scheduled to be concluded in December 1997.

II.3 The GATS/WTO Agreement and Other Multilateral and Regional Initiatives

In addition to the GATS, other investment-related agreements emerged out of the Uruguay Round: the Agreement on Trade-Related Investment Measures (TRIMs) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). The OECD's Multilateral Agreement on Investment (MAI), currently being negotiated, is perhaps the most important

agreement that "competes" with the WTO Agreement with regard to investment and services.[7] According to the OECD, the MAI is expected to "provide a comprehensive framework for investment with high standards of liberalization and investment protection, and with effective dispute settlement."[8] The Agreement is to be a free standing treaty which will be open to accession by non-OECD members. It will be a comprehensive agreement covering all forms of investment, including the establishment of enterprises and the activities of established foreign-owned or controlled enterprises. MAI disciplines would apply to all sectors and at all levels of government, and would extend beyond traditional foreign direct investment to include portfolio investment and intangible assets.

A major issue in the multilateral liberalization of trade and investment is the resolution of the relationship between the numerous bilateral and regional agreements and the WTO Agreement.[9] While bilateral and regional agreements that liberalize trade between countries are beneficial and desirable for many reasons, they in effect discriminate against non-members. Thus, the desired goal is a gradual convergence of regionalism and multilateralism such that full trade and investment liberalization is achieved and covered by one set of rules in a free global market (Witherell, 1997; Bergsten, 1996; Schott, 1996; Ruggiero, 1996a,b,c; *The Economist*, 1996a,b,c).

Multilateral liberalization of investment is difficult and will be slow to achieve (Witherell, 1997; Vocke, 1997; *The Economist*, 1996a,b,c). As Vocke (1997) notes, the existing multilateral legal framework on investment is "patchy in coverage, biased in favor of certain flows, and ambiguous in its impact on investment." In both developed and developing countries, there remains concern that such initiatives threaten individual countries' sovereignty and culture. Governments seek to maintain protectionist policies and retain unilateral discretion over laws, rules and regulations covering foreign investment, such as the selective use of incentives to attract certain types of investment in desired sectors or geographical areas. Witherell (1997) notes that, even among OECD countries, foreign investors still encounter barriers, discriminatory treatment and legal and regulatory uncertainties. Multilateral investment liberalization and the resolution of any

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[7]Witherell (1997) provides a discussion of the MAI in relation to foreign investment and the WTO. (Witherell is the Director of the OECD's Financial, Fiscal and Enterprise Affairs Division).

[8]"Multilateral Agreement on Investment: Report by the MAI Negotiating Group," May 1997, MAI Home Page, OECD Internet Website.

[9]The number of bilateral and regional agreements has increased considerably in the 1990s as both developing and developed countries have undertaken trade and investment liberalization (World Bank, 1997c). The numerous regional initiatives include: the European Union (EU), the North American Free Trade Agreement (NAFTA), ASEAN (Asia), CARICOM (the Caribbean), and MERCOSUR (Latin America). There are plans to expand some of these initiatives to include more countries in the respective regions. In Africa, regional groups include the Southern African Development Community (SADC), the Economic Community of West African States (ECOWAS), the East African Economic Community (EAC), and the African Economic Community (AEC). SADC is working to create a free trade southern Africa region that will focus on attracting foreign investment and reducing dependence on foreign aid.

conflicts between the WTO, the MAI and regional initiatives will obviously be a major focus of trade negotiations in the next few years.

II.4 The Emerging World Trade Order and the Least Developed Countries

Sorsa (1996) reports that during the initial negotiations of the Uruguay Round, many developing countries felt that they did not have comparative advantage in services or that liberalization of the services sector would be of little relevance for their development strategies. But, as the Round progressed, the potential of the services sector--in enhancing and diversifying their export sectors and improving the competitiveness of many export industries--became evident.

However, a major concern of developing countries, in particular the "Least Developed Countries" (a category that includes most sub-Saharan African countries), is that the costs of trade liberalization could outweigh the benefits for them--while free trade would be beneficial to developed countries, poor countries would be further marginalized. There remains the suspicion in some quarters that the WTO may well be an elite club of developed nations that will benefit from multilateral liberalization at the expense of developing countries.[10] As often noted, globalization will produce losers as well as winners in developing and developed countries alike, and there is the danger that it could contribute to further wealth inequality and social instability in developing countries (Rodrik, 1997; Bahree, 1997a; Garten, 1997; Cavanagh, 1997). Critics argue that multilateral investment initiatives such as the MAI will, among other things, divest domestic control from governments over measures designed to ensure that countries benefit from foreign investment. National treatment provisions, for example, would prohibit domestic laws that impose conditions on foreign investment or favor domestic firms or protect certain industries. Thus, there remains the suspicion that, given much access and power, transnational corporations may not conduct business in ways that optimally enhance a country's economic progress (Cavanagh, 1997; Nova and Sforza-Roderick, 1997). Cavanagh (1997), for example, contends that while "measures that put pressure on poorer governments to open up their stock and financial markets to foreign capital offer new profit opportunities to the global investing elite of the world, they are turning Third World economies into casinos vulnerable to the whims of the twenty-somethings who manage the world's mutual and other investment funds."

Given the desirability and inevitability of globalization, developing countries have to devise policies and strategies that will enable them to benefit optimally from multilateral trade and investment liberalization. The WTO acknowledges that a major challenge is to ensure that multilateral liberalization and globalization have a beneficial impact on the least-developed countries. A Plan of Action for the Least-Developed Countries was therefore adopted at the first

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[10]According to a recent *Wall Street Journal* report, the Malaysian trade ambassador was "miffed that developing countries often aren't invited into meetings of the bigger nations in the WTO's 'green room'," and likened the process to colonialism (Cooper and Bahree, 1997).

WTO meeting in Singapore in December 1996 "to ensure that all least developed countries have a strong voice in the WTO," in recognition of the fact that "membership in the WTO does not automatically mean that all countries have the resources to participate equally in the system" (Ruggiero, 1997a). A "High-Level Meeting on Least-Developed Countries," organized by the WTO, UNCTAD and other multilateral organizations, was held in Geneva in October 1997 to address "the pressing question of how to combat marginalization (of the LDCs in the world economy)" (Lavorel, 1997). The themes addressed include building the "capacity to trade" and encouraging investment in least-developed countries.

For African countries, the danger is that they will be further marginalized in world trade as a result of current trends in globalization (Shafaeddin, 1996; Yeats et al, 1996). Ng and Yeats (1996) argue that while Sub-Saharan Africa's current marginalization was partly due to the slow pace of growth in global demand for the region's exports, inappropriate domestic policies (such as import barriers and inability to diversify the export base), and not external protection by developed countries, were largely responsible for African countries' inability to compete internationally. Similarly, Sorsa (1996) and Harrold (1996) argue that most Sub-Saharan countries did not take advantage of the Uruguay Round to make meaningful liberalization commitments, thus foregoing the opportunity to reap important gains from the Round.

Obviously, African countries must come up with policies and strategies that will enable them participate effectively in multilateral and regional trade and investment initiatives for the benefit of their economies.[11] The relevant issues in this regard with respect to financial services are examined in the next section.

III. FINANCIAL LIBERALIZATION, GLOBALIZATION, AND INTEGRATION

III.1 The Globalization of Capital Flows, Investment and Financial Services

Over the last decade, most developing and transition economies have implemented market reforms and economies have become increasingly integrated. This phenomenon has included substantial liberalization and globalization of financial markets and services, as a result of deregulation in both developed and developing economies. Barriers have been removed both between national borders and between different sectors within financial systems (for example, banking, securities, and insurance). Spurred by the rapid advances in communications and information technology, world financial markets have therefore become rapidly integrated. The global financial system that has consequently emerged is characterized by: the high speed, volume, and sophistication of financial transactions and information flows; rapid and sometimes volatile cross-border capital flows; increased co-movements of securities markets; intense

[11]One proposal by the OAU/AEC is the establishment of a permanent institutional mechanism to support the negotiating capacity of African governments at the WTO (Xinhua News Agency, *op. cit.*).

competition in many financial markets; increased globalization of the activities of financial institutions; worldwide sourcing of capital for firms; global investment opportunities for individual and institutional investors; the immense resources and influence of institutional investors; remarkable strides in financial innovation, such as derivatives and securitization, resulting in a greater variety of financial products. (O'Brien, 1992; Isimbabi, 1992; *The Economist*, 1995d; Smith and Walter, 1997; World Bank, 1997a).

In particular, private capital flows to emerging economies have surged over the last decade as these countries, particularly in Asia and Latin America, have achieved high rates of economic growth (World Bank, 1997a; Calvo et al, 1996; Fernandez-Arias, 1996). This phenomenon has occurred primarily through emerging market funds that have largely been driven by international (primarily institutional) investors seeking higher returns and international diversification (Claessens, 1995; Feldman and Kumar, 1995). Inflows of capital to developing countries in recent years have largely been in the form of portfolio investment in securities markets and foreign direct investment (FDI). According to the World Bank (1997a), the substantial growth in portfolio investment flows to developing countries during the last decade has been "most striking," and FDI has "responded most vigorously to the improving economic environment in developing countries. The driving factor for FDI has been a sustained improvement in domestic economic fundamentals." The nature of FDI has changed from investment in extraction of natural resources and import substitution industries to investment in production facilities motivated by lower costs of production (especially labor) and production efficiency. Commercial bank lending to developing countries, which declined substantially following the debt crisis of the 1970s and early 1980s, has resurged to significant levels in recent years. Also, governments and firms in countries with good credit ratings have been able to raise capital in the international bond and equity markets.

While the capital flows have provided recipients with much needed capital to finance economic growth, they have also presented developing countries with challenges. As the World Bank (1997a) notes, there remain reasons for concern:

> "First, for the twenty or so countries that have been the major recipients, the management of private capital flows has not proved to be easy. It is not just the volume of flows, but the speed at which such investment pours in--and can be withdrawn--that present particular challenges to these economies. Governments need to build the kind of macroeconomic, regulatory, and institutional environments that channel this private capital into broad-based and sustainable growth. Second, the overwhelming majority of developing countries, in particular the smaller low-income economies, still need to create the conditions to attract private capital and must depend on declining official flows."

In an increasingly integrated world economy, a strong level of integration of a domestic financial market with international financial markets has become essential and inevitable for all nations--the notion of a national financial system is likely to become obsolete for any country that seeks economic prosperity. Integration ensures that firms, individuals, and governments have easy access to global capital at the lowest possible cost and under the best possible terms obtainable in the global markets.

Much of the recent emphasis on global financial integration, however, has been on capital flows in the form of portfolio investment, primarily because this is the area that has witnessed the most profound developments in recent years.[12] Thus, financial integration often refers to liberalization in the form of the elimination or reduction of barriers to international capital mobility. In this regard, the policy issues primarily have to do with the benefits and costs of inflows of foreign capital (Haque et al, 1997; Hernandez and Rudolph, 1995).

Another aspect of financial integration involves financial intermediaries and the financial sector as an industry. This emphasizes international trade and investment in financial services--largely cross-border transactions and FDI--and its interaction with capital mobility as also central to financial market integration (Gavin and Hausmann, 1997; Lewis, 1993). Gavin and Hausmann argue that liberalization of explicit barriers to capital mobility, while crucial, is not sufficient for achieving the "deep" financial integration that will enable a country to overcome "fundamental problems in the local intermediation of domestic and foreign financial resources."[13] They stress that fostering capital inflows and the efficient allocation of capital to users are critically dependent on the existence of a stable, efficient, and well-functioning financial industry. Thus, domestic as well as external financial liberalization are critical to facilitating the integration of a country's financial system with international financial markets.

Gavin and Hausmann recommend three approaches that Latin American countries can use in achieving financial integration in order to address the region's problems of scarcity of capital and a volatile, crisis-prone financial system:

1. Encourage the establishment of branches by international banks domiciled in countries with a strong supervisory framework;

2. Create a regional structure to facilitate the production of the required regulatory and supervisory services, and foster coordination of efforts;

3. Encourage domestically-chartered banks to expand abroad.

Entry of foreign financial services providers can be in the form of agencies, subsidiaries, joint ventures, or full branches. Allowing such entry can facilitate (a) inflows of capital, (b) the

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[12]The World Bank's recent report (World Bank, 1997a), for example, focuses primarily on portfolio investment in its analysis of international capital flows because of "its growing importance as a channel of financial integration" (p. 15).

[13]Gavin and Hausmann define "deep" financial integration as the existence of a financial market "in which domestic residents--households, major corporations and small businesses alike--would have access to financial products on terms similar to those offered to similarly-situated users of such products in the developed financial markets such as the United States, Europe, and Japan."

introduction of new and innovative financial instruments, products or services, (c) greater access to global capital markets and sophisticated financial services, (d) the transfer of much-needed financial and management expertise and technology, and (e) competition, which fosters transparency and accountability as well as market discipline of oligopolistic, anti-competitive, or state-dominated domestic firms [World Bank, 1996, 1990; Gavin & Hausmann, 1997; Noland, 1997; Sorsa, 1997; Lewis, 1993]. Branches or subsidiaries of international financial institutions have access to their parent institutions' capital and other resources and can therefore count on financial backing in the event of distress. Also, international institutions, seeking to preserve their reputation, will tend to make sure that their subsidiaries make prudent decisions even when supervision by domestic regulators is inadequate.

Gavin and Hausmann (1997) argue that it is preferable to allow a foreign firm to establish a branch rather than a subsidiary; this is because, while a subsidiary is a legally separate entity that can be cut off by the parent institution in the event of a crisis, a branch is an integral part of the parent institution and enjoys the parent's legal obligation to support it in times of adversity. (In fact, a foreign bank may use the threat of allowing its local subsidiary to go bankrupt in an attempt to extract concessions from the host government in the event of a crisis.) They also argue that, because branches of foreign banks are, in effect, regulated and overseen by their home-country regulators, they are a means by which countries can "import" the regulatory and supervisory services of the parent's home-country government, including its lender-of-last-resort and deposit insurance functions.

For domestic financial service providers that are prospective exporters of financial services, integration with global markets also enables them to access new markets in other countries and thereby expand and diversify their operations. Domestically-headquartered financial institutions that are well-diversified internationally will be less vulnerable to the impact of country-specific problems. Such resilience in turn helps to enhance the stability of (and confidence in) the financial system, especially in the event of a financial crisis. Furthermore, integration with global markets can expose domestic firms to new and innovative products and services and facilitate better understanding of foreign markets and consumers. Also, integration enables domestic savers to diversify their investment portfolios and improve their risk-return profiles by investing in both foreign and domestic assets, thus enhancing their risk management options.

The presence of foreign financial institutions can also provide some degree of international diversification of the financial system by enabling a risk-return profile that is diversified across nations and sectors. Ultimately, these benefits lead to modernization and improvement of the efficiency of the financial sector and reduction of the systemic risk of the financial system.

In support of these arguments, Warren Lavorel, Deputy Director-General of the WTO, observes that "there are a number of recent cases where liberalization in developing countries--and the participation of foreign banks--helped accelerate the required restructuring of financial institutions. There are also cases where allowing domestic banks to diversify abroad would improve their competitiveness at home. Through liberalization, financial institutions almost

invariably become more resilient and more efficient. And even those countries experiencing financial problems will need to look abroad for the capital and expertise necessary to revitalize their financial systems" (Lavorel, 1997).

As financial services providers (such as banks, securities and investment firms, finance companies, and insurance firms) in developed countries face saturated markets, intense competition, and slow growth in their domestic markets, they have increasingly looked to emerging markets with high growth potential to expand and diversify their markets and establish global networks.[14] Foreign financial services providers in the developed economies and their governments are pushing to get emerging economies to implement liberal policies that will allow entry by foreigners. However, while many developing countries strive to attract foreign capital and develop their financial systems, they still maintain a high level of protection of their financial sectors.[15] National financial systems are inextricably linked with monetary and financial policies and economic activity. Governments, including those of some industrialized nations such as Japan, therefore remain cautious and are reluctant to open up their financial markets and implement other liberalization policies that may reduce their control over their financial systems. Developing countries also express concern about what they perceive to be exploitation by foreign financial firms that enter their markets and reap large profits at the expense of domestic firms, without providing financial services in areas that are critical to economic development. Protectionism is also driven by domestic political considerations and the self-interest and influence of domestic businesses that fear the loss of their monopolistic or oligopolistic positions in the financial sector. Furthermore, there are sometimes genuine concerns that the dangers of liberalization may outweigh the likely benefits.

Although protectionism and the unfavorable investment climate in many developing countries has deterred investment by foreign financial services providers, recent developments suggest that developing countries are increasingly inclined to opening up their markets, albeit cautiously. In its recent Survey of Banking in Emerging Markets, *The Economist* (1997a) observes that "the past couple of years have seen an unprecedented opening of opportunities [for foreign banks in emerging countries], despite some pockets of resistance in Asia and elsewhere. Sometimes the opening has been voluntary; sometimes it has been prompted by disasters that left the emerging-country banks desperately short of capital and showed up their lack of expertise." Countries such

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[14]See, for example, Engen, 1997; Schifrin, 1997; Klee, 1997; *The Economist*, 1997a, 1995c; Crane and Bodie, 1996; Pilling, 1996; Shale, 1996; Shari, 1996; Spiro, 1996; Jenings, 1996; Hanway, 1995.

[15]*The Economist* (1997c), for example, reports that Malaysia, one of the so-called Asian tigers, seeks to become Asia's international financial capital. However, it is reluctant to let foreign financial institutions--whose presence, arguably, is necessary to make Malaysia an international financial center--compete on an equal footing with domestic institutions. Despite some liberalization, the response from foreign financial services providers has been below expectation, since alternative opportunities are still available in more liberalized competitor markets such as Hong Kong and Singapore.

as the Phillippines, Panama, Uruguay, Mexico, Argentina, Venezuela, Hungary, Poland, and other Eastern European countries have undertaken substantial privatization of their banking sectors and allowed foreign entry. As a result, their financial systems have been significantly internationalized and improved. Major foreign banks have purchased interests in domestic banks (including troubled ones) or set up new ones, and their presence has fostered greater competition, efficiency, and innovation in the banking sectors (*The Economist*, 1997a; Vogel, 1997; Reed, 1997; World Bank, 1996; Pilling, 1996). Also, since the end of apartheid, foreign investment banks have been seeking opportunities in South Africa (*The Economist*, 1995c). Banking firms such as J.P. Morgan, Goldman Sachs, Morgan Stanley, Merrill Lynch, and Donaldson, Lufkin, and Jenrette, have established operations there in recent years.

The activities of foreign banks in emerging economies tend to be skewed toward large firms, governments, and wealthy individuals, but this appears to be changing as the banks continually seek to expand their markets. *Institutional Investor* reports that Citibank, which has always been a leading globalized financial services firm, has been "remaking itself as a global marketer and spreading the gospel of American-style consumer finance" (Klee, 1997). Also, according to the *Wall Street Journal*, U.S., European, and Asian banks that have set up branches or affiliates in Latin American countries are shifting their focus from providing services to big corporations, governments, and the very rich: they are now "scrambling to provide the kinds of services to Mom and Pop savers and borrowers that are taken for granted in the industrialized world, yet practically nonexistent in most of Latin America" (Vogel, 1997). The banks are offering services such as consumer loans for automobiles and appliances and mortgages, and providing more efficient services, including some as basic as cutting down the amount of time it takes to wait in line for service at a bank. In Venezuela, for example, foreign banks now control more than half of all bank assets, compared with less than one-fifth three years ago, and the hottest area of loan growth is consumer lending. This phenomenon is premised on perceived high economic growth prospects that are expected to produce a "huge untapped market of new potential bank customers," as region-wide economic reforms become successful.

Determining the most appropriate strategies for financial liberalization and integration remains a difficult issue for developing countries, and is still a subject of debate (Noland, 1997; World Bank, 1997a; Caprio et al, 1993; Caprio et al, 1994; *The Economist*, 1997d). The considerations include:

(a) the form of liberalization and sequencing, for example, whether product market liberalization should precede financial liberalization; whether domestic financial liberalization should precede liberalization of external financial controls; or whether liberalization of the banking sector should precede liberalization of other segments of the financial system; and

(b) the extent and speed of liberalization--whether to implement financial reforms rapidly (the "big bang" approach) or to proceed gradually.

One view holds that financial liberalization aimed at ensuring deeper financial integration be postponed in the sequencing of economic reforms, because of the concern that liberalization could create financial and economic instability as noted earlier. However, Gavin and Hausmann

(1997), in examining the case of Latin America, dispute this viewpoint:

> "[P]ostponement of initiatives to secure a deeper financial integration will itself be a source of instability, because it will freeze the region into a state of 'shallow' financial market integration, in which international capital flows wash in and out of domestic financial markets that are ill-equipped to manage them. ...[F]inancial integration is complementary to the trade liberalization and regional integration that is on the region's immediate policy agenda. Deeper and more efficient financial markets, closely integrated with world markets, are required to finance the many investments that will be required to effect the adjustment to reforms of international trade and investment regimes, thus easing the adjustment process."

Noland (1997) also notes that, while the conventional wisdom is that domestic financial liberalization should precede external liberalization, "in the context of today's reality, it is questionable whether this distinction can be maintained." Caprio et al (1993) suggest that "where possible, a gradual--but sustained--reform process appears desirable for many countries," though a country's unique circumstances may require a more rapid, big-bang approach.

Obviously, a rigid sequence of financial reforms cannot be prescribed for countries. However, for external liberalization to provide the expected benefits, the requisite domestic financial and economic reforms--deregulation of interest rates and credit allocation, bank restructuring, establishment of prudential regulation and supervision systems, and measures to broaden and deepen financial markets and foster competition--also need to be in place.

As did the Mexican crisis of 1994 (Calvo et al, 1996), the recent financial crises in Thailand, Malaysia, Indonesia and other Asian countries have rekindled the debate on the benefits and costs of external liberalization in a globalized financial system in which capital flows can be quite volatile. And *The Economist* (1997f) warns that some Eastern European countries are also susceptible to similar crises. The conventional wisdom blames the Asian crisis on economic policy mistakes, bad banking such as reckless lending to finance speculative investments in stocks and real estate (made possible in part by large inflows of foreign capital), poor supervision of banks, and consequently banking system instability (Melloan, 1997a,b; *The Economist*, 1997d,e; *The Wall Street Journal*, 1997; McDermott and Wessel, 1997; Greenwood, 1997). Malaysia's Prime Minister, however, blamed currency traders/speculators ("the manipulators") who manipulate the markets for profit at the expense of poor countries (Mahathir, 1997).

Melloan (1997) argues that more openness to foreign competition would have fostered better banking and financial system stability in the Asian countries, but acknowledges the difficulty: "It is not easy to sell developing country politicians on the idea of spreading risks by allowing foreigners access to the financial sector. After all, that's where the money is and influence over money flows goes hand in hand with political power. If lenders are making decisions purely on the basis of credit risk analysis--as they should be--there is very little room for politicians to direct it to politically-favored credit seekers." In the aftermath of the crisis, however, Thailand, in its effort to shore up the country's financial system, has removed most restrictions on foreign ownership of banks and finance companies: among other measures, foreign investors will now be allowed to acquire majority ownership in any of the country's commercial banks and finance

companies (existing restrictions include a 25% ownership limit) (Sherer, 1997a,b).

The *Economist* (1997d) reports that the World Bank and IMF and their most important members agree in public that free capital flows are vital and that emerging economies benefit hugely from opening up to the world economy; behind the scenes, however, debate rages on two core questions: how quickly emerging economies should integrate into global capital markets, and what should happen when they get into trouble.[16] It concludes that the heart of the intellectual debate is that although there are clearly dangers involved in freeing a financial system, the alternatives may be far worse.

Because of the volatilities associated with short-term capital flows--such as short-term foreign investment in equity markets and banks--many developing countries favor more stable, long-term investment. However, Charles Dallara, head of the Institute of International Finance in Washington, DC, argues that while short-term capital may less beneficial than long- or medium-term capital, the former can provide some market discipline to domestic policy-making and foster structural improvements in financial markets, which do have long-term benefits: for instance, equity flows can encourage listings of stocks on stock markets according to internationally acceptable accounting standards and accelerate moves toward global standards of corporate governance and transparency; ultimately, these can promote global awareness of attractive investment opportunities and encourage not only further foreign direct investment but also help deepen local equity markets and enhance the credibility of local markets, not just with foreign investors but also with domestic investors (Wessel, 1997a[17]). In effect, the market discipline imposed on governments by short-term capital flows can force them to maintain stable, well-functioning financial systems and competitive investment environments.

Despite the concerns, the drive for growth, which necessitates attraction of foreign capital, will force developing countries to open up their financial markets. Current trends suggest that the competition among developing countries for investment by foreign financial services providers will intensify over the next decade. The resultant extent and patterns of trade and investment in financial services in the future are likely to depend to a large degree on the WTO Agreement on Financial Services and other multilateral and regional liberalization initiatives.

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[16]The institutions are still grappling with how to design appropriate strategies to deal with financial crises without exacerbating the moral hazard problem: encouraging bad policy-making by governments and reckless risk-taking by financial intermediaries and investors because they know that the IMF or World Bank will bail them out in the event of a crisis. (Thailand, Malaysia, and Indonesia, like Mexico in 1994-95, have obtained, or are negotiating to obtain, financial assistance from the IMF.)

[17]Debate between Roberto Zahler, former head of Chile's central bank and Charles Dallara.

III.2 The GATS/WTO Agreement on Financial Services

According to the WTO, the Agreement on financial services is expected to provide immense benefits to both developing and developed economies alike:

> "Developing countries have a growing interest in liberalizing their financial sector and deregulating their investment regimes in order to build the kind of competitive financial infrastructure they need for future growth. At the same time, developed economies have a clear interest in an agreement which will open the fastest growing markets to one of their fastest growing industries. And all sides in this negotiation have an interest in building a strong global financial system to support a strong global economy" (Ruggiero, 1997a).

At the end of the Uruguay Round in 1993, 82 governments (counting the then 12 nations of the European Union individually) included financial services in their schedule of individual market-opening commitments. The negotiations on financial services, which were not finalized at the conclusion of the Round, have continued and are scheduled to be concluded by mid-December 1997. The negotiations have been difficult: Wang (1996) notes that this is due to the "pervasive and complex relations between financing, payments and economic activities. The sensitivity of national financial and monetary policies and policies designed for the allocation of credit rendered the commitment-making much more prudential and tentative, particularly with respect to market access either through cross-border supply or commercial presence."

In July 1995, the U.S. declined to participate in a final Agreement on the grounds that the offers made by some countries (primarily Japan and the Asian emerging economies) were inadequate. An interim Agreement that was agreed upon, which did not include the U.S., expires in December 1997, when the final Agreement is expected. According to the *Wall Street Journal*, "it is assumed that if no deal is made by mid-December, financial services liberalization will be dead for this century" (Melloan, 1997b).

In the July 1995 agreement, 43 of the original signatories improved their market access offers.[18] The current round of negotiations are expected to improve upon the package of market-opening commitments made in July 1995, and many countries reportedly have tabled new or additional market-access offers (Bahree, 1997b). As of May 1997, 76 countries (with the 15 EU countries counting as one) out of a total WTO membership of about 130, had made commitments in financial services. Only 16 African countries have made specific commitments in financial services.

The commitments made to date by various countries vary widely in terms of sectoral coverage, modes of supply, MFN exemptions, and conditions and restrictions attached to commitments. The commitments relate to establishment of foreign financial institutions, guaranteed levels of

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[18]World Trade Organization, "The Second Protocol to the GATS" and the "Second Decision on Financial Services," WTO Internet Website Documents.

foreign equity participation in subsidiaries or affiliates of banks, insurance firms and other financial firms; and participation of foreign firms in asset management and other financial services, among other things. According to the WTO, the most evident practical change in many countries will be the appearance of more foreign banks, securities firms, and insurance companies in markets; the availability of banking, securities and insurance services sold across the border by overseas companies; and the provision of asset management and other financial services by wholly, or partially, foreign-owned companies. And, for countries that are actual or potential exporters of financial services, opportunities for their banks, securities firms and insurance companies will be considerably enhanced.[19]

Because of the unique nature of financial services, the GATS recognizes the need for prudential regulation and supervision measures to protect investors and maintain the integrity and stability of members' financial systems. It also allows the use of non-discriminatory restrictions on balance-of-payments and transfers in the event of serious balance-of-payments and external difficulties. Furthermore, the management of monetary and exchange rate policy falls outside the scope of the GATS.[20]

Sorsa (1997) provides the most extensive analysis of the Agreement on financial services to date and the discussion that follows is drawn largely from his analysis. He observes that the Agreement mostly consolidated industrial countries' relatively open policies in the multilateral framework, and, since these countries represent the bulk of the world's financial services business, the agreement virtually consolidates much of world trade in financial services. However, while most industrial countries made liberal commitments, some added reservations to their schedules on market access and national treatment. Coupled with their MFN exemptions, this effectively reduced the economic value of their commitments. In particular, the U.S.'s broad MFN exemption makes all new access subject to reciprocity in order to encourage market openings by emerging markets. This has posed the most serious limitation. Sorsa argues that:

> "the somewhat cautious liberalization by industrial countries in the GATS compared to their more liberal commitments in other fora such as the EU, NAFTA, or the OECD, probably reflects a reluctance to open up markets to financial institutions from countries with diverse prudential or supervisory systems. This may be due to a desire to limit potential systemic risks from the introduction of unsound foreign financial institutions into one's market."

Sorsa examines the commitments of developing countries by dividing them into two groups:

(1) *the Emerging Markets* group, comprising 26 developing and transition countries (South Africa, Morocco, and Egypt are the only African countries in this group). Some of these

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[19] "The WTO Agreement on Financial Services," WTO Press/18, 26 July 1995, WTO Internet Website.

[20] "Liberalizing Financial Services Helps Economies Without Compromising Their Right to Regulate," WTO Press/76, WTO Internet Website Document, 15 September 1997.

countries are developing rapidly, but most still have relatively closed or undiversified financial sectors. Therefore, increased foreign participation can facilitate the diversification and modernization of their financial markets. Most of the commitments by countries in this group (90% of the countries in banking and 70% in securities) were in commercial presence, but the commitments were subject to conditions. Many of the countries invoked MFN and current account restrictions and, in general, most commitments reflect existing policies, though some new liberalization was undertaken by some Asian countries. Sorsa notes that many of the countries in this group recognize the importance of liberalization and efficient financial sectors to their economies. Therefore, for them, the role of the GATS can be "one of a catalyst and consolidator" as they seek to develop their financial systems.

(2) the *Other Developing Countries* group comprises 26 mostly lower-income developing countries, but also some higher-income Latin American and Middle Eastern countries. There are 13 African countries in this group: Angola, Benin, Gambia, Gabon, Ghana, Kenya, Lesotho, Malawi, Mozambique, Nigeria, Sierra Leone, Tunisia, and Zimbabwe. These countries, which have relatively small financial sectors, offered quite diverse commitments, ranging from very liberal (compared to the Emerging Markets group) without major MFN exemptions (a few countries), to the token commitments in one or two sub-sectors (most countries). Forty percent of the countries made commitments in cross-border trade, mostly unconditional free trade in both banking and securities. Gambia, Ghana, Mozambique, Sierra Leone, and Zimbabwe are the only African countries that offer unrestricted cross-border trade (cross-border supply and consumption abroad) in all banking services and in most securities. Commitments in the group on commercial presence covered about two-thirds of entries in banking and one-fourth in securities, most of which were subjected to restrictions. Ghana, Kenya, and Mozambique are the only African countries that offer free establishment for foreign banks in many banking services. Most other offers were conditional, subject to limitation on foreign participation, legal form, or number of establishments, and in some cases, the seemingly liberal offers may be limited by existing restrictions.

According to Sorsa, industrial countries, as the main providers of financial services, pressed developing countries to open up their markets mostly for commercial presence. The pressure to open up was harder on the higher-income and larger developing countries; most made commitments, but subjected them to many restrictions under commercial presence. Sorsa concludes that:

(1) While the Agreement on financial services is a good start for multilateral liberalization in the sector, actual liberalization was "small and disappointing," as the bindings are likely to have only locked in policies or practices that are already in place in some financial sub-sectors or countries.

(2) The agreement fails to meet many tests for a good multilateral agreement in services, because the many exemptions allowed and conditions attached imply some discrimination and reduce security of market access. Some of the provisions are weak or are still subject to varying

interpretations; market access commitments are conditional and temporary; only specific financial services sub-sectors listed are bound; many countries made MFN exemptions that maintain reciprocity and discrimination in market access; and the Agreement allows far too much discretion in making liberalization commitments.

(3) The actual level of liberalization of financial sectors in most countries differs from that undertaken in the GATS framework.

(4) Liberalization under GATS so far appears to have little correlation with the level of financial sector development or actual openness, especially among the developing country members of the GATS.[21]

(5) Many countries with relatively developed financial sectors made narrow openings in the GATS framework, whereas some with less developed financial sectors made very liberal GATS openings, especially in cross-border trade, suggesting that mercantilistic bargaining, rather than the economic aspects of financial sector reform, explains the bulk of the GATS liberalization commitments.

(6) The Agreement's main immediate importance is therefore systemic and political, though it provides a basis and potential for future multilateral liberalization in the financial sector in a nondiscriminatory manner within internationally enforceable rules.

The potential impact of the Agreement on financial services will depend on what is achieved when the ongoing negotiations are concluded in December 1997.[22] The talks, however, appeared to have been set back briefly in the aftermath of the recent Southeast Asian financial crisis. *The Wall Street Journal* reports that European and American WTO negotiators "failed to engage" the Asian tiger nations and India in the negotiations because they were preoccupied with resolving the crisis (Bahree, 1997b). The crisis has made these countries, which hold the key to the talks because of their attractive markets, even more wary of opening up their markets: "Skittish" Asian officials are "feeling particularly vulnerable to foreign financial power...many of the countries think their financial institutions aren't strong enough to compete in the U.S. and Europe. Indeed, they are hard-pressed to see what's in the pact for them. At the same time, they would be putting

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[21]Sorsa notes that an economic assessment of liberalization commitments is difficult due to (1) statistical problems that hinder measurement of financial services and in turn the effect of liberalization; and (2) the complex provisions of the GATS framework, for example, complex schedules with many reservations attached, and lack of consistency across countries in the information provided (such as classification of financial sectors, prudential rules, and distinctions between market access and national treatment).

[22]Sorsa (1997) notes that whether the financial liberalizations already being undertaken unilaterally by individual countries will be bound multilaterally in the negotiations may well depend on the results of the MAI negotiations and the number of participants it attracts.

their own financial institutions at risk by opening the doors to big, competitive American and European firms" (Cooper and Sesit, 1997). The negotiators, however, hope to use the currency crisis as an example of why the world needs the more uniform financial regulation which the [WTO] pact would help forge. They reportedly will try to persuade the countries that, "in the long run, open and competitive financial markets may help avert financial crises... (and) ...that agreeing to open markets doesn't imply any loss of control over their systems" (Bahree, 1997b). A positive development in this regard is the recent decision by Thailand to allow foreign investors to hold majority stakes in banks, though this was apparently agreed to as part of the IMF bail-out package (*The Economist*, 1997g). In recognition of developing countries' concerns, the negotiators are also discussing possible provisions that will give emerging-market governments some flexibility in imposing controls (subject to IMF blessing) on inflows of so-called "hot money," the quick-to-arrive and quick-to-leave foreign capital invested in banks, bonds, and stocks (Wessel, 1997b).

IV. THE AFRICAN FINANCIAL AND INVESTMENT ENVIRONMENT AND PRIVATE INVESTMENT

IV. 1 African Financial Systems and Reforms

While there are differences across countries, the financial sectors of African countries are generally weak, undiversified, and shallow. In a 1994 report, the World Bank (1994) described the state of financial systems in Sub-Saharan Africa as follows:

> "Financial systems in Sub-Saharan Africa have traditionally been characterized by weak resource mobilization, high credit losses, high intermediation costs, and excessive political interference. So Africa's financial depth (sic) is shallower than that in other developing regions. Bank deposits are just 15% of GDP. Furthermore, financial systems have not grown during the past decade. The low rate of financial savings in countries is related to negative real interest rates, lack of confidence in the banking system, and political and macroeconomic instability, leading people to maintain savings in more tangible assets or to send their capital abroad. Part of the difficulty stems from structural long-term problems: limited human resources and undiversified, small scale economies. But government policy--reflected in ownership, interest rates, directed credit, and heavy taxation--has also weakened the financial systems."

As in most developing countries, African financial systems are dominated by banks, and in some countries, a few banks dominate the system, often operating as oligopolies. In many cases, until recent privatizations, the banks were state-owned or controlled. This was particularly predominant in the formerly socialist countries such as Angola, Guinea, Mozambique and Tanzania, which had largely nationalized their banking systems. The privatizations of the last decade have led to increased private sector ownership of financial institutions. However, especially in the formerly socialist countries, some financial sectors are still dominated by state-owned commercial banks and development finance institutions (DFIs) that provide financing in

sectors such as agriculture and housing. Cote d'Ivoire, Kenya, Nigeria, South Africa, and Zimbabwe have the largest banking markets and have always had the most foreign presence in their financial sectors. They also have had the most diversified financial sectors, with other institutions such as merchant and investment banks, stock markets, and nonbank financial institutions (NBFIs) such as finance houses, venture capital companies, and leasing companies. (Soyibo, 1994).

Much of the foreign presence in African banking systems, mostly affiliates and a few branches and representative offices, has been a result of colonial legacies. For example, in Anglophone Africa, affiliates of Barclays and Standard Chartered dominate the retail networks, while in Francophone Africa, affiliates of Banque National de Paris and Credit Lyonnais predominate. According to Deschamps (1995), in 1995, there were 117 African banks (outside South Africa) with a foreign shareholding of 5% or less, and 98 with 25% or less, that were affiliates of multinational (including South African) banks. There were also 22 branches and 16 representative offices of multinational banks. Thirty-nine (39) of the 47 Sub-Saharan African countries had affiliates of foreign banks, with Angola, Cape Verde, Equatorial Guinea, Eritrea, Ethiopia, Mauritania, Somalia, and Sudan the exceptions. American banks, such as Citibank and Chase Manhattan, have often chosen to operate through local branches (where allowed) rather than affiliates.

In general, African countries have significant informal financial sectors, serving their substantial informal private sectors. Informal financial markets, however, are generally not linked to formal financial markets (Aryeetey et al, 1997; Steel et al, 1997).

Most African countries experienced financial system instability during the 1980s. Some experienced total collapse of their banking sectors, for example, Benin and Guinea. There were several common factors: poor economic performance; fiscal imbalances; high inflation; mismanagement of financial institutions; fraud and corruption; and prudential regulation, supervision, and enforcement (Popiel, 1994).

As in many developing and transition economies, financial and private sector reforms instituted in African countries included: deregulation of interest rates; exchange rate liberalization and deregulation of foreign exchange markets; privatization; liberalization of investment regimes and opening up of markets to foreign investors; restructuring of banking systems; development of prudential regulatory and legal frameworks; diversification of financial services; development of capital markets, including the establishment of stock exchanges; and integration with

international financial markets. While there have been some moderate successes, progress has been limited and the results have been largely mixed.[23]

Financial sector reforms in African countries, which started in the 1980s, were led primarily by the World Bank, usually as part of structural adjustment programs. By 1993, 30 of the 47 Sub-Saharan countries were in the process of implementing reforms, which included deepening and broadening the financial systems, restructuring banking sectors, and improving monetary and financial management (Popiel, 1994). A major objective was to enhance the efficiency of financial resources mobilization and allocation, with particular emphasis on strengthening and expanding domestic savings. The reforms focused largely on banking, as the dominant segment of the financial sectors, and involved: (1) reduction of financial repression, such as interest rate liberalization and deregulation of directed credit; (2) restructuring, recapitalization, privatization, and liquidation of banks and other financial institutions; and (3) strengthening of prudential regulatory and supervisory systems, including training and development of personnel.

According to the World Bank, by the end of 1993, of 34 countries that were reviewed, interest rates were freed in 27; credit ceilings were eliminated in 23; directed credit was reduced in 27; prudential lending and capital adequacy guidelines were introduced, with greater monitoring and enforcement powers for supervisory agencies, in 21; central banks were strengthened in 21; money markets were activated in 15; and banks were recapitalized or restructured, liquidated, or privatized in 25 countries. Also, the number of government-owned and controlled banks was reduced from 140 in the late 1980s to about 115 in 1993; during the same period, the number of private banks rose from 80 to 115, and their share of assets in the banking system increased from 30% to more than 40% (World Bank, 1995a,b).

The most recent assessments of the reform efforts generally conclude that overall, not much progress has been made.[24] The main findings of some the case studies, reproduced in Appendix A, provide insights on the reform efforts in African countries. In general, the limited progress that has been made is largely with respect to reduction in financial repression; the restructuring and privatization of financial institutions, which have led to improvements in the management and performance of many banking systems; reduction in the public sector share of bank credit;

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[23]For detailed discussions on the structure of financial systems and financial liberalization in African countries, see: Deschamps and Bonnardeaux, 1997; Lewis and Stein, 1997; Jbili et al, 1997; Aryeetey et al, 1997; Aryeetey, 1996; Bagachwa, 1996; Chipeta and Mkandawire, 1996; Soyibo, 1996, 1994; Brownbridge and Gockel, 1996; Mwau, 1996; Pill and Pradhan, 1995, 1997; Deschamps, 1995; Montiel 1994; Popiel, 1994; World Bank, 1995, 1994; Hussein and Faruqee, 1994; White, 1993; Annibale, 1993; Collier, 1993; Seck and El Nil, 1993.

[24]Deschamps and Bonnardeaux, 1997; Lewis and Stein, 1997; Aryeetey et al, 1997; Brownbridge and Gockel, 1996; Mwau, 1996; Pill and Pradhan, 1995, 1997; Montiel 1994; Popiel, 1994; World Bank, 1995a,b, 1994; Hussein and Faruqee, 1994.

increased competition in and diversification of a few financial sectors. Most financial sectors, however, remain underdeveloped.

In 1995, the World Bank (1995b) classified African countries by progress made in financial reforms as follows :

Notable Progress: Botswana, The Gambia, Lesotho, Mauritius, Uganda

Progress: Benin, Cote d'Ivoire, Eritrea, Ghana, Madagascar, Malawi, Mauritania, Namibia, Senegal

Slight Progress: Burkina Faso, Gabon, Guinea, Guinea-Bissau, Kenya, Mali, Sierra Leone, Swaziland, Zambia, Zimbabwe

Regressing or Repressed Financial System: Burundi, Cameroon, Central African Republic, Chad, Congo, Ethiopia, Mozambique, Niger, Nigeria, Tanzania, Togo

The Bank's most recent report on bank restructuring in seven African countries (Benin, Cote d'Ivoire, Ghana, Kenya, Mozambique, Tanzania, Uganda) concludes that while there were improvements in the banking system in these countries, restructuring "failed", was "largely unsuccessful", or had a "less-than-satisfactory outcome" in Kenya, Mozambique, Tanzania, and Uganda; the reform efforts were "successful" or "largely successful" in Benin, Cote d'Ivoire, and Ghana (Deschamps and Bonnardeaux, 1997). The report attributes the lack of success in the four countries to: (I) the absence of commitment on the part of the governments, the regulatory agencies, and/or the institutions being restructured; (ii) the highly politicized environment within which the reforms were attempted and the absence of consensus on reform; (iii) the poor macroeconomic environment; and (iv) lack of skilled manpower. The report also acknowledged that failure in some of the cases was partly due to inadequate planning and poor timing by the Bank.

The studies cited above indicate that several pervasive deficiencies need to be addressed if well-functioning financial systems are to evolve in African countries:

Continued Financial Repression. Financial repression--such as interest rate ceilings, controls on credit allocation, restrictions on market entry and cross-border capital transactions--remains significant in many cases. This continues to hamper savings mobilization (the ratio of private savings to GDP remains very low compare to other developing regions), market-based allocation of investment capital, private sector investment, and financial innovation.

Weak Prudential Regulation and Supervision. Many countries still lack adequate capacity--financial and human resources, independence, and authority--to carry out prudential regulation and supervision. Thus, financial institution insolvency and distress may not be quickly detected,

and even when they are, there remains a reluctance to close institutions because of fears of adverse impact on the financial system and economic activity.

Inadequate Physical and Human Infrastructure. In most countries, basic infrastructure such as power and telecommunications systems that facilitate the smooth and efficient functioning of financial systems are still poorly developed. Also, the highly trained and skilled human capital that is necessary for the effective management of financial institutions and regulatory agencies is limited in many countries. In some cases, however, this has been partly due to appointments that are based on nepotism, ethnic background, and political affiliations and connections.

Political Control and Influence. Politicians and governments are reluctant to let go of unnecessary (and often harmful) control and influence over financial systems:

a. Due to political interference, central banks and other regulatory and supervisory agencies often lack the autonomy and authority to perform their functions effectively;

b. A substantial share of domestic credit still goes to the public sector, thereby crowding out credit to the private sector. Banks continue to finance public sector deficits and inefficient, loss-making public enterprises that are unworthy borrowers--often this is done based on government directives and without proper credit evaluation, even though directed credit guidelines may have been officially abolished.

c. A significant proportion of credit extended to the private sector still goes to large and politically well-connected firms and individuals. Credit is often allocated to a significant degree to politicians' cronies and pet projects at the expense of more productive enterprise. In such cases, since lending is explicitly or implicitly encouraged and supported by government, there is no proper risk assessment and monitoring of loan portfolios.

Slow Progress on Restructuring and Privatization. There is slow progress on the restructuring and privatization of financial institutions, partly due to a lack of commitment by governments and the institutions concerned to the reform programs. Governments still maintain significant ownership or control of banks and other financial intermediaries. Some of these institutions may still be poorly managed, fraught with fraud and corruption, and could be in poor financial health not usually reflected in financial statements. Many banking systems therefore remain in distress, with a high percentage of assets in nonperforming loans. In some cases, restructuring and privatization of banks have been undertaken only reluctantly, and the process is often highly politicized. As in many developing countries, privatization is often difficult to implement because of poor or unreliable financial information about the institutions being privatized, the lack of transparency, and doubts about the credibility of governments and their willingness and ability to honor obligations. In some cases, banks may be sold based on political connections or ethnic considerations, and the fear of dominance by a small elite of wealthy individuals, powerful ethnic groups, or foreigners often impede the privatization process (World Bank, 1995b).

Limited Competition and Diversification. Competition among financial institutions remains limited in most countries, and numerous restrictions on market entry remain. In some cases, continued political interference and public subsidization of loss-making institutions undermine the shake-out that is necessary to ensure that only strong and well-managed institutions survive. Although banks dominate financial sectors, there is not much competition within the sector itself, with a few banks still dominant as oligopolies.

Most financial systems remain small relative to GDP and are largely undiversified. There continues to be an over-reliance on traditional banking, and the banks largely tend to provide credit and other financial services only to large, well-established firms. Small- and medium-sized enterprises (often the most innovative and productive), microenterprises, and the informal private sector therefore have limited access to financial services. Also, because banks focus on short-term and trade financing and there are few long-term finance institutions, many firms find it difficult to obtain long-term financing for their capital investments. Formal venture capital industries do not exist or are not developed enough to meet the needs for venture capital by new and growing firms. Even in countries with a significant level of diversification in financial services such as Ghana, Kenya, and Nigeria, NBFIs largely serve the same large firms and affluent individuals that banks serve. Lower- and middle-income people have limited access to services such as consumer loans for cars and appliances, and mortgages. Services such as credit cards and automatic teller machines barely exist or are available only to a small segment of the population. Payments and settlement systems are still underdeveloped and most countries do not have the necessary communications and computer/information technology systems that can make these systems more efficient. Check-clearing in the banking system is very slow and even check-cashing can be an ordeal for bank customers.

Furthermore, financial services are largely urban-oriented and rural areas are underserved. Thus, the types of specialized financial services that farmers, rural enterprises, microenterprises, and the informal private sector in general, need are quite limited, as innovative financial institutions that can develop the appropriate instruments hardly exist. Attempts by governments to fill gaps, such as through the establishment of community and rural banks, have had little success, due to the high costs of operations, training, technical assistance and advisory services, as well as the management and operational problems that are typical of government-run ventures..

Poor Environment for Private Investment by Financial Services Providers. As discussed in the next section, the investment environments in most African countries remain poor and uncompetitive and there remain restrictions on cross-border capital flows and foreign ownership of financial intermediaries. This stifles private investment in financial services and, in particular, inhibits the entrepreneurial risk-taking that is necessary for the development of innovative financial products and services that can meet the needs of segments of the private sector that are underserved. Successful privatization in some countries has led to increased private sector ownership and better performance of banks (Postel, 1996). The banks, however, primarily engage in relatively low-risk business by serving only large, established firms and the affluent, and by providing only safe traditional banking services with little innovation.

According to a World Bank survey of multinational banks operating in Africa (Deschamps, 1995), the banking environment is generally perceived as difficult. The problems cited by the banks include: (I) pervasive intervention in the sector by governments, whether as shareholders, borrowers, or depositors; (ii) lack of commitment of authorities to serious reform; (iii) the high cost of doing business, particularly with regard to corruption and political intervention; (iv) small markets; (v) limited human and financial capacity; and (vi) policy reversals. For these reasons, some banks had discontinued their operations or were considering doing so.

The majority of the foreign banks expressed their "intent on maintaining a presence in countries where conditions for profitable banking are present," but would take several measures to lower risk:

1. They wanted to retain tight control over local lending decisions and "stick to risk-averse policies"--for example, by focusing on transactions tied to international trade or other cross-border transactions or limiting most private sector financing to only large firms.

2. Banks with large branch networks planned to downsize local operations and target only specific markets because they felt that "the deregulation and opening up of local economies is rapidly changing the competitive game, eroding the spreads available to them heretofore."

3. Many banks wanted to focus on commercial lending and would not engage in "financial lending"--lending to other African banks on the interbank market--which some considered too risky.

IV.2 The Underdevelopment of Financial Markets

The overall effect of the deficiencies outlined above is that financial markets cannot play a significant role in private sector development and economic growth. The deficiencies show that, while a few countries have made progress, African financial markets are generally underdeveloped in several areas that are critical to development:

- In addition to *commercial banks*, depository institutions such as *savings banks, community banks, and credit unions* which serve smaller savers and borrowers (including the poor and rural dwellers) and link with informal financial markets.

- *Finance and leasing companies,* which provide consumer credit and mortgages to households and loans and leases to businesses.

- *Contractual savings institutions,* namely, *pension funds* and *insurance companies*, which pool long-term savings and invest them in bonds and equities, for example, providing financing for long-term investments such as infrastructure (such as utilities and transportation projects) and firms' capital projects.

- *Investment funds or companies (such as mutual funds, unit or investment trusts)*, which pool funds from investors and invest them in diversified portfolios of securities, depending on the company's investment objectives.

- *Investment banks*, which help businesses and governments sell their debt and equity securities in the primary markets to finance capital projects; they also act brokers and dealers in the secondary markets. (In some countries, *universal or merchant banks* undertake both commercial and investment banking.)

- *Venture capital funds,* which provide capital to new and growing businesses with high growth potential; they are also often actively involved in the management of the firms.

- *Development finance* institutions, which provide long-term financing in sectors such as agriculture and housing.

- *Securities markets* which facilitate the trading of securities (bonds, stocks, and derivative instruments such as futures and options) and provide liquidity, with appropriate institutional arrangements such as organized stock, bond, or derivatives exchanges, and over-the-counter trading, and specialized intermediaries such as investment bankers, dealers, and brokers.

- A strong information and technological infrastructure--communications and information technology systems; accounting/auditing systems and standards; financial disclosure; research/information, risk assessment, and credit rating firms--for: availability of relevant and credible information in a timely manner and easy procurement at low cost; speedy transfer and dissemination of information; and efficient payments and settlement of transactions.

- Strong prudential regulation, monitoring and supervision of financial intermediaries and markets, by regulatory and supervisory agencies that have the necessary autonomy and authority.

- Legal and judicial frameworks that ensure protection of property rights and contract enforcement.

The limited development of capital markets beyond banking systems in particular, such as venture capital funds, and securities markets, severely hampers the mobilization of funds for financing the medium-term and long-term investments that are critical to economic growth. In an attempt to develop securities markets, attract foreign investment, and facilitate the privatization process, many countries have, in the last decade, established new stock exchanges (such as Botswana, Malawi, Swaziland, Zambia, Namibia and Ghana) or improved existing ones (for example, Kenya, Nigeria, Egypt, and Zimbabwe). Fifteen African countries currently have stock exchanges--Cote d'Ivoire, Mauritius, Morocco, South Africa, and Tunisia are the other African countries with exchanges. The Cote d'Ivoire exchange is being transformed into a regional stock exchange that will serve the countries of the West African Monetary Union. Also, new

exchanges are about to start operations in Uganda and Tanzania, and Ethiopia, Lesotho, Madagascar, and Mozambique are reportedly also planning to set up new exchanges. These stock markets, however, are thin and remain relatively inactive because of the small size and underdevelopment of private sectors; limited supply of securities; inadequate supporting regulatory, legal, and institutional structures; the poor investment environment; and the inability to attract much private domestic and foreign investment. In fact, the establishment of stock exchanges in some countries, especially the smaller ones, may have been ill-advised.[25]

Two of the most important aspects of financial and private sector development are (1) the role of informal financial markets; and (2) the provision of financial services to the poor. According to the World Bank (1995b), financial reform in most countries failed to incorporate the development of effective informal financial intermediaries that can provide financial services to businesses in the informal and small-scale economic sectors. A major challenge is the development of financial intermediaries that can deliver market-based (rather than subsidized, inefficient, and charity-based) savings and credit services to the poor (World Bank, 1997b, 1995b; Nelson, 1996; Wright, 1997). According to Aryeetey et al (1997): (1) the indigenous private sector in most African countries consists largely of households and small-scale enterprises that operate outside the formal financial system; (2) savings activities, which are widespread, are undertaken through informal arrangements (such as rotating savings and credit associations); (3) the financing needs of informal enterprises, which lack access to banking systems, exceed the capacity of informal lenders; (4) informal financial agents have demonstrated a comparative advantage as well as innovativeness in serving the large share of African populations who lack access to formal intermediaries; and (5) there need to be linkages between formal, semi-formal and formal financial sectors.

Following the celebrated success of the Grameen Bank in Bangladesh, microenterprise financing institutions have become popular mechanisms for providing credit to the poor and small borrowers in developing countries as well as developed countries. According to the World Bank (1995b), the schemes have been most successful in Latin America but have recorded the worst performance in Africa-- success in Latin America has been facilitated by the existence of "more competent banks, ..a more dynamic small business sector, ..and better program designs." Often run by nonprofit, nongovernmental organizations (NGOs), the effectiveness of these schemes has been hampered in part by small capitalization and high transactions costs associated with providing technical assistance to numerous small borrowers. Also, many institutions have not been run with a private-sector investment orientation. It is now generally acknowledged that there is a need for the schemes to develop a more market-based approach and evolve into for-profit financial institutions, so that successful institutions can eventually access capital markets and attract private investors (World Bank, 1997b, 1995b).

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[25]See *The Economist*, 1997h, 1996e; Isimbabi, 1997a; Postel, 1997; Moss and Kenny, 1996; and Jefferis, 1995 for discussions on African stock markets.

Though the overall effectiveness of microenterprise financing schemes has been questioned, some success stories reportedly suggest that they can have a significant impact if organized and managed appropriately with a market-based orientation, for example, Bank Rakyat Indonesia's small-scale credit program, BancoSol in Bolivia, and Accion Communitaria in Peru (Wright, 1997; World Bank, 1997b; Nelson, 1996). To help promote a private sector orientation in microenterprise financing, the IFC has recently set up Profund, a venture capital fund that takes equity stakes of up to 30% in microlenders in developing countries that either are already regulated for-profit financial institutions or are en route to doing so (Wright, 1997). Profund is planning to make a direct equity investment in a commercial bank being set up by the Kenya Rural Enterprise Program (K-REP), Africa's best-known microfinance institution.

Clearly, policies should be designed to eliminate deficiencies and foster the development of money and capital markets, namely: (a) improvement in the efficiency and performance of existing institutions in providing basic services, and (b) increasing the variety of financial services available to important sectors of the economy. The focus should therefore be on: (a) increasing competition in the sector; (b) facilitating financial innovation and the evolution of financial intermediaries and instruments that can meet the savings, investment, financing, and risk management needs of businesses, governments, and individuals; and (c) integration with global financial markets.

For any country, the appropriate policy approaches, such as the type of financial intermediaries and markets to encourage, and the extent to which markets should be opened to foreign investors, will depend on the state of its financial and private sector and economy, its needs, and the types of market distortions and failures that exist, among other things (World Bank, 1997a; *The Economist*, 1997d; Caprio and Summers, 1993; Caprio et al, 1994; Stiglitz, 1989, 1994). In this regard, the experiences of other developing regions--Latin America, Asia, and the transition economies--and other African countries can provide useful lessons and guidance for any country (World Bank, 1997a, 1995b; Caprio and Vittas, 1995; Caprio et al, 1994). What is clear from these experiences is that government ownership or control of financial intermediaries and political interference greatly hamper the functioning of financial markets and have generally failed. Therefore, politicians or governments should simply muster the political will to implement necessary reforms, then get out of the way and let markets function to the extent possible, and intervene (minimally and prudently) only in the event of market failures. Governments should, of course, concentrate on prudential regulation and supervision; maintenance of strong legal and judicial infrastructures; and improvement of the investment environment in general. The existence of a good investment climate will foster entrepreneurship and innovation in financial services by both domestic and foreign investors--in light of the deficiencies in African countries (for example, low income and low savings, the need for competition, expertise, and access to global markets) and the discussion in Section III, significant investment by foreign financial services providers is critical to developing well-functioning financial markets.

IV. 3 The African Investment Environment and Private Investment

The problems that make the investment environment in African countries uncompetitive are well-documented: poor leadership; civil strife; political, economic, and policy instability and uncertainty; governments' lack of credibility and genuine commitment to reforms; poor economic performance; the small size of markets; poor physical, financial, and human infrastructure; harsh regulatory and institutional environments characterized by corruption, red-tape, and inefficient bureaucracies; hostility toward private investment and foreigners; weak regulatory and legal systems, and the absence of rule of law that assures property rights and contract enforcement, among other things (World Bank, 1997; Bennell, 1997; Isimbabi, 1997a,b; Rauth, 1997; Bhattacharya et al, 1997a,b; Kasekende et al, 1997; Madavo and Sarbib, 1997).

It is generally acknowledged that the political and economic environment in Africa has improved in recent years, and most African countries have made attempts to improve their investment climates. The investment response, however, even in countries that have achieved some progress in economic reforms has been limited and below expectations. This is largely because the investment environment is still perceived as risky, unfriendly, and uncompetitive. Bhattacharya et al (1997b) report that their survey of commercial banks, investment banks, and mutual fund managers shows that "investors perceive the risks of investing in SSA countries to be higher than in other regions and face greater impediments to identifying and exploiting profitable opportunities in SSA than elsewhere." Similarly, *Institutional Investor*'s most recent semi-annual ratings of country risk, which are based on surveys of 75 to 100 international banks, show that most African countries continue to rank very low relative to other regions in the perception of international investors. Of the 29 SSA countries included in the rankings of 135 countries, the top twelve are Mauritius (ranked 42), Botswana (44), South Africa (51), Zimbabwe (68), Swaziland (73), Ghana (79), Kenya (83), Gabon (95), Senegal (100), Malawi (101), Uganda (103), and Cote d'Ivoire (104). The rankings of the remaining 17 countries range from 106 (Burkina Faso) to 133 (Sierra Leone) (Shapiro, 1997).

Thus, compared to other developing regions, little foreign private capital (FDI, portfolio investment, bank loans, or bond financing) has flowed to Africa in recent years (Bhattacharya et al, 1997a, b; World Bank, 1997c). Furthermore, some multinational firms, including banks, have divested their holdings in African countries over the last decade.[26] In particular, African countries are not able to attract the long-term financing needed for building basic infrastructure (such as power, telecommunications, and transportation networks), a critical prerequisite to attracting the other types of private investment that can bring about rapid economic development. Much of the FDI flows to Africa goes to the mining and energy (especially oil) sectors in a few countries--these lucrative sectors are the only ones that provide the almost certain high returns that can

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[26]See, Deschamps, 1995; Deschamps and Bonnardeaux, 1997; Isimbabi, 1997a,b; Block, 1997; Bennell, 1995, 1997; Madavo and Sarbib, 1997; *Business Africa*, 1996; *The Economist*, 1996f; IFC, 1995; UNCTAD, 1995, 1996; for discussions on the African investment environment, foreign investment and divestment, and related issues.

compensate for the high perceived risk. In 1996, for example, though private capital flows increased, 89% of portfolio equity flows went to South Africa, and most of the $2.6 billion in FDI ($2.2 million in 1995) was invested in the oil-exporting countries (Angola, Cameroon, Gabon, and Nigeria) (World Bank, 1997c; Morgan Guaranty Trust Company, 1997).

Recent trends indicate that if the investment environment is conducive and *competitive*, African countries can attract significant private foreign investment and stem capital flight. In the last few years, reform efforts (especially privatization) have achieved some success in a few African countries, and South Africa emerged from political turmoil with the potential to power economic growth in the continent. The potential of African economies has begun to draw the attention of international investors. In the early 1990s when interest in emerging markets heightened, African stock markets attracted significant attention from international investors, as evidenced by the establishment of at least a dozen African regional investment funds. During the 1993-96 period, African equity markets ranked among the best-performing markets in the world. The good performance and potential of African markets garnered significant reportage in prominent publications such as *The Wall Street Journal*, *Barron's*, *The New York Times*, *The Economist*, *Euromoney*, *Institutional Investor*, and *Forbes*.[27] *The New York Times*, for example, noted in 1994 that "investment experts...point to a variety of factors, from the end of the cold war to signs of improving commodity prices, that may ultimately make Africa the greatest emerging market of them all" (Eaton, 1994). More recently, *The Wall Street Journal* reported that "fund managers around the world increasingly are touting African stock markets as a necessary part of any global emerging-markets portfolio" (Block, 1997). Also, in its recent annual supplement on World Business, the *Journal* reported on the growing interest of foreign investors in Africa, and highlighted Uganda, Cote d'Ivoire, Botswana, South Africa, and Ghana as "Best Bets" for investment in the continent (Phillips, 1997).

Portfolio investment that can flow in and out very quickly arguably does not meet the long-term investment needs of African countries. As discussed in Section III, however, such investment can be a source of market discipline that forces a government to adhere to sound policies. This would make the country remain competitive enough to attract and retain long-term foreign capital (and flight capital) and spur domestic investment.[28]

The current levels of foreign investment the continent can attract fall substantially short of the massive amounts needed to finance development. To foster long-term private sector development, substantial amounts of long-term foreign capital to finance infrastructure development are required, as is venture capital for financing new and growing small businesses that should be the engines of economic growth. Such capital is high-risk, which further

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[27]See Isimbabi (1997a,b) for overviews of these developments.

[28]Of course, in a globalized financial market where there is competition for capital, external factors beyond a country's control, such as a significant increase in interest rates in industrialized countries, would influence capital flows.

underscores the critical need to create favorable climates for investment and entrepreneurial risk-taking in African countries.

In this regard, a major problem is that Africa continues to suffer from a serious image problem as negative perceptions about the continent (not always unjustified) persist. African countries will continue to face competition for capital from other regions--the former Soviet Union, Central/Eastern Europe, Asia, Latin America, and the Middle East--that are perceived more positively. Therefore, even those African economies that are making some progress may not be able to attract significant foreign private capital, especially if there is a global capital shortage, which, some analysts argue, is likely.[29]

Because of the continent's poor international image and low ranking among developing regions, African countries have to do a lot more than other regions to make the region more competitive in attracting foreign investment. There are, of course, legitimate concerns about "exploitation" by foreign firms at the expense of a country's progress. But it is incumbent on every African government to create the type of investment environment that will attract more ethical foreign and domestic investors--it is government corruption and incompetence, for example, that enables unscrupulous foreign and domestic investors alike to flourish. Also, competent governance requires that governments come up with policies to ensure that those who invest in areas that contribute significantly to economic growth face minimal impediments and obtain commensurate attractive returns relative to risk.

V. SUMMARY AND CONCLUSIONS: POLICY AND RESEARCH ISSUES FOR AFRICAN COUNTRIES

V.1 The Challenge: Developing Financial Services Sectors for Equitable Economic Growth

The foregoing discussion shows that, in a rapidly integrating world economy, African countries must take the risk of formulating and implementing sound policies to open up their markets in order to (a) attract foreign investment and (b) build well-functioning financial systems that are well-integrated with international financial markets. In particular, policies must be designed to foster equitable economic growth and improvement in the economic conditions of the poor, who constitute the majority of the African population. This requires effective financial services delivery to the private sector in areas that can have a direct impact on poverty alleviation, for example, the establishment and growth of small- and medium-sized businesses, export trade,

[29]There is an ongoing debate about whether or not a global capital shortage is likely. See, for example, Celarier, 1995; Qureshi, 1995; Stevens, 1995. Obviously, given the numerous factors involved, the likelihood of a capital shortage is difficult to predict.

microenterprise development, infrastructure development, agricultural and rural enterprise development, and housing.

Specifically, policy-making and implementation within the context of the globalization trends discussed in Section II and III should focus on the following:

- Elimination of the impediments to private foreign and domestic investment and the proper functioning of financial systems (outlined in Section IV).

- Approaches to opening up financial markets to foreign financial services providers and liberalization of cross-border capital flows: How much opening? How quickly? How should capital flows be managed?

- Determination of (a) how the WTO Agreement and other multilateral and regional initiatives can best facilitate financial sector development and foreign investment, and (b) what a country needs to do within the context of these initiatives, namely, in terms of unilateral liberalization, participation in multilateral trade/investment groups, and African regional economic and financial integration.

Many of the deficiencies in the financial and investment environments outlined in the last section are not unique to African countries: they are also prevalent in most of the newly emerging economies such as China, South Asia, Russia, and the Central/Eastern European transition economies (World Bank, 1996, 1997a; *The Economist*, 1997a; *The Banker*, 1996; Caplen, 1996). Even with the relatively successful reforms and good economic performance of some Asian, East European, and Latin American countries in the last decade, many of these countries have experienced financial crises in recent years and continue to have similar deficiencies--in fact, there remains much concern about banking system stability in emerging economies in general (McDermott and Wessel, 1997; *The Economist*, 1997a,f; Fairlamb, 1997; Montgomery, 1997; Fleming et al, 1996; Pilling, 1996). Financial systems in African countries, however, are relatively less developed than those of South and East Asia and Latin America (World Bank, 1995b). Sub-Saharan Africa, more than any other developing region, desperately needs foreign investment to finance infrastructure and private sector development and ensure that the region is part of a rapidly advancing global economy. Thus, the need for financial system development and foreign private investment is even more urgent for African countries.

The experiences of Asian and Latin American countries in recent years underscore the difficulties of financial sector and investment liberalization. It takes years of prudent and consistent policies and genuine commitment to comprehensive reforms to build a stable and well-functioning financial system and attract and sustain long-term investment. Because of the continent's political, ethnic, and leadership problems, such commitment has been lacking in African countries.

As the recent Asian crisis shows, there are no specific formulas that can guarantee success. The experiences of Latin American and Asian countries, however, are rich in lessons that are relevant for African countries. Of particular importance is the need for financial services and investment that will have a strong positive impact on the poor and rural areas. Growth in Asian and Latin American countries, for example, has led to a widening of the gap between the wealthy and the poor, most of whom have seen little change in their well-being. In many of these countries, there remain serious problems such as authoritarianism, corruption, neglect of rural areas and the poor, crime, labor and environmental issues, disregard for human rights, all of which threaten the social stability and consensus that is necessary for sustained development (Aronson, 1997; Richburg, 1997; Solomon, 1997; *The Economist*, 1997e; Garten, 1997; Cavanagh, 1997). In Latin America, the region often cited as providing the most relevant lessons for Africa, groups that advocate alternative approaches to the application of free-market economic policies are emerging. These groups are primarily motivated by their belief that the policies have done little to improve the lot of the poor and instead have worsened wealth inequalities. This issue is of such importance in relation to investment in Latin America that *Institutional Investor* recently did a cover story on it, noting that critics "are focusing their attention and energy on the allegation that [the same reforms that have made some rich people wealthier] have also spawned high unemployment and a sharp decline in the standard of living of the majority of Latin Americans" (Conger, 1997). The debate continues to be about whether or not the "Washington Consensus" policies have had enough time to work or cannot work at all to produce equitable growth and whether there are any better alternatives.

These developments should be watched closely by African policy makers. Clearly, policies that lead to poverty alleviation and a meaningful improvement in economic well-being at the grassroots provide the best chance of fostering sustained economic and social progress in African countries.

V.2 Research Issues

In light of the emerging globalization trends and the weak and fragile political, economic, and social environments in much of the continent, African countries face a daunting challenge with regard to developing their financial services sector and fostering private investment. This challenge needs to be addressed with the utmost urgency and dedication, especially as Africa is still seriously handicapped by lack of good leadership and governance and poor education, health, and social welfare infrastructures.

There is therefore a need for research that examines the relevant issues and provides thorough and comprehensive analyses and insights that will help African countries to formulate and implement appropriate policies and strategies.

Specifically, such research, in the form of case studies of individual countries or regions, should focus on the following issues:

1. The prospects for (a) the evolution of competitive environments for private investment and (b) significant investment response.

As often noted, the evolution of a favorable investment climate for both domestic and foreign investors is predicated on political and economic stability. A basic issue is therefore the indication from political and economic trends on the prospects of credible policies, genuine commitment, and ability of governments to implement and sustain political, economic, and institutional reforms that will quickly bring about investment-friendly environments. In particular, integration of domestic financial systems with global financial markets and attracting domestic and foreign investment in financial services require that the basic macroeconomic, institutional, and legal reforms are in place, and that internal liberalization efforts to restructure the financial services sector are successful.

It is not automatic that foreign capital will flow into an African country that is achieving success with regard to political and economic stability, financial liberalization, and other economic and institutional reforms. The prospects of significant inflows of foreign investment in response to successful reforms is to a large degree dependent on trends in the global environment, particularly with regard to (a) the potential returns on investment (relative to risk) that a foreign service provider can expect relative to comparable investment opportunities in other countries that are also seek foreign capital and (b) the availability of global capital (the incidence of a global capital shortage is always a possibility).

Thus, much depends on:

- trends in international capital mobility;
- developments with regard to multilateral and regional agreements in trade and investment;
- investor behavior and attitudes toward investing in developing countries;
- the response of foreign financial service providers to liberalization efforts in developing economies, and their preferred modes of trade/investment.

In this regard, for any African country, investors' perceptions of the African continent in general as a hospitable environment for private investment are relevant. The continent's poor international image, fairly or not, impacts negatively on even those countries that are making progress. An important issue is whether trends point toward continent-wide stability and a significant improvement in the perceptions of the African investment environment. At the same time, investors are gradually becoming more knowledgeable and beginning to discriminate between stable, reliable countries and those with continuing high risks.

2. Needs and innovations in financial services and prospective returns from investment opportunities

Assessments of:

a. The structure and deficiencies of the financial sectors--efficiency in financial services delivery; restructuring and privatization; competition; diversification; integration with international financial markets; the specific types of financial services, institutions, and instruments that are critical to a country's economic growth but which are "missing" (such as venture capital; securities markets; leasing; basic infrastructure financing; contractual savings institutions; insurance services; and asset management and investment advisory services);

b. the types of financial innovation that are required in different sectors, especially in critical economic development areas such as export trade, agriculture, housing, transportation, microenterprise, small- and medium-sized businesses, rural development, and infrastructure;

c. the potential returns that investment in financial services can provide, compared to alternative investment opportunities available to prospective domestic and foreign investors;

d. the availability of domestic capacity and resources (for example, entrepreneurs/investors, capital, financial and management expertise, and technology) to exploit opportunities in the financial services sector.

e. the areas in which foreign investment and expertise are needed;

f. the record on foreign investment inflows in relation to the conduciveness and competitiveness of the investment environment, and the prospects of attracting foreign financial services providers to invest in those areas where foreign investment is needed.

3. Trends in multilateral and regional trade/investment initiatives, foreign investment, and international financial markets, and the implications for African countries

a. Evaluation of

(i) multilateral and regional trade agreements (such as WTO, MAI)--commitments, liberalization trends, prospects--with respect to trade and investment in financial services;

(ii) trends in international financial markets and capital flows (such as FDI, portfolio investment, and loans) to developing countries, particularly foreign investment in financial services;

(iii) trends in financial innovations in developed and developing countries that are applicable to African countries; and

(iv) the implications of (i)-(iii) for African countries.

b. Assessment of

(i) African countries' negotiating capacity and achievements, commitments, and concerns with respect to the WTO and other multilateral initiatives;

(ii) dangers, challenges, and opportunities presented by these globalization trends, and how they can be beneficial in terms of financial sector development;

(iii) progress and prospects of African regional initiatives towards trade liberalization and economic integration, and the likely impact on African countries' leverage and negotiating positions in the multilateral arena (specifically with respect to financial services).

c. Evaluation of the experiences of other countries in trade and financial liberalization and the relevance and applications of lessons learned to African countries.

4. Policy and strategy options for African countries.

Based on the analyses in (1)-(3), recommendations on the appropriate policy and strategy options for African countries should be considered with regard to:

a. the types of financial intermediaries, innovation, and regulatory structures that are necessary for the development of a strong financial infrastructure that can provide the types of services needed in important sectors of the economy;

b. identification of areas of financial services delivery in which foreign investment is needed and those in which there exists domestic capacity;

c. creation of a conducive financial and investment environment to stimulate domestic and foreign investment in the financial sector and facilitate entrepreneurship and innovation in financial services;

d. integration of domestic financial systems with international financial markets, through removal of restrictions on cross-border capital flows and provision of market access to financial services providers;

e. regional financial integration and coordination within the context of African regional trade liberalization and economic integration initiatives such as the SADC, ECOWAS, AEC, especially for the purpose of creating larger integrated markets, harnessing resources, improving negotiating capacity and leverage in the multilateral arena, and facilitating integration with global markets;

f. the best strategies for African countries for participation in the WTO, the MAI, and other multilateral/plurilateral agreements.

Prudent recommendations on these issues, which should include clear definitions of the proper role for governments and policy-makers, would help African countries to develop and implement

policies and strategies that will enable them benefit fully from global trade and investment in the financial services sector.

APPENDIX A: FINDINGS OF SELECTED CASE STUDIES

The main findings of recent case studies of financial sector reform in African countries are summarized/reproduced below.

Benin

Deschamps and Bonnardeaux (1997)

Financial sector reforms under the World Bank structural program during 1989-94 were launched during a period of sluggish growth and under difficult political and macroeconomic conditions. Domestic banks were 'terminally insolvent' with non-performing loans in excess of 75% of aggregate outstanding loans.

Outcomes of banking sector reform were considered favorable:

- Economic growth, which resumed in 1990 in response to the government's new policy framework provided new banks with a more favorable environment to operate in. Thus, the reforms led to the establishment of a newly functional banking system:

- Collapsed banks were liquidated.

- Loan recovery measures (such as changes in commercial law, and reform of judicial procedures and of land title systems and records) were strengthened but the impact was modest--influential private debtors took advantage of continued shortcomings in the functioning of the judicial system to avoid meeting their obligations.

- Bank supervision and regulation were strengthened; in this respect, the program benefitted from the establishment (in 1990) of a Regional Banking Commission by BCEAO.

- Four new private banks were established by local and regional investors in 1990 and a wholly-owned affiliate was established by a major foreign bank (Credit Lyonnais of France) in 1993, all of which have remained profitable.

- Bank restructuring also benefitted from being preceded by reforms in the real sector, such as liquidation and privatization of public sector enterprises and parastatals.

- Restructuring was successful because, in addition to the World Bank's strong support, there was strong government commitment to the reform process and there existed wide consensus on the need for financial sector reform, which led the government to disengage itself entirely from the banking sector.

- "..The Benin experience demonstrates that it is possible to successfully rebuild a banking sector almost from scratch."

Cote d'Ivoire

Deschamps and Bonnardeaux (1997)

Of the 14 commercial banks that existed when the World Bank's Financial Sector Adjustment program (1991-94) began, four controlled 90% of the market. (Of these four, three were affiliates of French banks.)

The program was deemed to be largely successful in its main objective of restructuring the banking sector:

- The settlement of government arrears owed to the banks was undertaken through successful securitization.
- Banks got new and improved management and performance (profitability and operating efficiency) improved significantly.
- The privatization of banks was successful--there was a sharp dilution of government ownership in banks; government-controlled specialized banks (two industrial development banks, two housing banks, and the rural development bank) were liquidated.
- However, recovery of nonperforming loans was not successful.
- Key success factors included (a) government commitment and political will that backed the reforms; (b) the existence of a well-developed, sophisticated financial sector already in place, with a facilitating role played by French banks that were already in the country; (c) strong financial and political backing of French government; and (d) massive technical assistance from the World Bank and other donors.
- The reform project's longer-term success was also helped by the devaluation of the CFA franc which brought about improved conditions in the real sector and induced partial return of flight capital into the banking system.
- The program also included reforms of the stock exchange, the insurance sector, and rural financial intermediaries as well as improvements in monetary policy management.

Ghana

Deschamps and Bonnardeaux (1997)

In 1988, the financial sector was saddled with huge amounts of nonperforming loans and technically insolvent. Five state-owned commercial banks and three development banks together dominated the market.

The World Bank's Financial Sector Adjustment program (1988-95) focused on bank restructuring, improvement of the regulatory framework and strengthening bank supervision; new entry into financial markets by financial institutions; and the development of money and capital markets.

The authors considered the program successful, and cited the following reasons:

- The program contributed to a vastly improved performance in the banking sector, with all major banks now solvent.
- There was a significant achievement in the recovery of nonperforming loans and reduction in the proportion of non-performing loans relative to aggregate bank loan portfolios.
- Banks had improved performance in terms of profitability and efficiency.
- However, the privatization of state-owned banks was not carried out to the extent contemplated under the program.
- The success of the program was largely due to: (a) strong commitment by the government and central bank; (b) considerable backing from the IMF and the Bank; and (c) the existence of a favorable economic environment.

Brownbridge and Gockel (1996)

- The reforms brought about improvements in the financial system, but there remain major constraints to efficient financial intermediation.
- The two largest public sector banks have been partially privatized with minority-owned shares floated on the Ghanaian stock market.
- Banks are now more prudently managed and supervised, and are under much less political pressure to extend funding to unworthy borrowers.
- All but one of the public sector banks have been profitable and are able to meet capital adequacy requirements; however, the improved performance has been due partly to substantial investment in virtually risk-free government and central bank securities. Commercial loans and advances have accounted for only about 20% of the banks' total assets during the 1990s.
- Several new commercial and merchant banks, mostly joint ventures with foreign ownership, were established. However, there has been limited local private sector investment in banking, perhaps because of "the weakness of the local business class and its lack of close links to the government: local investors may have been wary of entering a high profile sector such as

banking without the protection of political connections. It is also possible that local investors interested in financial markets have instead opted for less ambitious ventures, such as foreign exchange bureaux and NBFIs, in which the capital investment required is much lower than that needed to set up a bank."

- In addition to banks, several NBFIs--leasing companies, finance houses, building societies and savings and loans companies--were established. The NBFIs were allowed to accept fixed term deposits but not current account (checking) deposits and extend credit, and so provided some competition to the banks.

- Though new entry has brought about increased competition and a small reduction in market concentration, the banking industry remains highly oligopolistic. Increased competition has apparently been limited mainly to the corporate and institutional market. Most of the new entrants are in merchant banking rather than retail banking. Also, new entrants have avoided retail banking outside the large cities and the older, more established commercial banks reduced their retail branch networks.

- Other than the introduction of some new credit instruments such as leases by NBFIs, there has been very little innovation (in terms of the range of financial instruments and services) in the financial industry or in the quality of services provided to the public. For example, banks are not competitive (relative to the foreign exchange bureaux) in the high volume business involving transfer of funds to Ghana by Ghanaians residing abroad.

- The "failure of financial liberalization to stimulate greater improvements in the range and quality of retail banking services may be attributable to the lack of competitive pressures on the banks which have been able to generate profits during the 1990s mainly from investing in securities, without having to compete vigorously for either deposits or borrowers. It is also possible that the low usage of the banking system by the public (as indicated by the lack of financial depth) makes the introduction of innovative retail services uneconomical. In turn, the public are deterred from using the banks, partly because services are poor, but also because holding bank deposits is unattractive given the high rates of inflation. It is likely that a combination of sustained low inflation (which might encourage the public to operate current [checking] accounts for payments purposes) and greater competition will be needed if retail services are to improve."

- Banks that had foreign equity participation (for example, Barclays and Standard Chartered) remained generally profitable. Even though the government had equity participations in these banks and they had to lend within credit directives issued by the central bank, they were able to resist most of the pressure to lend to unworthy borrowers. They were able to maintain generally conservative credit policies and lent primarily to the more credit-worthy borrowers--usually the larger private sector firms--within the priority sectors defined by the credit guidelines. Where loans were made in riskier sectors such as agriculture, the foreign-owned banks protected themselves with central bank guarantees. Foreign ownership appears to have

provided some protection against government interference in lending decisions which was pervasive in the state-owned banks.

- There remained cases of financial distress involving a state-owned bank and private sector banks. The sources of such distress--foreign exchange exposures and insider lending, as opposed to political interference when the banking system was state-dominated--point to the need for prudential regulation and supervision in a liberalized private-sector-based financial system.

- Improvement in the efficiency of credit allocation by banks is still largely constrained by macroeconomic instability--large fiscal deficits financed partly through domestic borrowing; unsterilized balance of payments surpluses that have led to relatively high and variable rates of inflation and high nominal interest rates. Due to the high inflation rates, real interest rates on many classes of deposits are negative. Government securities offer returns comparable to private sector lending rates. Also, in an attempt to restrain monetary growth, bank lending has been constrained by high reserve ratios, and therefore lending remains very low relative to GDP. Hence the private sector remains essentially crowded out of credit by the public sector.

- While the prudential regulatory framework and supervisory capacities of the central bank (the Bank of Ghana) were strengthened, they remain to be tested as banks expand private sector lending, and privatization and new entrants result in greater competition.

- Conclusion: Though there has been improvement in the banking system, it performs "very little intermediation between savers and borrowers in the private sector," and financial markets remain shallow. The reforms therefore "have probably had only a limited impact on enhancing the efficiency of intermediation in banking markets. Reducing inflation is essential if financial deepening and an expansion of lending to the private sector is to be attained."

Kenya

Since the mid-1980s, Kenya has had one of the most developed and diversified financial systems in SSA. This was partly as a result of the liberal issuance of licenses for new financial institutions, which led to a rapid proliferation of institutions, especially NBFIs. Most of these institutions, however, were weak and, because the financial system was dominated by the four largest commercial banks, they had to engage in highly risky business activities to survive (Mwau, 1996). This led to financial system distress that overwhelmed the capacity of the central bank to undertake effective supervision.

Deschamps and Bonnardeaux (1997)

The World Bank's Financial Sector Adjustment Credit (1989-90)

The restructuring of the banking sector was judged to be largely unsuccessful:

- Some financial institutions that were identified for closure are still operating.

- There were delays in the planned merging of institutions, which allowed for substantial asset stripping that further damaged the banks' financial condition.

- Ten institutions earmarked for recapitalization have still not been recapitalized.

- The conversion of several NBFIs into banks swelled the number of banks to 70, many of which were small, undercapitalized and overburdened with loan arrears.

- By 1993, the financial sector was fragile and unsound, with solvent and near-insolvent financial institutions accounting for an estimated 50% of total assets in the system.

- Lack of success of the reform efforts was due to: the absence of a strong commitment on the part of authorities; lack of political will and weight on the part of the central bank to promote reforms; poor supervision and regulatory enforcement-- "implementation... consisted mainly of window-dressing."

- There remains much political intervention in the lending and management decisions of banks--pressure to lend to the government, weak and inefficient parastatals, and to powerful well-connected clients. Because of the deterioration of the judiciary system, banks were unable to enforce their legitimate financial claims in court.

Mwau (1996)

Examines financial reforms in Kenya in the context of the GATS. He concludes that reforms have been inadequate and of limited impact, and therefore not sufficient to enable Kenya to benefit from the GATS:

- The two largest government-owned banks were partially privatized, with their shares floated on the stock exchange. There are plans to further increase the share of private ownership in the banks, with the government reducing its stake to a minority ownership.

- Development finance institutions are to operate on a commercial basis, without monopolies, and charging free market rates.

- Some degree of financial deepening and innovations in the form of new financial instruments and services, including credit cards and Automated Teller Machines (ATMs).

- Improvement in the operations of the money market; introduction of new money market instruments such as Repurchase Agreements for government securities and development of a secondary market for Treasury Bills, which can be traded on the stock exchange.

- Revitalization of the stock exchange, on which shares of recently privatized firms, including Kenya Airways and the two largest government-owned banks, have been listed.

However:

- There was little increase in competition in the industry, except in the foreign exchange markets with the introduction of bureaux de change in January 1995.

- Banking services have hardly improved, and may in fact have worsened.

- Political influence and government interference remain pervasive--banks owned by politically powerful individuals still enjoy preferential treatment such as liberal credit and rediscount facilities from the central bank and the freedom from punitive measures when they failed to meet statutory financial obligations: these privileges are otherwise unavailable to other financial institutions.

- Several "constraints that have prevented the emergence of a truly efficient and competitive financial sector":

-- Central bank lacks autonomy and authority--due to lack of political support/backing, such as in the licensing of financial institutions and enforcement of prudential regulations and supervision, thus allowing political interference and influence of special groups.

-- Slow progress on the privatization of financial institutions

-- Capital controls remain and currency is still not fully convertible

-- Inadequate regulation and supervision of capital markets

- There needs to be a firm foundation for an efficient payments system, including enforcement of the legal and regulatory framework governing payments transactions.

- Basic infrastructure--power, telecommunications--remains poor; this hampers the smooth functioning of the payments system, and forces institutions to invest in their own power and communications systems, which entails additional costs of providing financial services.

Mozambique

1992-94

The reforms were designed to bring about: entry of new private banks into the system; separation of the Bank of Mozambique's central banking and commercial banking operations, to result in the creation of a newly capitalized Banco Comercial de Mozambique (BCM). The program also

included provision of technical assistance to the central bank; training of bank staff; and strengthening of institutional capacity.

The reform program was considered a failure:

- BCM was not restructured to operate as a profitable, commercially-oriented bank--continued to lend to enterprises, many state-owned that did not service their debt. The central bank remained the principal source of liquidity. BCM was eventually privatized but this was viewed as a less-than-ideal compromise between the government and the World Bank's objectives.

- BCM's accounts remain in disarray, with suggestions of material fraud being leveled at bank management.

Nigeria

Financial reforms were launched in the mid-1980s and precipitated a financial crises from which the country is yet to recover.

Soyibo (1996)

- Several new merchant banks, commercial banks, and NBFIs were established. Most of the NBFIs (primarily finance houses and primary mortgage finance institutions), many of which were affiliated with banks and insurance companies, were poorly capitalized and weakly regulated and monitored.

- Changes in banking laws facilitated the evolution of universal banking as the dividing line between commercial and investment banking became fluid.

- The entry of several new institutions resulted in a lot of competition and some financial innovation (new financial instruments, computerization/automation of services, ATMs, innovative approaches to management and marketing).

- Privately-owned Community Banks and government-owned People's Banks were established to link formal and informal financial sectors and provide services to rural areas and microenterprises. However, Community Banks were abused by influential locals and nearly half of all community banks became insolvent.

- The problem of nonperformimg loans remained unsolved and banking officials advocate securitization as a strategy for addressing the problem.

- Reforms suffered from bad sequencing and poor planning.

Lewis and Stein (1997)

- Financial liberalization created a "chaotic speculative bubble" which resulted in disastrous consequences for the banking industry and the economy in general.

- By the early 1990s, government ownership of many institutions had been reduced, and there were several new entrants with a "broad range of fiscal health and entrepreneurial tendencies." The number of banks tripled over a five-year period, and there was an explosion of NBFIs, which were largely unregulated, and several bureaux de change were established. However, the extensive connection between banks and NBFIs created new "systemic vulnerabilities."

- Many merchant banks and other financial institutions were established primarily for the purposes of foreign exchange dealing, and huge profits were obtained through foreign exchange and interest rate arbitrage. Many of the institutions simply engaged in rent-seeking and speculative activities rather than conventional intermediation. Several were also involved in fraudulent activities, including several pyramid ("Ponzi") and capital export schemes.

- Extensive program of privatization of mainly insurance companies and development finance institutions, which spurred much trading activity on the stock exchange.

- Privatization of commercial and merchant banks was marred by instability, insolvency of some of the banks, and "a few pitched struggles among shareholders and management."

- In general, the privatization program was not successful: political concerns led the government to consider renationalization of banks but pressure from the domestic private sector and the international financial institutions (IFIs) forestalled such a decision.

The financial reforms were judged to have failed largely because:

- Prudential regulatory and supervisory systems were inadequate and overwhelmed, resulting in a virtual collapse of the financial system.

- The highly politicized economic environment, erratic and uncertain macroeconomic policies, political interference, influences of political constituencies and rent-seeking domestic elite, and rampant corruption impeded progress.

- Even as the number of banks and other financial institutions grew considerably, there was a relative decline in investment, lending and financial savings/GDP ratio.

- The manufacturing sector was devastated by scarcity of credit and its high cost for most small- and medium-sized domestic firms--there was considerable deindustrialization by the early 1990s, partly due to the growth of speculative financial activities.

- By 1993, the assets of insolvent banks, and those in jeopardy, were nearly two-thirds of the total bank assets and almost three-quarters of deposits in the financial system.

- The uncertain and adverse political situation in 1993 fomented a run on banks that brought the system to near paralysis.

Tanzania

Deschamps and Bonnardeaux (1997)

Financial Sector Adjustment Credit, 1991-95

The reform program sought to establish an efficient market-oriented financial system through: fostering indirect methods of monetary policy control; strengthening bank regulation and supervision, and reviewing accounting and auditing standards; promoting entry of new private sector banks (including branches of foreign banks); and restructuring existing state-owned banks, especially the overhaul of the state-owned National Bank of Commerce (NBC), which, in the late 1980s, had more than 80% of total bank deposits.

- Progress on the reforms has been judged as slow and only minimal:

- Government-owned banks were recapitalized as planned; however there was little bank restructuring, particularly with respect to NBC. There remained a lack of an effective banking culture in NBC, with inefficient operations and management--NBC continued to lend to nonperforming borrowers, including weak parastatals; by 1994, non-performing loans had again climbed to 50-70% of outstandings.

- NBC remained dominant in the banking sector, essentially insolvent, and still suffers from a huge overhang of non-performing loans.

- There was some success in improving the Bank of Tanzania's technical skills in bank supervision. However, bank supervision remained weak, which contributed to the crisis of government-owned banks.

- Accounting and financial disclosure standards remained poor, allowing only "rudimentary measurements of non-performing assets in problem banks."

- According to the authors, the lack of success was due to:

1. the poor macroeconomic environment, which was ill-suited to successful bank restructuring--during the program, economic conditions deteriorated and the government felt the need to finance huge government borrowing, which was not conducive to the restructuring program.

2. Lack of commitment by government and the state-owned banks: there was resistance to restructuring and privatization, as well as reluctance to provide the banking system with the needed independence and autonomy--the government continued to influence in detrimental ways the lending decisions of state-owned banks.

3. Authorities' limited skills and understanding of the mechanisms needed to implement bank restructuring, and the central bank's lack of autonomy or authority to halt bad lending practices by state-owned banks.

- NBC, whose restructuring was critical to the program's success, was neither prepared nor willing to undertake the difficult but needed internal measures that would bring about its improved health and efficiency.

- The debate on financial sector reform remains politically highly charged, on issues such as: the importance of preserving the integrity of the country-wide payments system (an argument used against the break-up of NBC); and the need to ensure continued access to financial services by clients served by NBC's money-losing branches. Difficult political decisions were postponed, "reflecting a lack of commitment to reform, if not lack of clarity as to the strategies best suited to reforming the financial system in a comprehensive, suitable way."

Uganda

Deschamps and Bonnardeaux (1997)

Financial Sector Reform Credit, 1993.

The reform program was instituted to restore the health and credibility of the financial system, specifically through the development of dedicated restructuring plans for the two government-owned commercial banks that dominated the system, the Uganda Commercial Bank (UCB) and COOP, which were technically insolvent and also suffered from an acute liquidity crisis. The outcome of the program was deemed to be less-than-satisfactory:

- Three years after initiation of the program, the sale of UCB has still not been initiated. At first, delays were due to a lack of commitment by the government and UCB management to the restructuring effort; then the government decided on recapitalization rather than sale of the bank.

- Uganda's banking sector remains in deep crisis, with non-performing assets still in excess of 50% of outstanding assets.

- The capacity of supervisory agencies was strengthened, but doubts remain about the central bank's capacity to manage future problems--it was unable to intervene vigorously in the recent failure of two small private banks.

- There remains a lack of skilled manpower to implement reforms.

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