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to Improve Agricultural Marketing Systems

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TOWARDS AN AFRICA BUREAU AGRICULTURAL MARKETING STRATEGY AND ACTION PLAN

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JUNE 1990

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**Towards an Africa Bureau Agricultural Marketing
Strategy and Action Plan**

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Centrally funded by A.I.D., S&T/RD**

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List of Acronyms

ADC	Agricultural Development Corporation (Somalia)
AFR/TR/ANR	Agriculture and Natural Resources Division of the Office of Technical Resources, Africa Bureau, A.I.D./Washington
AGSM	Agricultural Services and Marketing Division of FAO
A.I.D.	Agency for International Development
AMIS	Agricultural Marketing Improvement Strategies Project, funded and managed by the Office of Rural and Institutional Development of the Bureau for Science and Technology, A.I.D./Washington
AR	Applied research
CDSS	Country Development Strategy Statement (prepared periodically by USAID field missions)
CESA	Commission Nationale d'Evaluation et du Suivi de la Stratégie Alimentaire (Mali)
CFDT	Compagnie Française pour le Développement des Textiles
CMDT	Compagnie Malienne du Développement des Textiles
CIF	Cost, insurance, freight
COLEACP	Comité de Liaison Europe-Afrique-Caribes-Pacifique pour la Promotion des Fruits Tropicaux, Légumes de Contre-Saison, Fleurs, Plantes Ornamentales et Epices
DFA	Development Fund for Africa
EC	European Economic Community
FAO	Food and Agriculture Organization of the United Nations
FENU	Fonds d'Equipement des Nations Unies
FEWS	Food Early Warning System (Somalia)
FSA/CA	Food Security in Africa Cooperative Agreement (implemented by Michigan State University and funded by A.I.D.)
GTZ	Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation)
IARC	International Agricultural Research Centre

ICRISAT	International Centre for Research in the Semi-Arid Tropics
IFPRI	International Food Policy Research Institute
ITC/MNS	International Trade Centre, Market News Service
LPMC	Liberian Produce Marketing Corporation
M&E	Monitoring and evaluation
MADIA	Managing Agricultural Development in Africa (World Bank managed study)
MDB	Marketing Development Bureau (Tanzania)
MSU	Michigan State University
ONERA	Office National d'Exploitation des Ressources Animales
OPAM	Organisation des Produits Alimentaires Maliennes
OPIC	Overseas Private Investment Corporation
PI	Pilot innovation
PVO	Private voluntary organization
RA	Rapid appraisal
S&T	Bureau for Science and Technology, A.I.D./Washington
SCP	Structure, conduct, performance paradigm (of industrial organization theory)
SIM	Système d'Information des Marchés (marketing information system)
TCDC	Technical cooperation between developing countries
UNDP	United Nations Development Programme
USAID	U.S. Agency for International Development (usual designation for A.I.D. field missions)

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Any errors or omissions are the responsibility of the author. The views in this paper do not necessarily represent the views or policies of the Africa Bureau or the Bureau for Science and Technology of A.I.D.

Executive Summary

This paper represents an attempt to assist the Agriculture and Natural Resources division of A.I.D.'s Africa Bureau (AFR/TR/ANR) in formulating a strategy and action plan for the broad area of agricultural marketing. The paper has several key objectives:

1. Articulate a multidisciplinary systems approach for developing agricultural marketing systems in Africa. The approach incorporates policy analysis and reform, technological change, institutional design and evaluation, system organization and human capital development.
2. Examine the benefits of applied agricultural marketing research, policy reform programs and marketing systems investments.
3. Review selectively A.I.D. and other major donor experiences in funding agricultural marketing projects and policy reform programs in Africa, and summarize important lessons learned from these experiences.
4. Formulate a strategy for the Africa Bureau of A.I.D. and elements of an action plan for fostering agricultural marketing system development in African countries.
5. Discuss methods of classifying African countries with respect to stages of marketing system development to help assist A.I.D. in formulating policies, programs and projects for groups of countries with quite different characteristics.
6. Lay out a research and development process by which A.I.D. might assist African countries in improving local capacity for undertaking applied marketing system research and development and in monitoring and evaluating the impacts of marketing policy reform and liberalization programs.

The paper recommends that the Africa Bureau take a food systems approach to agricultural marketing and focus efforts on improving the performance of specific commodity subsystems or subsectors. The food systems approach breaks down arbitrary distinctions between agricultural production, agricultural marketing, and agricultural policy and emphasizes interrelationships and coordination among different stages of commodity subsystems. Rather than view agricultural marketing solely as a series of discrete functions or activities, such as assembly, bulking, transport, storage, processing and distribution, it is preferable to analyze it as a set of interrelated functions. Further, the economic viability of commodity subsystems is profoundly affected by macroeconomic conditions, trade and agricultural policies, the regulatory environment and investment climate.

The notion that system performance falls short of expected norms usually motivates efforts to improve marketing systems. The performance of marketing systems is typically and initially evaluated against static efficiency measures, which focus on analysis of the technical efficiency (physical input-output ratios) and operational efficiency (costs and returns) of transport,

storage and processing. These measures are useful in helping to evaluate the efficiency and competitiveness of an agricultural marketing system at one point in time. Marketing systems are constantly changing, however, and attention needs to be paid to dynamic evolution and dimensions of performance.

Key dynamic factors are the rate and nature of change in market system organization and institutional arrangements for coordinating agricultural production and marketing. As a marketing system develops, firms increasingly specialize. Exchange flourishes and different exchange (or transfer) mechanisms emerge to handle risk and ensure supplies, prices and acceptable produce quality. As individual firms grow, they can invest increasingly in improved technology, management and upgrading of human capital. This allows for achievement of scale economies, which lowers the cost of performing marketing functions. At the same time, agricultural products are better graded, more attractively packaged and presented, in some cases processed so they can be prepared more conveniently, and provided in convenient locations. In effect, greater value is added to agricultural products. Marketing margins expand to accommodate the costs of adding value, and farmers capture a smaller share of the retail (or consumer) price. Yet consumers are better off, because agricultural products have added attributes for which they are willing to pay. A.I.D. analytical efforts should focus on examining how marketing systems change and how firms grow, handle risk and learn to use and interpret market information, and on prescribing measures to facilitate system development.

Most of the literature on agricultural marketing has been written by agricultural economists and agribusiness analysts. Much of this literature is comparable in its assumptions and analytical focus, although agribusiness analysts usually put more emphasis on promotional efforts and demand development (shaping/creating tastes) than economists. Yet many of the problems affecting marketing systems are not purely economic in nature. Effective food systems research and development needs to be multidisciplinary in order to address complex issues and technical questions. Economists can provide effective leadership in assessing alternative technologies, management systems and institutional arrangements, because they are trained to analyze incremental costs and benefits.

Constraints to marketing systems development are multiple, simultaneous and constantly changing. Attention needs to be paid to macroeconomic and policy factors, as well as microeconomic constraints and potential for improvement in commodity subsystems. Agricultural marketing systems are more likely to improve incrementally rather than through sudden and dramatic advances.

The section on lessons learned from agricultural marketing research, projects, programs and policy reform discusses successful interventions by African governments and donor agencies. Infrastructural investments are critical to marketing system development. Infrastructure is defined not only as the road network but as investments in ports, airports, railways and accompanying facilities, electricity grids, water supply, waste and sewage facilities and communications. A.I.D., World Bank and other donor investments in rural roads have contributed in a major way to expansion of marketed surplus and increased food shipments from production zones that were

previously inaccessible. As fewer resources are available to fund new road construction, donors and African governments are putting more and more emphasis on improved maintenance of the existing road system. Investments in ports, airports and communications are paramount in linking African countries to international markets for exported commodities. Decentralization of agro-industry, particularly processing, can be effectively promoted by investing in electrification, water supply and sewage/waste facilities in secondary cities or market towns. Given the high transport costs in Africa, decentralized investments in agricultural processing merit consideration.

Technological change is an important factor in food system development. African governments and donor agencies have focused on agricultural production technology during the 25-30 years since independence, usually operating from the assumption that the critical need was to augment agricultural production and generate marketed surpluses before paying attention to marketing issues. This view, though perhaps justifiable in the poorest African countries, reflects an unfortunate production bias. Production decisions by farmers are marketing decisions, as any production decision is a decision to produce for a market (whether internal to the household, local, regional or international). As African countries generate greater marketed surpluses, their governments and donors will need to pay more attention to non-farm technology issues. Improving the technology of input handling, storage and packaging will help farmers obtain high-quality inputs. Improving post-harvest handling, processing, grading/sorting, and storage technologies will also contribute significantly to marketing system development. Even improving the capacity to collect, process and disseminate market information has a technology dimension that should not be neglected.

Agricultural development during the 1980s focused primarily on agricultural and macroeconomic policy. This emphasis was suitable given the distortions and disincentives created by poorly conceived and often conflicting policies in many developing countries. Donor agencies have responded by pressuring African governments to examine the effects of policies and regulatory measures carefully and make necessary reforms. This effort is beginning to pay off in quite a few African countries, particularly where governments have been committed to implementing the reforms diligently, and where monitoring and evaluating of impacts have facilitated flexible and timely adjustments in implementation of reform programs.

Much policy reform currently underway in African countries is essentially marketing policy reform or liberalization. Market reform programs usually include some or most of the following elements: rescinding parastatal statutory monopolies; legalizing private trade in agricultural products; removing inter-regional commodity movement restrictions; streamlining regulatory procedures; and reforming exchange rate and price policy. In many cases market liberalization has had a positive short-run effect. It is becoming increasingly clear, however, that longer run improvement in marketing systems requires more than just a policy and regulatory environment that allows market signals to provide incentives to private marketing agents. Constraints such as inadequate access to capital, market information and market extension services, poor infrastructure and marketing facilities, weak management skills and costly, inefficient technology often limit the ability

of marketing agents to respond to market incentives. Micro-level surveys of the organization, operations and performance of marketing agents (e.g. traders, processors), as well as their perceptions of reform program impacts, further needed reforms, and constraints to improving their operations and overall system performance, can provide potentially valuable information to policymakers.

Many analysts consider market information to be a prerequisite for the emergence of competitive and efficient food systems. Market information goes well beyond price data to production estimates and forecasts and information on stocks in different regions, imports/exports and world market conditions. In the African context, market information is potentially valuable to both policymakers and private marketing agents. Designing a workable system that generates and interprets useful information for these two different audiences is not easy. As a general guideline, marketing information systems need to be simple to be sustainable. Analysts trained in the West are tempted to overdesign ambitious data collection and analysis programs, which tend to go well beyond the shorter term needs of policymakers and private agents. Longer term programs of research can generate useful new knowledge about marketing systems that serves as a valuable input into the design of a market information system, however.

Although there is much current interest in market liberalization, parastatal divestment and privatization, there are few explicit guidelines for reorganizing agricultural marketing systems and devising alternative institutional arrangements for improving system performance. In addition to broad-based policy reform, there is scope for experimentation with alternative institutional arrangements such as contract farming schemes, joint ventures, farmer organizations, trade associations, and licensing agreements and management contracts with multinationals. The knowledge base is thin in this area, with the exception of recent documentation of contract farming schemes (SARSA, 1987 and 1988; Minot, 1986; Glover, 1986). Some studies have extolled contract farming as generating employment and income. Others have vilified these schemes as exploiting cheap rural labor or, where cash crops substitute for food crops, leading to malnourishment of producer households. The few studies that have carefully analyzed costs, benefits, rights and responsibilities, and distributional impacts do highlight how complex and flexible contract schemes need to be in order to adapt to changing market conditions, political factors, and grower expectations.

Another alternative institutional arrangement is joint ventures, which are an increasingly popular means of teaming local entrepreneurs with foreign capital, technology and marketing management. Many farmer organizations, created by government mandate and often run by a government umbrella agency, have performed poorly. Examples of successful, enterprising farmer-owned and managed organizations are few, but there is scope for experimentation and selective public assistance to strengthen financial and marketing management and technical skills in post-harvest handling, storage, processing and packaging.

Strengthening local capacity in policy analysis has become a high priority in recent years in Africa. The World Bank-managed MADIA (Managing

Agricultural Development in Africa) study has called for greater public sector capacity building to both substitute for and make more effective use of technical assistance. The Food Security in Africa Cooperative Agreement has advocated strengthening local capacity in African countries to do applied research, policy analysis and extension of policy findings. There is clearly scope to expand the supply of trained, public sector analysts, as well as to improve the clarity and quality of marketing studies, monitoring and evaluation of policy reform programs and policy analysis in African countries. Strengthening private sector capacity in the same areas might build an autonomous analytical capacity not as subject to strong political pressure as public sector institutes. A.I.D. and other donors could support private sector skills in financial analysis and management, interpretation of market information, performance of marketing functions, and mastery of improved technology. The mix of A.I.D. investments in building public and private sector capacity will vary from African country to country, and from commodity subsystem to subsystem. It is important to note, however, that the private sector's ability to improve skills may be as constrained as its access to capital, technology and market information.

Attempts to classify agricultural marketing systems need to go beyond using standard macroeconomic, sectoral and trade statistics, found in CDSs, the World Bank Development Reports, U.N. statistical abstracts and FAO Production and Trade Yearbooks. Most of the data presented in these sources are of limited usefulness for comparing market system evolution in different African countries. Efforts to devise indicators specific to agricultural marketing face data limitations. As an alternative, the evolution of marketing systems in Africa (and worldwide) can be broken into stages; characteristics of input and output markets are broadly similar within each stage. The multiple forces that drive marketing system evolution include income growth (and distribution), levels and rate of urbanization, technology development and use, the extent of industrialization, the legal environment, the organization of agricultural markets, transport and communications infrastructure, electrification and water supply, the role of the government in marketing, and the development of financial institutions and instruments.

If the Africa Bureau devises a classification scheme, it must be flexible. Perhaps a key first classification variable is the extent to which the government of an African country has demonstrated commitment to policy reform and market liberalization (or already has created a positive economic and investment climate). The World Bank classifies African countries as strongly reforming, weakly reforming and non-reforming. Beyond this broad governmental orientation to marketing, classification is more likely to be meaningful if it is focused on commodity subsystems. In any given African country the organization and performance of commodity subsystems may vary significantly. Traditional export crop marketing may be highly integrated and well-coordinated, with heavy public sector participation. On the other hand, marketing of staple food crops is typically more informal and fragmented and less organized, even where grain parastatals have attempted to monopolize staple crop assembly, storage and distribution. A handful of exporting firms, which contract with farmers to obtain supplies and minimize price risk, often dominate marketing of non-traditional exports, such as horticultural products.

Going beyond classification to fostering a process of agricultural marketing system development will require an emphasis on six key areas:

- o Building both public and private sector capacity in policy analysis, establishing market information systems (and interpreting the data they generate), financial analysis, marketing management, improved marketing system technology, and more efficiently performing marketing functions;
- o Engaging in effective policy dialogue, informed by empirical observation rather than ideological predisposition. This in turn requires (see next point):
- o Simple yet effective monitoring and evaluation of the microeconomic impacts of policy reform, and clearly communicating findings to policymakers;
- o Determining the right public and private sector mix in investments in marketing system infrastructure, technology research and development, market information systems, and performance of marketing functions;
- o Selectively investing in upgrading specific commodity production and marketing systems;
- o Increasing attention to the potentially positive role that local agribusiness can play, both alone and in collaboration with foreign investors, and public sector facilitating measures necessary to enhance chances of success; and
- o Supporting full cycles of commodity subsystem a) applied research, b) pilot-testing of innovations in technology, management, marketing information, institutional arrangements and subsystem organization, and c) monitoring and evaluating the impacts of innovations.

1. Introduction

This paper was written to assist the Agriculture and Natural Resources division of A.I.D.'s Africa Bureau (AFR/TR/ANR) in formulating a strategy and action plan in the broad area of agricultural marketing. It follows other Africa Bureau strategy papers completed on agricultural research and natural resource management and policy. The paper also builds on an earlier report prepared for the same office by Ithaca International, Inc. entitled Agricultural Markets and Economic Development in Sub-Saharan Africa (June 1989).

An underlying issue in this paper is why A.I.D. should be concerned with agricultural marketing systems improvement as part of an agricultural development strategy in the first place. A key theme is the need for A.I.D. to take a market-oriented, demand-driven and private sector led approach to food systems development. The paper will assess key constraints to expansion and improvement of food systems from a marketing perspective. The development of efficient and competitive agricultural commodity markets depends on increased specialization and exchange in the food system, technological innovation, and changes in economic organization that capture scale economies and spread risks. These factors can and should receive attention and support from A.I.D.

1.1 Background

As the lead office on agricultural development issues in the Africa Bureau, AFR/TR/ANR took the initiative in 1989 to develop a coherent and consistent strategy in agricultural marketing for the Bureau. AFR/TR/ANR commissioned a first paper by Ithaca International that emphasized marketing policy reform and liberalization and the need to foster and strengthen competitive and efficient agricultural markets. AMIS was asked to do a follow-up study describing a consensual food and commodity systems approach to agricultural marketing development issues. AMIS was also charged with discussing and clarifying the following:

- o Linkages between macro-marketing policy (i.e. reform and liberalization) programs and micro-level commodity systems improvement;
- o The interrelationship among policies (macroeconomic, trade and agricultural policy), institutions (public-private roles, alternative institutional arrangements), technology, marketing management and infrastructure in the development of agricultural marketing systems; and
- o Broad institutional preconditions for facilitating market system development, such as property rights, inviolability of contracts, legal recourse, and transparency of public organizations (and their operations) and government policies and programs.

This paper is intended to assist AFR/TR/ANR staff in the Program and Analysis Branch in developing an action plan on agricultural marketing for the Africa Bureau. The action plan will guide USAID Missions in Africa in identifying, designing, implementing and monitoring/evaluating agricultural marketing policies, programs and projects. In the ideal, this paper will help AFR/TR/ANR consider suitable marketing policies and investments for African countries with different political economies, macroeconomic and policy environments, resource endowments (including human capital), degree of integration with world markets, and at different stages of marketing system development.

1.2 Objectives of the Paper

This paper has several key objectives:

1. Articulate a multidisciplinary systems approach to the development of agricultural marketing systems in which policy, technological, institutional, system organizational, and human capital dimensions of marketing are systematically examined and brought to bear on programs of system improvement.
2. Justify the need for applied research on agricultural marketing and for programs of agricultural marketing policy reform and marketing systems improvement.
3. Summarize important lessons learned from the experience of A.I.D. and other major donors in funding agricultural marketing projects and policy reform programs in Africa.
4. Formulate a strategy for the Africa Bureau of A.I.D. and elements of an action plan for fostering agricultural marketing system development in African countries.
5. Discuss ways in which AFR/TR/ANR might classify African countries with respect to stages of marketing system development that could assist A.I.D. in thinking about appropriate policies, programs and projects for groups of countries with quite different characteristics.
6. Describe a research and development process by which A.I.D. could assist African countries in improving local capacity for applied marketing system research and development and monitoring and evaluating the impacts of marketing policy reform and liberalization programs.

1.3 Organization of the Report

The remainder of this report is organized into five sections. A food systems approach to agricultural marketing is presented in section two. Section three reviews lessons by A.I.D., other donors and African country governments in the areas of infrastructural investment, technological change and adaptation, marketing policy reform, experiments with alternative institutional arrangements, and upgrading of human capital. Examples from

agricultural marketing research, policy reform, market liberalization programs and marketing projects in Africa are used selectively to illustrate key points. The fourth section discusses ways in which AFR/TR/ANR might attempt to classify African countries for programmatic purposes. Section five proposes a process by which A.I.D. can foster the development of competitive, efficient and progressive agricultural marketing systems. Such a process includes diagnostic assessments, applied research, pilot innovations, and monitoring and evaluation of innovations and policy reform programs.

2. A Systems Approach to Agricultural Marketing

Agricultural marketing has received increasing attention since the mid-1980s as an important ingredient in food systems development in African countries. This section addresses the following issues:

- o What are the food systems and commodity subsystems approaches?
- o What are some important measures or indicators of marketing system performance?
- o How can marketing system research and development be most effectively fostered?

2.1 The Food System and Commodity Subsystem Approaches¹

Many analysts and policymakers tend to think of agricultural production, marketing, trade and policy as distinct and separable activities and areas for intervention. In practice, distinctions blur and there is much overlap in what are often considered different subject matters and analytical categories. As an example, agricultural policy in the African context is often concerned with issues of market reform or liberalization. Hence, what is usually referred to as agricultural policy is very often agricultural marketing policy.

The food system and commodity subsystem approaches break down the distinctions between production, marketing, trade and policy and encourage analysts to think in terms of value-addition and exchange at each stage of the production-marketing-distribution system. A specific commodity subsystem is a vertical cut of the food system integrating input supply, production, marketing, and distribution for a given crop, tree or livestock product.

Systems approaches compel analysts to consider a broad range of possible factors influencing a given component of the system, as well as possible systemic interactions. Systems analysis offers decision-makers a framework for approaching and sorting out complex problems using practical, prescriptive multidisciplinary research. Although it is not possible to specify and trace all systems interrelationships, it is important to think about broad system influences and system consequences of marketing projects, programs and policies.

Agricultural marketing is as much of a productive activity as field crop production. Marketing adds time, place, form and possession utilities to the raw or unprocessed commodity coming from the farm. It is also important to note that agricultural marketing encompasses input distribution as well as product marketing. Agricultural marketing agents and processes link producers with intermediate and end users of their products. Considering agricultural production without paying attention to potential demand and marketing prospects when designing and implementing agricultural development projects

¹Key terms used in the body of this paper are defined in Annex 2.

typically leads to production gluts, low prices and discontented farmers. Unfortunately, far too many agricultural development projects illustrate this point all too clearly.

Figure 1 illustrates one way to depict the food systems approach. This shows each stage in the food system and how it is linked to the broader policy, regulatory, legal and financial environment. Implicit in the food systems approach is the notion that looking at marketing as a series of functions performed in moving (storing and transforming) agricultural products from the farmgate to consumers is limiting. Policy, regulatory, legal and financial dimensions are critically important in understanding the performance of commodity subsystems. The policy and regulatory environment affects incentives facing producers and marketing agents. The broader macroeconomic environment and macroeconomic variables, such as the inflation, wage rates, interest and exchange rates, also have an important effect on the incentives of food system participants and on food system performance. Policy, regulatory and macroeconomic variables are therefore key elements in effective food systems analysis.

For example, the exchange rate overvaluation common in African countries cheapens the local currency cost of imported agricultural products that compete with domestic production and marketing. This can undermine incentives of domestic producers and marketing agents to produce and distribute import-substituting commodities. An overvalued exchange rate also constitutes an implicit tax on exports of agricultural commodities, raising their cost to importers in foreign currency terms

2.2 Marketing System Performance: Static Efficiency Measures

Much of the literature on agricultural marketing in developing countries focuses on the competitiveness and efficiency of marketing systems. If marketing systems are efficient in performing key functions such as transport, storage and processing, they are likely to be competitive. Another commonly cited prerequisite of a competitive system is a market (or commodity subsystem) of enough participants at each stage of the system so that no single firm or small group of firms is able to set prices (and extract monopoly or oligopoly profits). The exact number of participants at any one stage sufficient to ensure competition varies from stage to stage and subsystem to subsystem. To illustrate, one would typically expect more participants involved in product assembly at the farm level or in rural markets and in retailing the commodity than at the wholesale or processing stages. In commodity subsystems where many people or firms perform similar functions in the same area and redundantly, systems are said to be atomistically competitive. This situation can deter growth and the achievement of economies of scale, since hyper-competitive firms operating on very thin margins are unable to accumulate capital to reinvest in business improvements and innovations.

Figure 1

Agricultural Marketing in a Food Systems Perspective

<u>POLICY ENVIRONMENT</u>	<u>PARTICIPANTS/STAGES</u>	<u>ASSOCIATED FUNCTIONS</u>
Macroeconomic and Trade Variables	Input Suppliers	R&D Input Manufacture/Importation
Regulations	Input Distributors	Extension
Legal System	Agricultural Producers	Post-Harvest Handling
Financial Policies and Institutions	Assemblers	Bulking
Investment Climate	Processors	Transformation
Government Role and Attitude Toward:	Wholesale Distributors	Storage Transportation Sorting/Grading
<ul style="list-style-type: none"> ● Research ● Direct Participation in the Food System ● Facilitating Private Sector ● Export Promotion 	Importers/Exporters	Breaking Bulk Arbitrage
	Retailers	Sales/Promotion
	Consumers	Convenience

During much of the past 30 some years, agricultural marketing economists have focused on developing efficiency measures and applying them in different industrial and developing country contexts. Marketing systems are said to be price or allocatively efficient in the following ways:

- o Across space. Differences in agricultural commodity prices among different markets and geographic areas should reflect transfer costs (transport, handling, losses, and transactions costs) plus a normal return to performing the spatial arbitrage function. Measures of spatial market integration have been devised using correlation coefficients for market prices or first differences in market prices (see Timmer, Falcon, Pearson, 1983; Ravallion, 1986; Timmer, 1987).
- o Over time. Differences in prices of storable agricultural commodities from one harvest to the next should reflect real storage costs, which include depreciation, interest and losses, plus a normal return to the temporal arbitrage function. Prices of storable commodities rise to a peak after harvest, shortly before the following harvest or when forecasts about the upcoming harvest are likely to be reasonably accurate and the expectations of producers and marketing agents are widely shared. Economic analysis of returns to storage of staple crops in Africa can be found in Southworth et al. (1979), Loveridge (1988) and Rassas et al. (1989).
- o In transformation or processing. Differences in the prices of unprocessed and processed agricultural commodities should reflect real processing costs (depreciation on plant and equipment, variable operating costs, labor costs) and a normal return to performing the transformation function. The relationship between price of unprocessed and processed products will depend in part on technical conversion ratios. Hence, technical efficiency (physical input-output relationship) plays an important role. Economic analysis of returns to processing of staple crops in Africa are found in Morris (1987) and Holtzman (1989).

Allocative efficiency has a broader definition in that it refers to how wisely resources are allocated among competing uses. Prices (and implicitly returns) provide signals to entrepreneurs who can invest scarce resources in any of a number of businesses or investment opportunities. In the context of marketing system development, investors can choose to allocate resources at the margin to strengthening the performance of different marketing functions. The measure of where potential returns are highest or marketing cost savings greatest guides investment choices. The efficiency with which resources are allocated depends heavily on how accurately prices and costs reflect what economists call opportunity and social costs.

Operational efficiency is really the economic analogue of technical efficiency. While the latter is concerned with physical input-output ratios, the former focuses on the cost-price relationships of individual firms. Firms are said to be operationally efficient if they perform a marketing function or marketing functions at a cost per unit that is competitive with other firms

costs of adding value plus a normal return to profit. Operationally efficient firms provide a quality product at the least possible cost. In an operationally efficient marketing system, marketing margins reflect the real costs of providing goods and services.

The above efficiency measures are useful for gauging the competitiveness of an agricultural marketing system (or any industry) at one point in time. Hence, they are essentially static. They do not capture either the direction or rate of change. They can be very useful measures early in the analysis of a marketing or commodity system, but their predictive and prescriptive power is limited. These efficiency measures assume that technology and institutions are given. They also provide limited insight into the issue of scale economies.

As an example, if returns to storage are judged to be excessive after carefully accounting for all the real costs and risks, the generalized policy prescriptions are typically to improve storage methods and perhaps construct more storage facilities. There are commonly no specific recommendations regarding appropriate scale of storage technology. Furthermore, harvesting methods and post-harvest handling practices may be more responsible for storage losses than storage methods per se. Finally, there is typically no input on whether additional storage should be owned and operated by private firms or parastatal organizations, or whether storage by one type or scale of firm/organization is performed more efficiently than by any other.

As a point of departure, the static efficiency measures provide useful indications of system competitiveness. They need to be supplemented, however, by analysis of scale issues, alternative institutional arrangements, and ways in which agricultural commodity systems are changing with respect to technology, management, standard operating procedures and sources and uses of information (see Shaffer et al., 1985).² In addition, the efficiency measures do not lead analysts to address issues of risk and uncertainty in agricultural marketing, and institutional arrangements for reducing, spreading or better managing risk.

The economic efficiency measures allow analysts to gauge marketing system competitiveness, holding constant institutions, infrastructure, technology, human capital and management. A given commodity subsystem can be efficient in a context where institutions are poorly developed, infrastructure is sparse

²A fascinating discussion and analysis of a wide range of factors affecting comparative economic development, including several market institutional, "politico-institutional" and "socio-institutional" variables, can be found in Comparative Patterns of Economic Development, 1850-1914 by Morris and Adelman (1988). Market institutional variables include "the importance of market compared with nonmarket transactions, the strength of medieval or mercantilist restrictions, the importance of functionally specialized institutions, and the geographical area over which institutions operated." (p. 64) Morris and Adelman classify a sample of 23 countries at three points in time (1850, 1870, 1890) as to the rate of spread of development of market institutions (see pp. 66-95).

and poorly maintained, technology rudimentary, human capital underdeveloped, and management mediocre. Similar to Theodore Schultz's efficient yet poor thesis regarding small farmers in developing countries, marketing systems may be efficient, yet poorly developed. Furthermore, the prescriptive power of the efficiency measures is limited in that they do not allow effective comparison between countries with poorly developed marketing systems and those with well-developed ones. In the emerging globalization of agricultural trade, this is a serious handicap.

2.3 Marketing System Performance: Dynamic Dimensions

As economies and agricultural marketing systems develop, the rate of change varies, depending on the nature of constraints at any given time and the strength of inter-sectoral linkages. The rate, direction and magnitude of change during any developmental period is not easy to predict or even to understand ex post. If dynamic factors or change are variable and unpredictable, then why be concerned about them in the first place? A.I.D. is in the business of fostering change and economic development. Efficiency gains are important but potentially limited within the context of a given macroeconomic, institutional, resource and technological framework. Economic development and marketing system development are not a process of merely equilibrating or fine-tuning. Movement from one stage or level of marketing system development to another can involve uneven, if not dramatic change, with attendant dislocation and losses to certain groups of food system participants. In the process of structural transformation, everyone does not necessarily benefit.

An illustrative example of reform is the operationally inefficient cereals parastatal facing rules of the game (pan-territorial and pan-seasonal pricing) that lead to allocative inefficiency. Changing the rules of the game from a statutory monopoly facing pricing inefficiencies to open and competitive participation in cereals marketing, as well as free market pricing or a variant thereof (e.g. where there is a minimum floor price) will lead to major organizational and operational changes of a dynamic nature. Achieving efficiency gains within the existing institutional and organizational framework would call for a different approach, such as concentrating on improving the marketing and financial management of the parastatal. Allowing the parastatal, as a monopsony, to set different buying prices in different production zones during various periods would not necessarily ensure a competitive and progressive marketing system. Without the discipline imposed by competition, the parastatal might pay, on average, lower prices to farmers, leading to a less than socially optimal investment in grain production.

One set of dynamic factors or dimensions is the rate at which marketing systems change structurally and the nature of these changes. Economic organization lies at the heart of structural change. Marketing system organization concerns the configuration and market power of firms within an industry (horizontal cut) or subsector (vertical cut). At the industry level, analysts need to examine the number and the market shares of firms, their interrelationships and conduct, and the resulting industry performance. At the subsector level, analysts need to examine the vertical organization of the subsystem, the number and types of firms at any given stage of the subsystem,

how they behave or interact with firms at adjacent stages, and how rights, responsibilities, risks and returns are distributed among firms at different stages of the subsystem.

Important forces shaping the organization of agricultural marketing systems are the imperatives to achieve economies of scale and scope. Economies of scale refer to the lowering of unit costs in performing a specific marketing function, typically achieved as firms grow, invest in improved technology and management methods, and improve workers' skills. Economic theory points out that firms in a competitive environment strive to lower their average production costs and that firms with average costs above the industry mean are forced out of business. Yet achieving scale economies is a dynamic process by which firms constantly strive to lower costs per unit of output and to increase productivity in production and marketing. Technological, management and behavioral (standard operating procedures for getting things done) factors need to be addressed to achieve non-marginal reductions in cost. Increasing the size of a marketing firm, whether public or private, does not necessarily ensure lower unit costs and greater productivity. If firms or marketing organizations grow too large, they may become increasingly difficult to coordinate and manage effectively, and per unit costs may rise.

Economies of scope refer to the gains a firm achieves through performance of one or more related marketing functions. Per unit costs of performing two related functions, such as input distribution and product assembly, are lowered, as firms use resources more efficiently and thus reduce transaction costs. In this case firms can use costly transport more effectively, hauling full loads of inputs to rural areas and agricultural commodities back to urban centers. To pursue this particular example further, a firm engaging in fertilizer distribution and product assembly in rural areas, for example, has better information about what areas or types of producers are the biggest and most effective users of fertilizer, and where marketed surpluses are most likely to be found. Given the dispersion of producers and high transport costs in Africa, this could also represent a significant cost-reducing advantage.

Another example of how economies of scope can reduce marketing costs is the case of wholesale traders handling more than one agricultural product. Economies of scope could be derived from collection of several commodities simultaneously, fuller and more cost-effective utilization of storage facilities, and spreading the cost of a wholesale distribution facility through sales of several commodities at the same time.

The evolution of an agricultural marketing system involves increasing specialization and exchange. In a relatively underdeveloped system, firms tend to perform several marketing functions at the same time. In some African countries, urban-based traders assemble staple food products in rural areas, transport them to urban areas for storage or sale, and even retail some food. They may also become involved in processing the food, although relatively rarely. This system is not ideal, as the traders might be efficient at wholesale buying and selling of commodities, but not necessarily at the storage, processing and retail functions. As a commodity marketing system

develops, specialists perform more and more marketing functions, developing the expertise and making the investments required to do the job at the lowest possible cost. As efficient specialists emerge, general traders disappear, because they cannot compete at performing specific tasks not related to buying and selling commodities.

Another dynamic factor in the development of marketing systems is the search for institutional arrangements for reducing, spreading and better managing risk. Agricultural production and marketing are inherently risky enterprises, given the biological nature of the production process and the perishability of most agricultural products. These factors are accentuated in much of Sub-Saharan Africa, where most production is dryland and dependent on rainfall, and where heat, humidity and pests affect commodity storage and shelf life. Investing in irrigation is one way to lower the risk of crop production shortfall. Contracting arrangements may be designed to reduce risks due to commodity price and producer income fluctuations, trader/processor supply availability, exchange rate variability, and other factors. As food and marketing systems develop, the proportion of transactions on spot markets and on an arms-length basis declines. Insurance schemes (for producers) and services (for traders) may also emerge to reduce the potentially devastating impact of quantifiable risks. Some processing and trading firms may invest heavily in agricultural production through extension, research and farmer training. In return, they are likely to demand legally enforceable guarantees from producers who receive these benefits.

The literature is fascinating on the institutional arrangements that tend to emerge when assets become highly specific to the production and processing of a particular good or service (see Williamson, 1979 and 1985). Clearly, the issues become less related to specialization and economies of scope and more to designing institutional arrangements for managing risk at adjacent stages of commodity subsystems, stabilizing or guaranteeing a minimum level of return for different parties in a given year, and binding potential competitors more closely in a mutually beneficial set of economic relationships as the costs of investments in hardware, training and social services rise.

A last dynamic dimension to marketing system evolution is the sources and uses of marketing information by firms in the food system. All firms in developing country food systems have access to and use market information in their production and marketing decisions. Information can range from local price movements from week to week to quantitative forecasts of future prices and interpretation of emerging trends in foreign markets. As food systems develop, the capacity of firms to generate, interpret and use marketing information in their marketing decisions increases significantly. More effective use of marketing information by some firms in the food system may give them a competitive edge. With the advent of the information age and the worldwide spread of microcomputer technologies, there have been quantum leaps in the availability and quantity of marketing information. Of course availability cannot be equated with intelligent selection and interpretation of marketing data and better production and marketing decisions.³ The rate at

³In fact, some observers would argue quite the opposite--that the explosion in information confuses potential users and buries them in often useless detail.

which firms learn to use the new hardware/software technologies and to glean and effectively use the marketing information which is most critical to marketing decisions will be a key element in their success.

Systems analysis is a useful approach for identifying and examining dynamic dimensions of marketing system development. Since effective systems analysis forces consideration of a broad range of economic, institutional, technological, political economy, and human capital factors and their interactions, the systems analyst has an intellectual predisposition to identify and examine dynamic dimensions. Good systems analysts think in terms of evolution of marketing systems and alternative paths of growth and development. They are essentially pragmatic and appreciative of the approaches and potential contributions of different disciplines, rather than wedded to one disciplinary framework. As discussed below, effective marketing system research is more likely to be conducted in a multidisciplinary setting than within a single discipline.

2.4 The Multidisciplinary Nature of Marketing System Research and Development

Because agricultural economists have written most of the literature on agricultural marketing systems, it tends to emphasize economic organization and economic factors or variables. Policy specialists stress macroeconomic, agricultural sector and trade policies and regulations. Commodity experts analyze commodity supply and demand conditions, forecast commodity prices based on probable future supply and demand, and assess prospects for expanding production and trade in particular commodities. Industrial organization analysts, who typically subscribe to some variant of the structure, conduct, performance paradigm, focus on food system organization (concentration, market shares, vertical dimensions), the effects of the organization on the competitive (or collusive) behavior of firms, and the resulting performance in terms of efficiency, equity and progressiveness.

Economists will probably continue to take the lead on analyses and discussions of agricultural marketing issues, but they typically need help in approaching marketing systems development matters with a true systems perspective. Since many analysts working on food policy and marketing issues in A.I.D. and other donor agencies are economists, it is important to consider this need. Marketing system constraints rarely are purely economic in nature, although economic analysis of costs and benefits can contribute significantly to rigorous assessment of technological, managerial, institutional, human capital development and infrastructural alternatives.

Marketing systems research and development must be multidisciplinary to be effective. Marketing constraints and development issues may require the expertise of any or most of the following specialists:

- o Agricultural economists
- o Policy analysts
- o Institutional analysts

- o Agribusiness specialists
- o Financial analysts
- o Marketing managers
- o Agricultural, transport, food processing/storage engineers
- o Post-harvest physiologists
- o Specialists in training and capacity building
- o Food technologists
- o Commodity specialists

The list could undoubtedly be longer. Coordinating the efforts of these specialists is another matter. Agricultural economists can often provide leadership, as they tend to be able to "reality-test" proposed improvements by examining likely costs and benefits. The only caveat is that economists need to develop a firm grasp of key technical issues. Otherwise, economic analysis may be based on false assumptions and unrealistic parameters.⁴

An illustration of how the expertise of various disciplines and perspectives can be brought to bear in efforts to improve commodity marketing may prove useful. One good example is promotion of cowpea marketing and export in Niger, which is the leading exporter of cowpeas to Nigeria, the world's largest cowpea market. Niger exports raw, unprocessed cowpeas, capturing no value-added other than assembling and transporting the raw product. Cowpeas are stored for short periods in Niger, which leads to a concentration of export shipments during the post-harvest period. At a minimum, value could be added by improving storage methods. Storing cowpeas in tropical climates in rudimentary facilities leads to heavy losses from insects. Addressing the storage problem requires the efforts of agricultural engineers, food technologists and entomologists, as well as economists to analyze costs and returns of alternative technologies. Niger cowpeas could also be processed into flour in Niger or simply decorticated in order to add value and lower transport costs. Whether enough value could be added through processing to cover additional costs of transformation and packaging requires economic analysis of costs and returns. Developing, pilot-testing, and disseminating improved cowpea processing and packaging technology could be addressed by mechanical engineers and food technologists. Analysis of Nigerian import policies and regulations affecting imports of processed food products is also required initially to determine whether any investment in technology development is merited.

⁴One way to qualify the results of financial and economic analysis is to perform sensitivity analysis, which shows how sensitive measures such as internal rates of return, domestic resource cost ratios, and net and effective protection coefficients are to changes in key variables (e.g. relative input and output prices, yields, processing conversion or transformation ratios).

The need for multidisciplinary efforts to address agricultural marketing constraints is also exemplified in the development of the Nepalese vegetable seed industry. Nepal has begun exporting radish seed to neighboring countries, particularly Bangladesh. However, enormous technical problems need to be resolved. Mechanical processing or conditioning of vegetable seed must be improved to produce a high-quality exportable product that competes effectively with the vegetable seed of other Asian suppliers. Vegetable seed legislation, policies and regulations need to be more precisely formulated and their likely economic impacts analyzed. Seed bulk and retail packaging requirements need to be better understood to reduce export losses and improve the presentability and marketability of Nepalese seed in regional markets. Finally, vegetable seed exporters require financial assistance to formulate bankable projects and prepare business plans. Economists, vegetable seed specialists, legal or institutional analysts, policy analysts, and financial analysts need to collectively address the multiple constraints.

2.5 Multiple Constraints to Food System Development

At any point in the development of a commodity subsystem or the food system, multiple constraints are likely to impede development. During the 1980s donor agencies, including A.I.D., strongly emphasized getting policies and prices right. Given the lack of attention to policies and macroeconomic conditions during the 1960s and 1970s, this emphasis was well deserved. Many development projects failed miserably, because producers and marketing agents lacked incentives to produce, buy, store, process and sell agricultural commodities. By the end of the decade, however, it had become clear to many analysts and donor officials that policy reform was a necessary but often insufficient condition for food system development and the emergence of vibrant, competitive commodity subsystems. Macroeconomic, price and trade policy reform might stimulate production of some local commodities and reduce imports of others (and disincentive effects of such imports) as a first-round effect. However, underlying "structural" constraints, such as inadequate agricultural production and marketing technology, poor infrastructure, weak public support institutions, credit constraints, limited human capital development and other factors are likely to reduce the impact of policy reform measures in the medium run.

The binding constraint at any one point in the food system development process is not always clearly identifiable. Problems tend to leap out at the observant analyst, but the appropriate order of priorities and sequencing of policy reform, institutional restructuring and experimentation, technology research and development, and investments in new infrastructure or better infrastructure maintenance are not readily discernible. In reality, there probably is no single binding constraint at any given moment. The constraints that impede food system development are multiple, and simultaneous efforts to resolve them are needed. Determining the extent of resources to allocate to removing any one constraint requires careful analysis and good judgment. Economists can help in this process by evaluating costs and benefits (or impacts) of alternative investments and policies ex ante. It is important to remember, however, that such analyses are only as good as the assumptions and data on which they are based.

3. Lessons from Agricultural Marketing Research, Projects, Programs and Policy Reform

This section is a selective review of lessons learned from African country and donor-funded efforts in agricultural marketing. It draws on the available published (and unpublished) literature, interviews with A.I.D. and FAO officials, and the author's professional experience during the 1980s.

3.1 Investments in Infrastructure

Infrastructure is often equated with road systems, but it actually encompasses other hardware elements, including the following:

- o Ocean, river and lake ports
- o Infrastructure and facilities at ports (quays, cranes, electricity, storage and cold storage, approach roads, loading/unloading facilities, customs clearance offices)
- o Internal waterways
- o International airports and domestic airstrips (and related facilities)
- o Railways (and service facilities)
- o Electricity grids and services in rural and urban areas
- o Waste and sewage treatment facilities
- o Communications, including telecommunications, telephone/telegraph grids

3.1.1 Rural Road Construction and Maintenance

Africa is a vast continent with low population density relative to Asia. Real transport costs are reported to be twice as high as those in Asia (Ahmed and Rustagi, 1987). Road construction costs are as high as any region in the world, which limits new road construction. Evidence is mounting that maintenance of road systems is increasingly inadequate and likely to become a greater constraint to transporting agricultural inputs and products in African countries in the future (Levy and Malone, World Bank, 1988). As a result, the World Bank has begun to place greater emphasis on strengthening maintenance capacity in African countries. There is a strong incentive for resource-poor governments to contract out some maintenance functions to efficiently run private firms.

A.I.D. has supported successful rural road improvement in several African countries, including Kenya and Mauritania (A.I.D. Impact Evaluation, Kenya Rural Roads, No. 26, 1982). In addition, construction of all-weather rural roads in North Shaba, Zaire during the late 1970s and early 1980s, along with introduction of improved maize seed and the clearing of fertile forestland, led to a dramatic expansion in maize production and rail shipments to

southern Shaba and the Kasai regions. In the transition from an area development project with significant A.I.D. resources over nearly 10 years, which was run by a separate, local project authority, to a Zairois government undertaking, the North Shaba Project faced difficult sustainability issues. The ability of the underfunded and poorly managed Office des Routes to maintain the roads leading to the railhead is questionable. Hence, A.I.D. has faced the same maintenance pitfalls as the World Bank and other donors.

3.1.2 International Airports and Export Infrastructure for Horticultural Shipments to Western Europe

Several African countries export significant volumes of fresh vegetables, including green beans, melons, Asian vegetables (such as okra) and asparagus, to Western European countries during the European off-season or counter-season. Kenya enjoyed the most striking success during the 1980s, becoming the leading Sub-Saharan African exporter by the end of the decade. In contrast, Senegalese exports of most horticultural products stagnated during the 1980s, never attaining the record volumes of 1978. Many factors contributed to the success of Kenya and the stagnation in Senegal, including the facilitating role of the public sector, the degree of commitment to quality control and shipment of the highest grade produce, the investment climate and private investment in the horticultural sector, infrastructure development and exchange rate flexibility (see Schapiro and Wainaina, 1989). The quality and range of international airline services and facilities at airports were also important factors, since shipping by air is the most rapid and effective means of transporting highly perishable fresh vegetables (fruit and ornamentals) long distances to competitive European markets.

While Nairobi and Dakar are both important regional hubs in Africa, international airline services are more regular and reliable in Nairobi. Kenya has also invested resources in improving cold storage, inspecting export shipments, and streamlining customs procedures. Inadequate cold storage capacity at the Dakar airport coupled with airline delays can be disastrous for Senegalese exporters when produce sits on the tarmac or in hot warehouses at the airport awaiting shipment. Inadequate hardware (cold storage) and airline management problems (especially those of Air Afrique) beyond the control of exporters undermine the quality of Senegalese horticultural exports in highly competitive European markets.

3.1.3 Electricity and Food Processing

Small-scale hammer and plate mills for grinding millet, sorghum and maize typically powered by electric motors or diesel engines are widely used in West Africa. Since electricity is generally available only in urban areas, use of electric motors is restricted to cities and market towns. Mills found in rural areas are powered invariably by diesel engines, a costly disadvantage to rural millers, who pay much more for diesel power than urban millers pay for electricity and whose variable operating costs are also higher. Electricity use is subsidized in many West African countries, while diesel consumption tends to be taxed (albeit at a far lower rate than gasoline consumption). Diesel engine-powered mills are also more expensive to maintain and repair than electrical mills. Diesel powered units in rural areas have the added

disadvantage of being poorly serviced by mechanics and spare parts distributors.

The economic implications of these investment and operating cost differentials are far-reaching. First, mills in rural areas have to operate a high level of throughput (five metric tons per month in rural Senegal)⁵ in order to amortize the high up-front investment cost of a diesel engine. Unfortunately, the purchasing power that pays for milling services is lower in rural than in urban areas. Hence, it is far easier to operate an electric mill at a high rate of utilization in urban areas, and urban millers can command higher prices for processing than their rural counterparts can. Second, since processing costs are high in rural areas, little commercial processing of coarse grain occurs in grain surplus production zones for shipment to urban areas. Hence, traders assemble and truck undecorticated and unground grain to urban areas. They pay in essence to ship an additional 20 percent weight of grain in countries where financial transport costs are high (with the exception of oil-surplus countries such as Nigeria). The husked bran, removed during decortication, has a positive opportunity cost in urban areas as livestock feed, but its value and utility may be lower in urban than in rural areas where protein- and energy-rich bran provides a necessary complement to pasture and agricultural byproducts. Third, urban millers are able to operate their mills at higher levels and amortize their units more rapidly than can rural millers, yet they typically charge more for processing services. Hence, real returns to grain processing are higher in urban areas, which skews income distribution and impedes the development of rural processing.

The policy implications of these findings are several:

- o Investments in rural electrification would put urban and rural millers on a more equal competitive footing.
- o This greater equity would stimulate more rural investment in grain milling, which would expand rural employment opportunities.
- o In African countries that subsidize electricity use, subsidies should be removed in urban areas, because they tend to have an adverse distributional impact, giving unfair advantage to urban-based food processing.
- o Taxation of diesel fuel use penalizes rural-based grain processing by increasing operating costs.
- o Another policy issue not mentioned above is the incidence of import taxes on imported equipment and motors. Even if electrical motors and diesel engines are taxed in equal proportions, the CIF price of the former is much lower, leading to a far higher absolute level of

⁵See John S. Holtzman, Coarse Grain Processing in Senegal: Issues, Constraints and Opportunities, 1989.

taxation on imports of diesel engines. This policy also penalizes prospective rural investors.

3.1.4 Telecommunications and Export Markets

Inadequate communication infrastructure contributed to the stagnation of Somalia's livestock exports to Middle Eastern markets during the second half of the 1970s and during the 1980s. In the first few years after the oil boom, which increased incomes in Middle Eastern countries, Somalia was the leading shipper of live animals (sheep, goats, cattle, camels) to Saudi Arabia. By the late 1970s, Australia had become the leading exporter of sheep to Saudi Arabia, and Somalia's market share had begun to plummet. While Somalia never managed to expand its small ruminant exports beyond levels achieved in 1975, Australia increased exports considerably in response to the new market opportunities. Key factors responsible for Somalia's stagnation as a livestock exporter included taxation of livestock exports, an overvalued exchange rate, underinvestment in public quarantine facilities and animal health, fragmentation of the private sector live animal trade, a parastatal statutory monopoly on live animal exports from southern Somalia, and poor market intelligence.

Inadequate communication with Saudi Arabia and the outside world was also a critical deterrent. The international telephone, telegraph and telex infrastructure in Somalia was underdeveloped during the 1970s and first half of the 1980s. Most of the live animals exported from Somalia were shipped from the port of Berbera in the North, where communications facilities and services were sadly lacking. Mogadishu, far less important as a livestock shipment point but significant as the capital city, benefitted from better telecommunications services. By the mid-1980s some of the larger exporters set up offices and investments in private telex machines in Mogadishu, even though livestock assembly, holding and shipment were all conducted in the North. This introduced an additional cost to livestock exports, which harmed Somali exporters at a time when they faced stiff international competition in the Saudi market.

The poor communications between Somalia and Saudi Arabia constituted a serious constraint for Somali exporters, who tended to be small-scale, independent operators. As the Saudi importation of live animals became increasingly concentrated in the hands of a few very large firms, Saudi importers became less willing to deal with many independent Somali exporters, with whom they had difficulty communicating. While communications capacity was not the only or even the most important constraint facing Somali exporters, it contributed to steady loss of market share.

3.2 Technological Change and Adaptation

African governments and donor agencies commonly concentrate more technology at the farm level than at other stages of the food system. Despite this emphasis, heavy investments in agricultural production research has brought few results (see Eicher, 1985). While farm productivity clearly must improve as populations in African countries expand rapidly, more balanced support to production and "marketing" technologies is also needed.

A key lesson of many technology improvement schemes in Africa is that investment in the hardware or physical facility or equipment is rarely sufficient in the African context. Accompanying investments in "software" are also required, including training in improved management and accounting methods, post-harvest handling, storage or processing techniques, and a systems perspective on the importance of a particular technology. Understanding the importance of proper grain harvesting, handling and drying, for example, is vital to maximizing benefits (and minimizing losses) of improved storage. If producers store insect-infested, moist grain laden with foreign matter, losses are likely to be high.

3.2.1 The Technology of Improved Input Distribution

Technology as embodied in improved seeds, fertilizers or agricultural chemicals is highly visible and, if effectively utilized, leads to clearly demonstrable results. Yet improved storage, handling, bagging, and packaging technology are often required to improve and protect the quality of high-cost production inputs, increase the efficiency with which these inputs are distributed to farmers, and ensure effective and timely use of inputs. In many cases inadequate and unreliable distribution systems reduce the effectiveness of input use, or in extreme cases make the inputs unusable (due to spoilage, tardiness in delivery). While institutional, policy and management factors affect distribution systems, technology also plays an important role.

Fertilizer Handling and Storage. Substantial savings can be realized by importing in bulk and bagging at the port. Bulk importing also makes it possible to prepare formulations suited to local markets, soil characteristics and crop requirements by mixing prior to bagging. Yet whenever agricultural inputs or products are handled and repackaged, physical and economic losses result. Fertilizer losses can be minimized by using the proper bagging equipment (and well-trained labor). If fertilizer is distributed to rural areas well before planting, storage facilities need to be dry.

Seed Handling and Storage. Crop seeds, as living organisms that are highly sensitive to heat and moisture, require special care in storage and handling. Improper storage in excessively hot and moist conditions can undermine germination and effectiveness of improved cereal seeds. Seeds also need to be properly packed and handled at the farm or retail level. Watertight packages with proper labels and instructions are imperative for crops that have no heavy seed requirements, such as grain and vegetables. For crops with heavy seed requirements, such as peanuts, proper bulk storage units need to be used. Pesticide and fungicide treatments are critical in ensuring seed quality.

3.2.2 Post-Harvest Handling Technology

The quality of agricultural produce depends heavily on effective post-harvest handling technologies and practices. If terminal markets are characterized by high incomes and low tolerance for produce heterogeneity, as in Western Europe, post-harvest handling equipment and techniques need to be

state-of-the-art. In the case of high-value agricultural commodities such as horticultural products, successful private firms can achieve scale economies. They reinvest profits in improved plant and equipment, such as state-of-the-art sorting and grading equipment, pre-cooling equipment to remove field heat in freshly harvested crops, packing materials and techniques such as shrink-wrap, and cold storage units for holding produce prior to shipment. The Senegalese horticultural exporters with the best reputation among importers in the highly demanding French market are those using improved post-harvest handling methods and equipment. Although large upfront investments in such equipment may increase costs while the equipment is being amortized (assuming that such investments must be financed with loans), they enable innovative firms to capture greater market share than competitors in the longer run.

In addition to improving produce quality, better post-harvest handling would reduce losses and expand domestic food availability. Losses in staple food crops after harvest in some developing countries have been estimated to be as high as 20-30 percent.

3.2.3 Improved Processing Technology

Processing of agricultural commodities is a means of adding significant value to commodity exports, provided the technology is suitable, a high-quality processed or semi-processed output is produced, and processing is efficient relative to competing countries. Typically though, importing industrial countries or more economically developed African countries import from less developed neighbors and process the raw materials themselves, thereby adding value. Coffee, cocoa and groundnuts are common examples. Improved processing technology can also reduce transformation costs per unit of output, in some cases reducing marketing (typically transport) costs, and improving product quality and storability (or "shelf life") of staple foods consumed domestically.

Groundnut Oil Processing. Investments in groundnut processing plants are very costly; consequently, high levels of throughput are required to amortize such investments. African countries have been losing their competitive edge in groundnut and groundnut oil exports on world markets since the 1960s. Peanut oil processing is high-cost and inefficient in African countries. Because parastatals monopolize assembly, processing and export, they often lack the discipline to minimize costs and achieve scale economies. Processed throughput may be too low to cover costs, and management expertise may be lacking. Some processing plants in Africa may be too large-scale to ever be efficient, given high assembly and transport costs to large, centralized units and stagnant or declining levels of peanut production.

Cocoa Butter in Côte d'Ivoire. Côte d'Ivoire began to export cocoa butter as a way to add value, capture additional foreign exchange, and partly overcome lower returns associated with low-grade unprocessed cocoa. The Ivorians were able to acquire this technology through a joint venture with a French firm that enjoys a strong reputation in European markets (World Bank, Industry and Energy Department Working Paper No. 5, 1989). Joint ventures are attractive in that they team local management and labor with needed foreign capital, technology and access to world markets. If structured properly,

local firms can acquire management expertise, knowledge of how to use state-of-the-art technology effectively, on-the-job training that upgrades labor skills, and contacts in world markets over time. While foreign firms are reluctant to give away technological secrets, they are often willing to provide improved technology through licensing arrangements.

Slaughter of Livestock in the Sahel for Refrigerated Shipment of Carcass Meat to Coastal West African Markets. In key livestock producing and exporting countries of the Sahel, live animals are trekked, trucked and shipped by rail to coastal West African markets. Little or no domestic value is added by shipping live animals as opposed to carcass meat. Hides and skins also leave the exporting country with the animal, so processing these into semi-processed wet blue form is not possible. Exporters also fail to exploit other by-products useful for a variety of purposes.

In an attempt to capture more value-added in Sahelian countries, donors funded numerous livestock projects during the 1960s and 1970s in which large-scale, modern slaughter facilities were constructed. Most of these facilities were inappropriate in scale and technology, but improved on hygiene and working conditions. Many abattoirs were too large-scale, underutilized, costly to operate, unresponsive to the needs of local butchers, and uncompetitive with local slaughter methods.

An underlying objective of investing in the abattoir at Ouagadougou, Burkina Faso, was to slaughter cattle and small ruminants for export (see Herman and Makinen, 1980 and Herman, 1983). Cold storage at the abattoir was provided to chill carcass meat prior to shipment. A parastatal agency, ONERA (Office National d'Exploitation des Ressources Animales), was charged with managing the abattoir and shipping carcass meat to coastal markets in refrigerated trucks. The scheme never worked without subsidy, and ONERA was unable to export large enough quantities of carcass meat to cover investment and operating costs. The problem lay partly with ONERA management. ONERA shipments were also too high cost relative to live animals that were trekked or shipped by rail from Burkina Faso and relative to Ivorian imports of carcass meat from non-African suppliers.

By early 1990, rail costs, delays and problems in shipment had begun to undermine the cost advantage of rail shipment on the Ouagadougou-Abidjan line. Trucking of live animals had increased as traders sought to reduce the time period during which resources were tied up in cattle and small ruminants. As income growth increases again in markets such as Ghana and Côte d'Ivoire following economic decline during most of the 1980s, shipments of carcass meat to the coast may resume. The determinant will be the costs of trekking and trucking live animals as opposed to slaughter and refrigerated transport of carcass meat, and any benefits derived from Sahelian slaughter, processing and export of hides and skins. Careful empirical investigation is necessary to resolve this issue.

3.2.4 Improving Grain Storage Technology

As with meat processing facilities, improved storage facilities which are uneconomic, poorly managed, and plagued by losses litter the African

landscape. Donor-funded investments in the 1960s and 1970s in many grain-deficit countries, approved with the best intentions for alleviating hunger during years of production shortfall, have largely proved to be costly failures. One common mistake was to simply construct the facilities without training public sector employees to manage them properly. As an example, LPMK (the parastatal Liberian Produce Marketing Corporation) warehouses in Liberia practiced first-in, last-out storage of domestically produced rice during the mid-1980s, leading to heavy losses of stocks with essentially no salvage value. During bumper crop years in some African countries, parastatal employees have stuffed surplus grain into warehouses so that effective fumigation was not possible. Another common mistake has been to invest in large facilities in a few central locations, as opposed to a larger number of smaller scale facilities in many locations (including isolated and typically deficit areas). Given the high transport costs in Africa, establishing a few large facilities has not always proved to be the most cost-effective solution.

Improved grain storage facilities are not always provided to parastatals, but may be constructed for village groups or farmer organizations. The intuitively appealing concept of cereals banks, promoted heavily during the 1970s and first half of the 1980s in many African countries, has proved difficult to put into operation. The promotion of cereals banks sometimes reflects false assumptions about the grain storage and transactions behavior of rural households (see Ouedraogo, 1983). In other cases, farmers have been reluctant to mix their grain with that of other producers, fearing insect contamination or excessive moisture and foreign matter. In other instances managers of cereals stocks lacked experience in proper storage methods, which exacerbated losses. There is scope for further in-depth investigation of traditional and improved storage facilities and practices, analysis of the relative importance of storage technology and management in reducing the effectiveness of storage investments to date, and the optimum distribution and scale of storage facilities in African countries.

3.3 Marketing Policy Reform

During the 1980s donors focused their analysis on structural adjustment and reform of policy distortions at the macroeconomic, sectoral (agriculture sector) and subsectoral levels. While the World Bank has taken the lead on structural adjustment and macroeconomic policy reform, A.I.D. has had considerable experience in providing support to African governments undertaking agricultural market liberalization programs.

Some African governments have demonstrated a good deal of courage in undertaking market reform programs with limited empirical information. Medium-term effects, after the positive short-run impact of removing price and commodity movement controls and scaling back parastatal agencies, have been limited in some cases, as private agents willing to step in after parastatal retrenchment face numerous constraints. Hence, marketing reform is far more than a one-time removal of price controls; it is a longer-term, protracted process, in which effective implementation of policies in the food system may lag far behind policy formulation. Policy reform and market liberalization are generally necessary but not sufficient conditions for stimulating productivity gains in agricultural production and marketing. Fundamental institutional

reform (property rights, contracts), a different public-private sector mix, and a public sector shift away from direct performance of many marketing functions toward a facilitating and supporting role are key elements of market liberalization programs. Improved technology and better management skills are also often necessary to enhance agricultural development and economic growth. In most cases, long-term improvement in agricultural marketing systems requires the following actions:

- o Investing in infrastructure and improved maintenance;
- o Strengthening public institutions that support agriculture and the private sector;
- o Deepening and increasing the sophistication of financial markets;
- o Streamlining regulatory procedures; and
- o Investing in human capital, particularly local capacity to do applied food systems research that effectively and empirically monitors and evaluates agricultural policy reform programs.

To the extent that donor-supported agricultural sector programs consist solely of policy reform, the effects on food system development will likely be limited. A.I.D. may need to go beyond these broad reform programs to support integrated programs of commodity systems research. IARCs have a comparative advantage in production technology development and testing. A.I.D. can support efforts beyond the farm in improving post-harvest handling, agricultural marketing functions (storage, processing, transport), agricultural marketing systems analysis (including building capacity to carry out applied research on domestic marketing systems, as well as analyses of world and regional market opportunities), and training of private market system participants in financial analysis and marketing management. Policy analysis affecting market system development will also continue to be a high priority.

3.3.1 Liberalization of Agricultural Marketing Systems

In most cases programs to liberalize agricultural marketing systems have centered on improving the performance of grain marketing systems that were previously dominated or monopolized by parastatal agencies (as in Burkina Faso, Kenya, Niger, Senegal, Somalia, Tanzania, Zambia and Liberia). Key elements of such programs are the following:

- o Rescinding statutory monopolies granted to parastatals;
- o Permitting private traders to buy and sell grain in competition with parastatal agencies;
- o Removing inter-regional grain movement restrictions; and

- o Either freeing grain prices so they are market-determined rather than administratively decreed, or allowing government reference prices to serve as support or floor prices rather than fixed or ceiling prices.

Market reform programs have been broadened in some cases to include privatization of other commodity marketing systems, such as cowpeas in Niger, and removal of burdensome regulations and export taxation (e.g. onions in Niger).

A.I.D., the World Bank and African governments themselves deserve much of the credit for successful liberalization of agricultural marketing systems. In quite a few cases African governments took political risks in launching market reform programs with little empirical knowledge of how parallel markets were organized or operated and with little objective *ex ante* analysis of likely consequences. Some governments, such as those in Liberia, Senegal and Sudan, paid heavy political consequences, ranging from removal from power to backsliding concessions to urban groups favoring lower consumer prices. In addition to donor support and the political will of African governments, timing also proved to be critically important. Market reform programs were an idea, indeed a reality, whose time had come in the early and mid-1980s. African governments could no longer afford to subsidize parastatal agencies that were able to intervene directly in grain markets only as long as governments (and donors) covered annual operating deficits. The roles of parastatal agencies had to be redefined, certain functions spun off to the private sector, the remaining operations greatly streamlined, and their orientation redirected to providing public good types of services to facilitate the emergence of efficient and competitive private sector markets.

3.3.2 Monitoring the Impacts of Policy Reform

As A.I.D. has allocated greater resources to agricultural sector reform programs, particularly market liberalization, the need to monitor and evaluate the micro-level impacts of such programs has grown. In African countries where the Food Security in Africa Cooperative Agreement (FSA/CA) has conducted applied research (Mali, Senegal, Somalia, Rwanda and Zimbabwe), farmer and trader surveys have generated microeconomic data that have proved useful in assessing the impacts of reform programs. Beginning in the late 1980s, FSA/CA also expanded its work in southern Africa to include support for collaboration with research institutions in Botswana, Malawi, Tanzania and Zambia.

Examining the micro-level behavior of traders and farmers (as both producers and consumers) is an important part of the monitoring and evaluation of policy reform programs. These private agents may have difficulty responding to new opportunities created by policy reform (typically in exchange rates, import duties, input and product prices and interregional grain shipments) due to constraints in transport, technology, finance, management and institutions. Privatization of input and output markets may also lead to less response than anticipated by private agents, due to the constraints that they face, including lack of knowledge and uncertainty regarding government policies, regulatory measures and longer run intentions. A.I.D. has supported field research programs that gather, analyze and interpret information about farmer and trader resources, behavior in response

to policy reform, constraints, and perceptions of problems and opportunities. This contrasts strongly with the more typical reliance of multilateral organizations on macroeconomic and agricultural indicators derived from secondary data (as an example, see World Bank with UNDP, 1989). Since secondary data in Africa are often inaccurate, the indicators may be quite misleading. Even when accurate, they reflect the effects of reform programs at the national level only indirectly. This is inadequate when specific impacts on disaggregated groups of food system participants need to be monitored to provide feedback to policymakers.

Universities (other than MSU and the Food Security Cooperative Agreement) and private firms provided numerous policy advisors to A.I.D. during the 1980s, who have closely collaborated with African ministries of agriculture and planning, or with local research institutes. Notable examples are Kenya, Niger, Senegal and Zambia. Where expatriate policy advisors have shown commitment to institutional strengthening and on-the-job training of counterpart analysts, such technical assistance will likely have a long-run impact. A problem of many such advisory projects in their earlier stages is that key local analysts are sent to the U.S. or another industrial country for long-term academic training, leaving few competent analysts with whom foreign advisors can work. In the short term, expatriate advisors are likely to act as front-line policy analysts, substituting for the insubstantial local capacity. As African analysts are trained and return to work in their home countries, they resume their roles as line economists. Expatriates then can serve as staff advisors who critique and strengthen the analyses of their African counterparts, as well as providing strategic input to longer term policy formulation.

Monitoring of the impact of reform programs on the operations and performance of parastatal agencies has received less attention. FSA/CA has done effective monitoring in Mali and Zimbabwe, despite its emphasis on micro-level behavior of rural households and traders. In countries where FSA/CA has not worked, such as Gambia and Madagascar, short-term assessments of parastatals have been conducted that have focused on their role in key markets, methods of streamlining to increase efficiency, and privatization of certain functions and assets. A.I.D. has typically not provided long-term resident advisors (typically management experts and financial analysts) to parastatals (except to Burkina Faso in the early 1980s). The World Bank, FAO and other donors have usually supplied this form of technical assistance. The Economic Development Institute of the World Bank has examined the operations and performance of 10 commodity subsystems dominated by parastatals worldwide (five in Africa) which are involved mainly in exporting traditional commodities (e.g. peanuts, cocoa, tea).

In many African countries, obtaining detailed and timely information on parastatal operations and performance has been difficult, which is not surprising, given the political sensitivity of market reform programs. When a major part of these programs is the scaling back or dismantling of parastatals, these agencies have a strong incentive not to cooperate with investigators intent on exposing inefficiencies and improprieties. Given the political stakes and the resistance of parastatals to in-depth investigation,

applied research should focus more on how parastatal organization and operations affect the incentives and behavior of private marketing agents.

3.3.3 Removing Trade and Regulatory Barriers

In the dirigiste tradition of many African countries, economies are heavily regulated. Permits and approvals, carrying high financial and transactions costs, must be obtained in order to do any type of private economic activity. The business of granting these permits and approvals is an important source of supplemental income for typically poorly paid public officials. Certain government jobs confer property rights or privileges and opportunities to extract unearned rents from private parties. It is no easy matter to transform economies that are characterized by rent-seeking and obstructionist regulation designed to maximize rents.

A top priority is for A.I.D. economists and contract analysts to continue to use economic logic and available empirical evidence to demonstrate and publicize the disincentive effects of certain macroeconomic, trade and agricultural policies and regulatory barriers. A.I.D. can and should use its leverage to encourage African countries to make policy and regulatory reforms to improve the efficiency and performance of agricultural marketing systems, particularly opportunities for private marketing agents.

In order to strengthen their arguments and policy advice, A.I.D. economists and policy advisors need the findings of high-quality, empirical studies. Whether these studies should always be conducted by public agencies is debatable. Government analysts may not have sufficient incentive or leverage to make politically unpopular policy recommendations that threaten to worsen the lot of rent-seeking public officials. It may well be possible to establish autonomous or semi-autonomous policy analysis units that can conduct high-quality applied research without fear of immediate and direct reprisal. Some units could be in the private sector.

In addition, it may be necessary to compensate those officials benefitting from current, highly regulated systems who stand to lose the most from marketing policy and regulatory reform (Rausser, 1989). As an example, dismantling parastatal organizations in Senegal has been made more politically palatable by allowing former employees to form economic interest groups which can obtain subsidized formal credit to start up private production and marketing schemes. Compensating the losers is likely to be very costly in many cases, and it will not prove very popular in the foreign aid appropriations process.

An alternative approach, which will satisfy Congress and other appropriation agencies in industrial countries, is to insist on improved transparency and accountability in public agencies in Africa. The World Bank (1989) makes the point very cogently:

It is not just the unpredictability of policies that discourages investment, but also the uncertainty about their interpretation and application by officials. This problem is exacerbated by the frequent lack of a reliable legal framework to enforce contracts. The rule of

law needs to be established. In many instances this implies rehabilitation of the judicial system, independence for the judiciary, scrupulous respect for the law and human rights at every level of government, transparent accounting of public monies, and independent public auditors responsible to a representative legislature, not to an executive. Independent institutions are necessary to ensure public accountability. (Sub-Saharan Africa: From Crisis to Sustainable Growth, 1989, p. 192)

3.4 Marketing Information and Intelligence

There is currently great interest in the positive role that market information can play in the emergence of competitive, efficient commodity marketing systems. Market information is typically viewed as price data at different locations and levels of the marketing system, but it actually includes much more than that. Key elements of a strong marketing information system include the following:

- o Production estimates by region, including forecasts of upcoming harvests;
- o Estimates of stocks of storable commodities at the farm, trader and parastatal level;
- o Data on commodity import and export volumes and prices;
- o Domestic price data at multiple locations, levels of the food system (farm, wholesale, retail), and points in time (weekly, monthly);
- o World supply situation, price trends and forecasts; and
- o Less commonly, information about producer and trader intentions.

A common pitfall of some donor-funded efforts to strengthen marketing information systems is the temptation to overdesign data collection and analysis systems. For example, expatriate analysts may recommend that African governments collect price data at many more rural and secondary town markets than is necessary or sustainable. Some of the price data collection points may be relatively close together and well-integrated, so the extra information is probably redundant. Fascination with micro-computer technology (both hardware and software) can also encourage analysts to design market information systems that are too sophisticated and ambitious for African countries with limited capacity and public funds to support data collection and analysis. There are several examples, however, where well-conceived and designed marketing information systems can serve as models worth replicating in other African countries.

3.4.1 Cereals Marketing Information in Mali

A common pitfall in creating market information systems in developing countries is the temptation to overdesign systems so that too much data is collected in too many markets or at too many levels of the system. In

addition, a market information system may try to respond to too many varied requests for information, especially where external funding tends to drive research agendas. Both expatriate advisors and local analysts trained overseas are prone to fall into this trap, particularly if they are heavily influenced by the professional literature, which places a premium on complex, data-intensive activities amenable to formal modeling. In initially establishing a market information system, analysts should design a system that meets most local data needs at minimum cost. Furthermore, designing a modest system, which is likely to be funded by the government and/or other local users once donor support is phased out, is preferable to designing a more ambitious scheme that will require indefinite external funding.

Since early 1988, the Food Security in Africa Cooperative Agreement (FSA/CA), co-managed by A.I.D./S&T and the Africa Bureau of AID/W, has been working with the Malian national cereals board (OPAM) to establish the country's first public market information system on cereals marketing (SIM). The SIM was established in a highly systematic, incremental and carefully planned fashion. Initially, a Malian national, trained in agricultural economics in the U.S., assessed the information needs of different prospective users of the SIM. Then the analysts developing the SIM spent six months harmonizing the data and methodologies of three different groups collecting price data at different levels of the marketing system. A prototype bulletin was produced for limited distribution to technical specialists in the government and donor community. Feedback on the bulletin, as well as periodic input from expatriate consultants, helped shape and improve the market information system. Currently, the SIM releases market information in three different formats and varying levels of analytical depth: weekly price reports, monthly discussions of price movements, and semi-annual analyses of price trends and supply and demand factors affecting price movements.⁶ The weekly price data are disseminated in printed form to policymakers and analysts and over the radio and via newspapers to other users.

A number of factors are responsible for the success of the SIM. First, it was organized and designed by Malian professionals, who were well-trained in price and market data collection and analysis, and who were working within public agencies (Institut d'Economie Rurale and OPAM). Second, the Malian analysts were supported by a A.I.D.-funded project, FSA/CA, that is committed to long-term training and institutional strengthening in Africa. Third, three years of original applied research on cereals production, marketing and prices carried out by Malian researchers (Josué Dione and Nango Dembelé) in collaboration with FSA/CA provided an excellent knowledge base and training experience. During this period data collection methods and concepts were refined and local capacity for collecting, processing, analyzing and disseminating the results of analysis of cereals data were strengthened. Fourth, the effective dissemination and extension of applied research results of the Malian and FSA/CA grain production and marketing studies generated demand among government analysts and policymakers and donor agencies for

⁶Semi-annual reports were issued quarterly until 1990. Quarterly reporting was considered onerous, and semi-annual reports afforded analysis of price and volume movements over a longer period of observation.

empirically-based policy research and analysis. Fifth, the designers of the SIM were careful to develop a system that satisfied the key needs of major users but did not outstrip the fledgling institutional capacity of the local analytical unit to respond. Sixth, the SIM collects and disseminates data on a limited number of key crops, rather than trying to cover all crops, livestock, inputs and consumer goods.

Another key ingredient in the successful design of a market information system is knowledge of the needs and preferences of prospective users. Under the Food Security research program, Malian and MSU researchers carried out in-depth surveys with Malian producers and private traders, and presented empirical findings to Malian policymakers in an ongoing and effective dialogue. Intimate knowledge of producer and trader behavior and requirements, as well as successful policy extension, facilitated the development of an information and dissemination system that is meeting both private and government needs. Rural radio broadcasts and newspaper reports of weekly producer and consumer prices are targeted to the producers, traders and consumers. Weekly, monthly and semi-annual reports are directed to government analysts and policymakers. According to Dembele, Staatz and Egg (1990):

The external evaluation of the SIM in November 1989 found that the radio broadcasts of SIM price data have had a real impact on the market: Consumers (notably, those in Bamako) have benefitted from lower prices in certain markets, and many merchants are using the SIM data to help decide where they will buy or sell grain.

Steffen (1990) has found that 86 percent of a sample of 93 cereals traders interviewed found market information generated by the SIM and reported via radio and newspaper to be useful and informative. When asked about recommendations for change, 57 percent stated that no change was necessary. Another 22 percent said that the SIM should become permanent.

Designers of the SIM caution against the "paradox of success" (see Dembele and Staatz, 1989). A successful market information system can generate such heavy and diverse demands for available data and new information that its original mission is seriously compromised. Responding to new requests for data and analysis may lead to neglect of demanding yet necessary management of ongoing data collection, processing and analysis, which could result in lower quality raw data and analysis, as well as less timely dissemination. Hence, managers of market information systems need to be very careful not to expand the scope of their efforts, taking on burdensome special projects, before additional staff are hired and trained.

A final critical point is financial support for market information systems. In an ideal world, analysts would design systems that can be easily sustained by local government agencies. Information systems need also to respond to the requirements of local users, who would ideally be willing to provide continued financial support. In the African context of tight budgets and slow economic growth, the reality is that donor agencies will need to supplement limited local budgets for market information systems for quite some time. FSA/CA believes strongly that this is one use of scarce donor resources

with a very high payoff in terms of informing policy analysis and strengthening local capacity to do effective, empirically-based policy research and extension (Weber et al., 1988).

3.4.2 Food Early Warning System in Somalia

Availability, quality and reliability of data on grain production, marketing, trade and food aid in Somalia were very poor until late 1986. Marketing information was available from disparate sources, including the Ministries of Planning, Agriculture and Commerce, as well as the Agricultural Development Corporation (cereals parastatal), which is quite typical for African countries. Production and marketing information was not widely available or consulted by policymakers, contributing to some poor public decisions regarding food aid importation in years of bumper grain harvests, particularly 1985.

In mid-1986 the EC revived a struggling Food Early Warning System (FEWS) unit in the Ministry of Agriculture, which had received GTZ support during the early 1980s. A private Belgian firm was awarded the technical assistance contract to strengthen data collection and analysis capacity, to improve data availability, usability and reliability, and to publish production and market information from multiple sources on cereals more frequently, more widely and in a single quarterly bulletin. Beginning in late 1986, the FEWS began releasing bulletins with information on the following:

- o Crop growing conditions in different areas (relying heavily on rainfall data for 10-day intervals and field inspections of crops);
- o Production estimates/forecasts;
- o Publicly-held (ADC) cereals stocks;
- o Imports of concessional and commercial grain; and
- o Retail cereals prices in major towns and assembly market prices in major production zones.

Acquisition of several micro-computers allowed for tabulation of raw data, simple analysis and plots of key data series. The quarterly bulletins were distributed widely to key government officials and representatives of donor agencies. The Belgian firm also provided on-the-job training to Somali staff in micro-computer use and data analysis. As cereals supply and price information became available on a timely basis, it served as an important input into government and donor food aid decisions. A multi-donor food aid coordinating committee was able to use this information to avoid costly mistakes, such as importing large volumes of maize during bumper crop years.

3.4.3 Horticultural and Specialty Crop Market Information

As African governments and donor agencies have become more interested in promoting exports of "non-traditional" commodities, particularly horticultural products, the need for high-quality, reliable and timely information on

foreign markets has risen. Public agencies and private exporters can consult several sources of publicly available information for a relatively modest fee. Two notable assemblers and disseminators of horticultural market information are the Market News Service of the International Trade Centre (MNS/ITC) and COLEACP (Comité de Liaison Europe-Afrique-Caribes-Pacifique pour la Promotion des Fruits Tropicaux, Légumes de Contre-Saison, Fleurs, Plantes Ornamentales et Epices).

MNS/ITC, which is run out of Geneva, will telex weekly price data for a wide range of tropical and counterseasonal horticultural products in nearly 10 key Western European markets.⁷ It also publishes a periodic bulletin, which features more in-depth analyses of the supply and demand situation and prospects for selected commodities. MNS/ITC price data, which can be telexed on a weekly basis or purchased as soft copy in WordPerfect files, are not available in a format suitable for analyzing price trends and seasonal patterns.

COLEACP is affiliated with the EC and run out of the Rungis wholesale market outside of Paris. It publishes a monthly bulletin with European price and import data, as well as articles about key developments in the European horticultural industry, profiles on supplying countries (e.g. Burkinabe green beans, Ivorian pineapples, Zimbabwean horticulture), and discussions of key constraints to expanding horticultural exports (such as air freight capacity). COLEACP hosts workshops for its members, including four annual seminars on air freight capacity in francophone Africa.

Both organizations have subscribers in Africa, who tend to be export promotion agencies, trade associations or larger-volume exporters. MNS/ITC was evaluated in 1989 by Kriesberg Associates (report forthcoming), who recommended that dissemination of market information had to be strengthened and broadened, and that MNS needed to raise user fees in some instances to help recover more than dissemination costs. The evaluation also raised key questions regarding potential uses of the market information and the most useful form of data presentation/analysis.

3.5 Alternative Institutional Arrangements

Interest is increasing in the potentially positive role that agribusiness can play in African agricultural development. It is advisable to consider the full range of institutional alternatives for transferring technology, assuring access to markets, managing risks, and improving the productivity of commodity subsystems rather than promoting only agribusiness (particularly multinational) investment. Some examples of institutional alternatives, not all of which are mutually exclusive, include the following:

- o Contracting arrangements between subsystem stages;
- o Joint ventures;

⁷MNS/ITC also has a U.S. office based in Boston, which assembles and disseminates U.S. market price data for Latin American and Caribbean subscribers.

- o Farmer organizations that obtain credit and procure inputs, as well as market agricultural products;
- o Vertically integrated commodity subsystems;
- o Parastatals or marketing boards;
- o Active trade associations, which lobby for favorable policy, trade and investment incentives and reduced regulation;
- o Licensing of foreign technologies by local firms; and
- o Management contracts with expatriate firms.

In the next several subsections, examples of successful development and application of different institutional arrangements for increasing productivity of agricultural production and marketing systems will be discussed.

3.5.1 Contract Farming

A.I.D.'s Africa Bureau funded an assessment of contract farming schemes in Africa, which was carried out by the SARSA Cooperative Agreement in 1986-88. Under the leadership of the Institute for Development Anthropology, the contract farming study tended to focus on the distributional impacts of such schemes. Case studies of the horticultural subsectors in Senegal and Kenya (Horton, 1987 and Jaffee, 1987) demonstrated that contract farming is a viable institutional arrangement for exporters of high-value commodities, where shipment of top-quality produce needs to be assured. Contract schemes typically enable producers to lock in a minimally attractive price and to gain access to cash inputs on credit. Processors and exporters benefit from contracts by guaranteeing sources of supply at an acceptable price.

Despite these positive features, contract farming schemes are not free from pitfalls. Producers of horticultural crops for export in Senegal do not always comply with contract terms and conditions, particularly when spot market prices are higher than prices negotiated under contract. Since exporters negotiate contracts individually with many producers, the transactions costs associated with trying to punish individual noncompliers are prohibitively high. These contracts have no straightforward legal mechanisms for enforcement. Non-compliance with contract terms and conditions can also harm participating farms, especially when buyers interpret quality clauses to their advantage (offering lower prices to growers due to supposed substandard produce).

Another weakness of the grower contracts in Senegal is that green bean contracts do not differentiate among grades (on the basis of bean thickness); exporters pay growers on a per kilogram basis. Hence, producers have an incentive to delay harvest beyond the point where returns would be highest to exporters (when beans are mature but thin) in order to obtain the greatest yield (weight/unit of land). At the point of greatest yield and hence return

to farmers, the harvested beans are thicker and command a lower price in the highly competitive French market (Horton, 1987). This factor has probably negatively affected Senegal's long-run market share.

In Kenya, contract schemes were a key factor in stimulating a nearly 20-fold expansion in the value of horticultural exports between 1974 and 1986 (Schapiro and Wainaina in World Bank, 1989). Kenya's horticultural product mix is far more diverse than Senegal's. One scheme, a canning operation at Njoro in western Kenya, has combined French technology, capital and management with low-cost, efficient farm labor to produce a high-quality canned French green bean for export (Jaffee, 1987). Individual contracts with farmers were a key feature of this project. A large French canning company entered into an agreement with a cannery in western Kenya and a local businessman to rehabilitate and manage a processing plant, assure adequate supplies of French beans through contracts with producers, and organize and manage extension supervision. The experience of the French company (Saupiquet) with a similar scheme in Morocco, the intimate knowledge of the French market and the resulting immediate access, state-of-the-art processing technology, and production and marketing management expertise were important factors in the success of this joint undertaking.

3.5.2 Joint Ventures

One of the biggest success stories in francophone Africa in the post-independence period has been cotton production and export. France introduced cotton production to its former West and Central African colonies during the colonial period to develop reliable sources of supply for its textile industry. The multinational firm CFDT (Compagnie Française pour le Développement des Textiles) provided investment capital, production and processing technology, management (and extension) expertise and immediate access to the French market. After independence, African countries became majority shareholders, with continued CFDT participation, in parastatal companies in Senegal, Mali, Burkina Faso, Côte d'Ivoire, Cameroon and Chad. Cotton exports have become an important source of foreign exchange in most of these countries. The cotton parastatals have successfully introduced mechanized agriculture (i.e. animal traction) to farmers who formerly practiced hand-hoe production methods. Improved maize production has been introduced in crop rotation with cotton, benefitting from residual fertilizer in the soil and helping to assure food security. Although there have been problems with parastatal management, high overheads and cost containment in some cases, the parastatal organizations have been able to provide farmers with necessary inputs (traction equipment, seed, fertilizer, agricultural chemicals) on credit in a timely manner, assure producers of a market and fair returns, and upgrade farm management skills through careful production supervision.

3.5.3 Farmer Organizations

Farmer organizations in Africa have a mixed record of achievement in improving performance of input distribution, processing and storage functions. Typically farmers have been organized in cooperatives or village sections under the leadership and management of government agencies. In francophone Africa several countries have created cooperative ministries or agencies and

appointed public officials to manage them down to the regional and sub-regional level. Women's village organizations are also a popular cooperative mechanism in many African countries. In Senegal, the Fonds d'Équipement des Nations Unies (U.N. Equipment Fund) has provided capital and technical assistance to women's groups for purchase of hammer mills and diesel engines to power grain mills in rural areas. The mills are collectively managed by the women's groups but required to deposit 50 percent of their net earnings up to 500,000 FCFA (or approximately \$1,650) in postal savings accounts, the economic cost (i.e. cost without import duty, which is exonerated) of replacing the diesel engine. Although a rigorous evaluation of the FENU program has not been conducted (Ministère du Développement Social, 1985), the financial performance of the rural mills varies as a function of grain production in the area served by each mill, marketed grain surplus, rural incomes and ability to pay for custom milling services, actual utilization rates of the mill, per kilogram custom milling charges, the effectiveness of collective management, and the adequacy of mill maintenance (Holtzman, 1989). In areas of surplus grain production and marketing, relatively high rural incomes, annual grain processing throughput of at least 60 metric tons per annum, and a sufficiently high processing charge (to recover economic costs of mill operation), the women-run mills have performed well and in some cases generated surplus revenues used to finance other income-earning activities.

3.6 Upgrading Human Capital: Capacity Building and Strengthening of Marketing Management

A loud clear lesson of major research programs and donor-funded reviews of Africa's economic and agricultural development experience during the 1980s has been the imperative to invest more heavily in human capital development.

3.6.1 The Food Security in Africa Cooperative Agreement

Under the FSA/CA, the Department of Agricultural Economics at Michigan State University has considered capacity building to be an important joint product of the research process. African doctoral candidates trained at MSU have served as principal investigators on major country studies, where available and suitable. MSU doctoral candidates, whether African or expatriate, have worked closely with local collaborating analysts, many of whom have received overseas training. This training has provided on-the-job sharpening of skills, with the supervision and support of MSU faculty who make periodic field visits at critical points during the research process (sample definition, survey design, preparation of working papers and oral presentation of findings in seminars).

Related to this direct investment in upgrading the skills of public sector analysts, FSA/CA has placed an equally high priority on applied research and extension of policy findings (Weber et al., 1988). Findings have been presented in clear terms to African policymakers via periodic working papers, workshops, conferences, and in-depth analyses. Policymakers have responded positively to findings that shed light on the microeconomic behavior of producers and wholesale traders. FSA/CA applied research programs have generated badly needed micro-level insights into how macroeconomic, trade

policy and agricultural marketing reform have affected the incentives, operations and organization of farms and firms in the food system.

By way of contrast, FSA/CA applied research on agricultural marketing and policy illustrates why African policymakers are often reluctant to provide financial support to research programs. Much research output has been neither timely nor presented in a usable or understandable form. Efforts to increase demand for policy-oriented research face a healthy skepticism regarding the findings of outsiders, including doctoral candidates from U.S. or European universities and consultants. In order to generate greater demand for marketing and policy research, A.I.D. and other donors need to demonstrate that high quality and timely research and analysis can have important payoffs in terms of avoiding policies, programs and projects with potentially negative consequences, as well in improving the design and implementation of essentially positive interventions.

3.6.2 Managing Agricultural Development in Africa (MADIA)

The MADIA studies on agricultural development in Africa were carried out from 1986-89 under the leadership of Uma Lele of the World Bank's Research Department. The studies constitute a comprehensive and critical review of donor programs and projects, African government development strategies, and policies in the agricultural sector.

A key finding of the MADIA studies (Lele, 1989) has been that much foreign aid to Africa since the 1960s has been in the form of technical assistance. African countries lack the local institutional capacity and management systems to use technical assistance effectively. In too many cases foreign analysts have done routine analysis and preparation of staff papers themselves, generally out of necessity, rather than serving in an advisory and training capacity. While this assistance has helped to satisfy short-term policy analysis needs, it has generally not built local capacity. MADIA calls for far more investment in local capacity building. There is some evidence that this is already beginning to take place.

3.6.3 FAO Programs to Build Public Sector Capacity in Agricultural Marketing^a

Marketing Departments in Government Agencies. Building a marketing department in developing country governments to provide advice on policy and coordinate support services has been a main program line of FAO's Agricultural Services and Marketing Division (AGSM). In many African countries, marketing responsibilities were dispersed over various ministries and public authorities. Where this has been the case, FAO has recommended institution of a marketing council to bring together periodically representatives of these agencies, along with private sector representatives.

^aJohn C. Abbott, former Director of AGSM in FAO and currently an international agricultural marketing consultant, prepared a draft of this subsection.

AGSM's views on the responsibilities of a government marketing department and the kind of staff it would need are presented in Table 1. FAO's greatest success in building such an institution was the Marketing Development Bureau (MDB) of Tanzania, established in the Ministry of Agriculture with FAO/UNDP assistance in 1972. MDB's work program included:

- o Market research and export promotion
- o Training of marketing staff for government services
- o Issuance of marketing intelligence bulletins
- o Provision of advice on pricing policies
- o Review of the operations of parastatal marketing bodies.

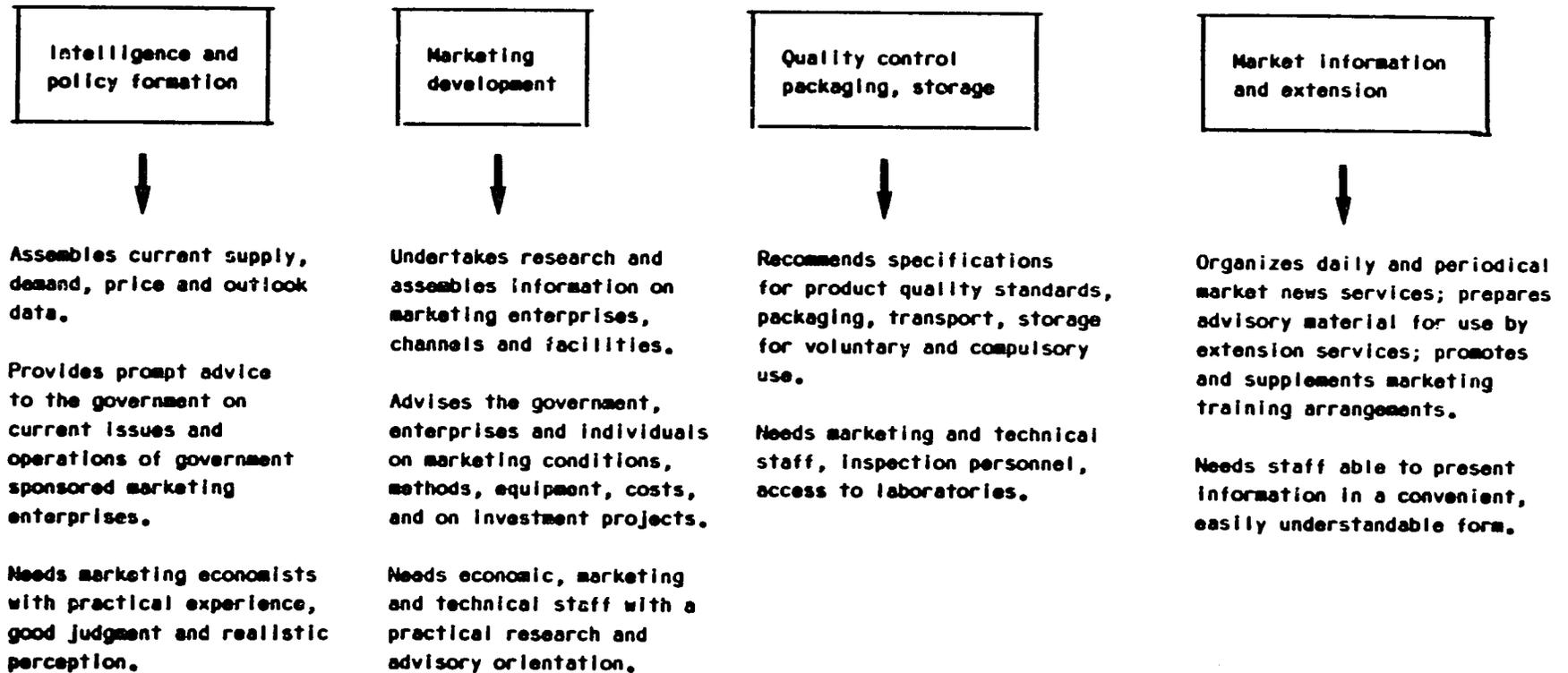
By 1976 MDB was making an annual review of agricultural prices, the first attempt to present price proposals with a balanced analysis of relevant factors. Previously, decisions on individual crops had been disjointed. The operation of the National Milling Corporation and various commodity marketing boards called for continued attention and the mobilization of in-depth accounting and management expertise. MDB was also asked to monitor the food supply situation. MDB studies resulted in donor-funded construction of storage and establishment of reserve stocks. The MDB became so strategic in Tanzania's economic planning that the World Bank made loans to finance external staff to supplement the personnel available nationally when UNDP funding ended.

In-Service and Special Training. Counterparts in AGSM marketing assistance projects gained confidence and proficiency by working with expatriate advisors for substantial periods. Practical, in-service training courses were organized for market staff and extension personnel. These programs were directed at increasing marketing awareness (often quite latent) and improving the performance of personnel already responsible for government policies and services, and of marketing organizations and facilities.

Participants in short courses can usually benefit more from short-term training if they have previously been trained in longer term programs in economics, methods of data collection/analysis, and marketing management at centers of excellence, which have historically been outside of Africa. A.I.D. has formulated a strategy for strengthening agricultural research and training in emerging African centers of excellence (see A.I.D., AFR/TR/ARD, 1985). In Cameroon an agricultural university on the Land Grant model has been built at Tschang and staffed by largely American-trained faculty. Much of the agricultural economics work has been in production economics, a typical initial orientation, not in marketing or policy analysis. In some cases Indian and perhaps Brazilian institutions may be able to provide lower-cost training that is more relevant to the African context than what U.S. or European institutions can provide.

Table 1

Plan for a Government Marketing Department



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Source: John Abbott, consultant and former chief of FAO/AGSM

AGSM support for longer term marketing training was available mainly via scholarships to universities in North America and Europe. The need for a closer focus on developing country conditions was stressed in successive technical meetings and conferences of government representatives. FAO followed up these initiatives by establishing specialized marketing training and research centers in the developing regions (Asia, Latin America). For lack of consistent government support, it then shifted to the strengthening of marketing teaching in already existing institutions. Marketing departments offering degree courses were established at the Bangalore agricultural university in India, Los Banos in the Philippines and elsewhere.

Training workshops organized by FAO and typically led by analysts from industrial countries are held in regional centers (Kenya, Côte d'Ivoire, Zimbabwe) for government policymakers, analysts and researchers to discuss marketing system constraints, policy issues, and means of improving the performance of commodity systems. These workshops have enabled professional analysts, typically trained in economics, agricultural economics or business administration and management (often in industrial countries), to maintain and sharpen their skills, learn from the often quite similar experiences of other countries at the same stages of market system development, and discuss marketing problems and issues with experienced and knowledgeable FAO professionals.

During the 1980s FAO promoted technical cooperation among developing countries, the so-called TCDC approach, by serving as a catalyst in the organization of marketing associations or networks in Asia, Africa and Latin America. The Association of Food Marketing Agencies in Asia brings together some 25 food marketing agencies and government marketing departments from 12 countries to discuss food marketing issues, exchange ideas and receive training. Similar associations are being established in East and Southern Africa and in the Near East. A TCDC network in Latin America promotes voluntary chains and another plans, manages and operates wholesale markets.

FAO is planning to establish a regional agricultural marketing training institute in Zimbabwe, with branches at Egerton College and Nairobi University in Kenya (FAO, 1985), for anglophone African countries, principally those in East and Southern Africa. The Japanese have agreed to provide the initial funding for the institute. The project manager assumed his post in Zimbabwe in April 1990. The institute will offer short courses that focus mainly on analysis of agricultural marketing functions and ways to improve productivity and reduce costs.

Marketing Extension. In addition to marketing policy analysis, AGSM has promoted the establishment of marketing extension programs in developing countries. In most African countries governments have set up special services to advise farmers on production methods, but have not given the same attention to providing marketing advice to farmers and produce handlers. Cost considerations have precluded creation of a separate service in many poor countries, while in other countries, it was viewed as a responsibility of farmers' cooperatives. India was one country where the government marketing advisor's office trained a large staff for marketing extension. FAO has organized seminars and prepared material for extension use in other

countries.⁹ AGSM recommends that marketing specialists be hired within the general agricultural extension service to prepare material for dissemination by village-level staff, adapt it to local conditions and follow up on its presentation to rural groups.

3.6.5 Building Capacity in the Private Sector

Donor agencies and African governments stressed capacity building and institutional strengthening in public agencies and parastatal organizations during the 1970s and 1980s. This emphasis was clearly necessary in order to develop the capacity for policy analysis, agricultural research and extension in ministries of agriculture, planning and commerce, and in research institutes. Investing heavily in training parastatal staff may have been a misplaced emphasis, however, given efforts to streamline and dismantle some of these organizations in recent years, and the rather poor performance of many staple crop parastatals.

Development of capacity in the private sector has lagged, largely due to donors' working through African governments with glaring needs for expanded capacity. As the thrust of U.S. foreign assistance changes in the 1990s in response to emerging free and open markets and societies, A.I.D. will channel more resources to the private sector, where skills need upgrading in use and interpretation of marketing information/intelligence and government policies, in marketing management and in financial analysis. A key issue is whether A.I.D. and other donors can effectively train private marketing agents on a short-term basis. A second issue is whether A.I.D. should be doing this training at all, as opposed to U.S., European and Asian agribusiness and private consulting companies.

The answer to both these questions is yes. A.I.D. and other donors need to reorient at least part of their portfolios to working with the private sector, even though it is uncharted territory and likely to involve much trial and error. Continued emphasis at the policy level on improving the macroeconomic environment, investment climate and incentives facing private agents is absolutely essential for donor agencies. Nonetheless, it will be insufficient in many instances. The private sector in Africa is undercapitalized, deficient in skills, cautious and risk-averse even after market liberalization programs have begun. The state of the private sector should be no surprise, as the dirigiste governments in many African countries have harassed and restricted private enterprise in the agricultural sector, taxed and penalized private agents, and maintained an unfriendly posture to private business in public pronouncements and attitudes. Some officials have also delayed implementation of reform programs in order to protect their privileged positions. The nascent private sector will need help in upgrading its marketing and financial management skills and in using market information to make sound production and marketing decisions. A.I.D. and other donors

⁹Horticultural Marketing: A Resource and Training Manual for Extension Officers, FAO Agricultural Services Bulletin No. 76 (1989), is an example of prepared extension materials.

have a positive and facilitating role to play, and donors should encourage African governments to play a similar role.

4. Agricultural Marketing System Evolution

4.1 Potential Problems of Classification

Taxonomies and classification schemes need to be devised and used with caution, as they tend to reflect conditions at a particular point in time rather than dynamic evolution. Based on early judgments, countries may get pigeonholed into categories that do not reflect changing realities. Despite these potential pitfalls, it is useful to think about key characteristics that differentiate African countries based on their suitability for different types of investments in agricultural marketing. We will frame the discussion initially in terms of broad market system evolution, an inherently dynamic process which moves through different stages. It is important to note that various commodity subsystems within the same country may be organized and operate in quite different ways. We conclude by arguing that fruitful cross-country comparative efforts should focus on particular commodity subsystems, rather than agricultural marketing systems as a whole.

4.2 Stages of Agricultural Market System Development

This section proposes a general marketing system development classification scheme based on evolutionary stages.¹⁰ Any African country may manifest characteristics of one or more stages in different regions or for different commodity subsystems. For example, grain markets may be poorly developed, but a country may produce horticultural products under contract and export them to distant, high-income markets. Despite varying rates of marketing system development across subsystems, we hope that the proposed classification is generally useful in thinking about how marketing systems change over time.

In order to avoid a lengthy descriptive presentation, we condense the discussion of stages into a comprehensive, two-page table (Table 2), that differentiates between driving forces, which are essentially causal variables, and associated factors, which reflect marketing system developments characterizing or correlated with different stages. The driving forces are divided into key economic indicators, institutional variables and infrastructure. The associated factors are broken into those related to input markets and product markets.

Stage I characterizes African countries where the domestic marketing system is least developed and where the country is poorly integrated into world commodity markets. Stage V characterizes highly industrialized North American, European and Asian countries. Although there are land-scarce countries in Africa and pockets of land scarcity in many African countries,

¹⁰This conceptualization of stages and evolutionary development was inspired by a similar presentation by Kelly Harrison in Recent Evolution of Urban Wholesale/Retail Food Distribution Systems in the Third World, November 1986.

Table 2. Agricultural Marketing System Evolution: Driving Forces and Associated Factors

Driving Forces	Stage I	Stage II	Stage III	Stage IV	Stage V
Income	Very low levels. Undifferentiated in rural areas.	Low but some differentiation in rural areas. Rising urban middle class.	Emerging urban class with purchasing power. Rural incomes rising, with increasing differentiation.	Increased incomes and wealth spread throughout rural areas. Fewer, larger, more economically viable farms remain in rural areas.	High incomes and standard of living prevail. Consumers willing and able to pay premium prices for convenient goods and services.
Urbanization	Low level. Most people live in rural areas.	Still at low level, but rising urbanization. Largest cities begin to grow rapidly.	Outside of growing major cities, secondary or market towns thriving.	Cities continue to grow though at lower rate than in Stages II, III. Population growth rate levels or declines.	Most people live in cities, though urban population is diffused in many primary and secondary cities.
Technology	Pre-industrial.	Limited use of improved technology in agricultural production and marketing.	Improved production and marketing technology has become widely used. Most land goes to high-yielding varieties, and farms use fertilizer and agro-chemicals. Improved storage and processing techniques. Refrigeration (and cold storage) become widespread.	Virtually all farms use improved seed, fertilizer and agro-chemicals. Post-harvest handling, processing, storage and distribution technology becomes larger-scale and more efficient. Export crop technology meets highest Intl. standards.	State-of-the-art technology prevails in agricultural production, post-harvesting handling, and other functions. Computers assist in determining optimal crop or land mix, inventory levels, and firm financial/marketing management.
Industrialization	Artisans produce agricultural implements and limited range of consumer goods.	Small local manufacture of farm implements, low-scale processing units and consumer goods, though on a small scale.	Increasing industrialization. Expanded scale in manufacturing farm implements and machinery. Processing machinery manufactured, fertilizer mixing plant. Assembly and maintenance of cold storage units.	Go beyond machinery assembly and fertilizer mixing plants to full-scale industrialization. For most part, country achieves a scientific and industrial base.	Scientifically advanced, industrial society, with many "post-industrial" elements. Micro-firms able to produce efficiently for niche markets.
Legal Environment	Informal judiciary. No contract law or private ownership of land.	Judicial system in urban areas, but prone to influence peddling. Contract law not vigorously enforced. Insecure land tenure.	Secure land tenure and private land markets emerge. Contract law increasingly well-enforced. Judicial system becomes stronger and less prone to manipulation.	Strong judiciary system provides checks and balances to executive and legislature. Property rights, contract law, torts become increasingly well developed.	Strong legal system consolidates. Environmental and food safety issues come to fore; strict penalties for firm non-compliance with regulations. Legal advances also in biotechnology and patent law (intellectual property rights).
Market Organization	Small, statistically competitive firms with circumscribed trading activities.	Increasing scale of some firms, particularly in wholesale trading.	Scale and concentration increases in wholesale trading and processing. Less efficient, smaller-scale competitors struggle. Small retailers provide goods conveniently, which are in high demand.	Scale and concentration increase in performance of other marketing functions (e.g., retailing). Small-scale, inefficient operators disappear, except where able to provide great convenience utility.	High degree of concentration typically emerges in food processing, grading and distribution. Mergers and buyouts become commonplace during food industry consolidation.
Transport Infrastructure	Underdeveloped. Many rural areas not served by roads. Trunk roads dilapidated. Few all-weather roads. No railroads. Few airstrips. Small, non-mechanized parts.	Trunk road grid extended. Expanded rural road network. Limited rail and air transport between key points/cities. Parts can accommodate larger vessels, but operations are non-mechanized.	All-weather roads penetrate further into rural areas. Feeder road network becomes better developed. Rail and air transport networks expand. Parts can accommodate ocean-going vessels carrying containers. Intl. air freight capacity expands.	Transport infrastructure becomes well-developed and maintained. Trunk roads improved. Entry/exit to urban areas facilitated. Rail, airstrips and ports improve.	Paved roads serve most rural areas. Toll roads charge user fees for maintenance. Rail systems used to transport grain and bulky commodities. Airports and ports achieve state-of-the-art.
Communications Infrastructure	No electronic communications outside capital city.	Telephone service between major cities. Capital city has limited international telephone and telex capacity.	Domestic and international telephone service improves. Intl. telephone and telex/fax linkages strengthened. Telecommunications to major cities.	Telephone service penetrates into most rural areas. International telecommunication network deepened; secondary lines integrated into it.	Telecommunication networks penetrate into rural areas. Telex, fax, express mail systems well-developed. Car telephones/faxes.
Electricity & Water	Electricity only available in one or few cities. It's unreliable and available part-time. Pumped municipal water supply available in few cities. Sewage and waste disposal systems underdeveloped in major cities. Water raised by hand or with animals in rural areas.	Electricity, municipal (pumped) water and sewage/waste disposal systems expand to other major cities. Water raised increasingly by motorized pumps in rural areas.	Electricity and municipal (pumped) water systems expand to secondary market towns. Sewage and waste disposal systems developed. Some rural areas, particularly those near cities, become electrified. Water raised by motorized pumps in many rural areas.	Rural areas electrified, and water systems improved. Electricity capacity strengthened to accommodate industry and refrigeration requirements.	National electrification achieved. Pumps or urban authorities meet water requirements. Increasing attention to water contamination and quality.
Government Role in Marketing	Limited involvement in marketing system, and little capacity to enforce policies and regulations.	Limited government regulation of food system and enforcement capacity. Government may set up marketing boards for export crops and grain.	Government regulation of input and product markets improves. Unfair trading practices and misrepresentation penalized. Government able to enforce compliance with minimal food hygiene regulations. Grades and standards developed and applied.	Government regulation continues to improve, particularly investigation of anti-competitive practices. Grading system vigorously enforced, but may also change to accommodate changing tastes and preferences. Food safety becomes a high priority.	Government improves capacity to regulate food industry and utilization. Concerns over increased concentrations, environmental externalities, food safety and truth in advertising/labeling.
Financial Institutions	Predominantly informal. Savings groups and local moneylenders are key financial intermediaries.	Commercial banks lead to larger agro-entrepreneurs. Informal finance still predominant in rural areas and for smaller firms with few assets (as collaterals).	As private land ownership expands, larger farmers are able to borrow from commercial or ag credit arrangements penalized. Government able to use the formal financial sector, which deepens and broadens its asset base and lending capacity. Financial links with foreign countries, including currency convertibility, are strengthened.	Formal financial institutions become stronger, more diversified and deeper. Informal financial arrangements of declining importance. Longer term loans for farm processors, traders requiring investment capital become increasingly available.	Farms and firms able to use commodity exchanges and futures markets to hedge risk and currencies to manage risk. Financial system well-integrated into global financial markets.

Table 2 (continued) Agricultural Marketing System Evolution: Driving Forces and Associated Factors

Associated Factors	Stage I	Stage II	Stage III	Stage IV	Stage V
Seed Industry	Farmers retail seed. No government or commercial multiplication or distribution.	Government produces foundation seed in limited quantities and usually multiplies seed. Improved seed usually only available through government seed service or development projects.	While government continues to produce foundation seed, commercial seed firms and specialized contract multipliers emerge. Large numbers of farmers use improved seed.	A vibrant private seed industry develops, which is able to screen, test and develop improved varieties. Private firms increasingly produce foundation seed, and they use contract multipliers extensively.	Private firms, often with government or university support, improve seeds and plant material through biotechnology, which shortens the testing, multiplication and diffusion cycle.
Fertilizer Distribution and Use	Farmers rely on manure, crop residues and burning to maintain fertility. Little use of inorganic fertilizer.	Fertilizer used on cash crops, particularly export crops. It is often supplied by parastatal organizations responsible for export marketing. Limited use of fertilizer on staple crops (i.e., grain, tubers, legumes).	Fertilizer is used increasingly on staple food crops, particularly grains. Fertilizer application is often below optimum levels, and farmer knowledge of the benefits of alternative formulations may still be limited. Fertilizer is distributed by commercial firms in many rural areas.	Farmers use higher levels of fertilizer. Their knowledge of alternative formulations, timing and methods of application expands. They increasingly buy in bulk from wholesale dealers. Dealers provide informal extension services with fertilizer.	Farmers are very knowledgeable about fertilizer attributes and requirements for different soil types. Soils are systematically tested for deficiencies and to compensate through fertilizer application. Some farms practice "organic" agriculture in response to environmental and soil erosion problems. Hence, fertilizer requirements are reduced.
Agro-Chemical Distribution and Use	Not available or used.	Limited use of agro-chemicals, except on cash crops. Little use of phytosanitary products in storage or transport.	Farmers begin to use agro-chemicals widely on field crops and on crops in storage. Veterinary inputs are also widely used and available, generally from public animal health agencies.	Virtually all farms use agro-chemicals. Use of phytosanitary products for crops stored on the farm or commercially has become widespread. Private practices supplement government agencies in distributing veterinary drugs and providing veterinary services.	Farmers are very knowledgeable about pests and parasites. Many practice integrated pest management, reducing the need for chemical treatments. When pest problems get out of control, government agencies step in to provide widespread spraying and treatment programs.
Agricultural Equipment	Farmers practice hand-lab agriculture. Very limited animal traction. Farm implements produced by artisans using scrap metal.	Farmers associated with export marketing boards are able to obtain animal traction and equipment on favorable credit terms. Traction not widespread outside of these programs.	Animal traction is increasingly widespread and has diffused spontaneously. Rural and secondary town artisans manufacture and repair equipment. There are active traction animal and equipment sales and repair services. Farmers use animal traction on non-motorized machines to process outputs on the farm.	Farm operations are increasingly mechanized, using motorized tractors, tillers, harrows, processing units. Higher-level processing takes place off the farm, and farmers buy back processed products for consumption.	Farm operations are heavily mechanized. Larger farms make large investments in agricultural machinery. Smaller farms rely on custom hire mechanized units to perform key operations.
Labor Markets	Inter-household labor exchange predominant in rural areas. Virtually no agricultural wage labor.	Informal agricultural wage labor markets emerge. Premium wages paid during peak agricultural periods. Apprenticeship systems prevalent in marketing and transport.	Agricultural wage labor becomes an important source of farm labor. It is often full-time, rather than part-time peak season labor. It often comes (or is recruited) from distant, depressed rural areas. As marketing and processing firms grow, they hire more full-time employees.	Farm ownership and management/labor become increasingly separate functions. Permanent hired labor is supplemented by peak season labor during peak periods, such as harvesting. The seasonal labor may be imported from other countries. Marketing and processing firms hire more full-time, skilled laborers, technicians and managers.	As farms become increasingly capitalized, capital and labor are hired together to perform peak season farm operations. Agriculturalists compete with other industries and services in competitive, national labor markets for skilled laborers, technicians and managers.
Storage Methods	On-farm storage and processing. Storage is artisanal and unimproved with typically high losses. Unmechanized, labor-intensive handling and processing methods.	Short-term commercial storage generally without use of insecticides. Government agencies often perform the longer term storage function on a large-scale. Emergence of small-scale, mechanized food processing.	On-farm storage methods improve significantly and losses drop correspondingly. Insecticides and fungicides become widely used. Producer knowledge of harvesting and handling techniques improves, especially for perishable commodities. Marketing agents improve capacity to handle and store foods.	Post-harvest handling practices continue to improve, especially for higher-value, perishable commodities, as well as become more mechanized. Pre-cooling and cold storage become widely used in perishables marketing. Large-scale commercial storage of staples improves greatly.	Post-harvest handling methods become state-of-the-art in order to satisfy increasingly exacting consumer demands. Pre-cooling, shrub wrap in the field, mechanized sorting and grading, standardized cartons and containers, palletization and fork-lift handling of all types of products are among the major post-harvest handling methods.
Processing	Generally limited to processing for household consumption. Processed products not storable or traded.	Small-scale, commercial food processing emerges. Processing done on a custom basis.	Larger, more efficient processing units emerge, as marketable surplus expands and producers rely on commercial rather than on-farm processing.	Processing units increase scale and efficiency. Processed fruits and vegetables are widely consumed. Much greater convenience is exhibited in processed foods, which are ready to eat or cook. Packaging becomes more attractive and important for sales.	Processing facilities are able to operate much of the year at high levels. Processing machinery can be adapted for several related uses. As demand for fresh fruits and vegetables expands, processed output may decline per capita (except for frozen products).
Predominant Trader Type	Household to household trade predominant. Some part-time rural traders. Few wholesale traders in urban areas.	Urban wholesale traders begin to dominate trade in staple crops. They typically work through commission agents or associated rural assemblers.	Increasing specialization takes place in trading. Scale increases, particularly for wholesalers and processors.	Large-scale wholesale firms trade a broader array of products and are able to supply the needs of grocery stores and other retail outlets. Small-scale, inefficient firms disappear, except where able to provide convenience. Increasing scale in retailing.	Best, integrated food conglomerates perform assembly, processing, storage, wholesaling and retailing functions. Mergers and acquisitions lead to increased concentration and scale.

Table 2 (continued) Agricultural Marketing System Evolution: Driving Forces and Associated Factors

Associated Factors <u>Subject Markets</u>	Stage I	Stage II	Stage III	Stage IV	Stage V
Spacial Organization of Markets	There are few periodic, localized markets drawing from circumscribed areas.	The number and size of periodic markets expands. These serve increasingly as bulk buying points in staple crop trade. Market hierarchy begins to emerge.	A well-articulated market hierarchy develops, with vibrant, high-volume urban wholesale markets in large cities.	Multiple wholesale markets serve large cities, and the variety of retail outlets proliferates. Produce is increasingly assembled on the farm or brought to warehouses or grain elevators directly by farmers. Periodic markets performing assembly and retail functions disappear.	Wholesale markets in central cities disappear, and are replaced by direct shipment of food products from suppliers to end users. Supermarkets and warehouse stores become the chief retail outlets for urban and suburban consumers. High incomes and the increasing value of time create expanded opportunities for convenience stores and fast food outlets.
Grades and Standards	High degree of product heterogeneity. Limited income differentiation among consumers does not justify grading.	Informal grades and standards are applied by the private trade, although they are not always consistent.	Governments intervene to develop clear, universal grades and standards. Public health concerns become important. Grading schemes reflect previous informal grades used by private trade. Governments begin to apply and enforce standards.	Uniform weights and measures are universally applied, and violators are sanctioned. Grading schemes become more subtle and differentiated, reflecting higher income levels and greater variety of tastes and preferences (dictated by purchasing power).	Grades may change as consumer preferences and health concerns change (e.g., beef grades, field milk in U.S.).
Coordination and Exchange Mechanisms	Informal exchange. Virtually no active coordinating institutions or agents.	Spot markets, characterized by wide supply and price fluctuations, predominate. Traders are required to personally inspect lots of produce.	Increasing use of formal contracting arrangements by producers, processors and exporters. With the emergence of uniform grades and standards and warehouse receipts, personal inspection of produce lots is no longer necessary.	Market coordination becomes more dynamic and precise. Active markets, commodity exchanges and in some cases futures markets replace spot markets. Electronic marketing is introduced. The food industry becomes more vertically integrated.	Market coordination becomes increasingly precise with the advent of computerized inventory tracking systems and excellent communications. Contracting arrangements, vertical integration, and the use of commodity and currency futures markets predominate.
Risk-Sharing and Sharing Mechanisms Marketing	None other than farmer investment in livestock and reciprocal social relations in rural areas.	Market brokers or facilitators assess credit-worthiness of marketing agents and extend short-term credit. Traders turn over stocks rapidly to avoid losses associated with adverse price movements while staples in storage. Informal moneylenders charge high interest rates to offset high risk of borrower default.	Contracts with price, quantity and quality guarantees and provisions for handling production shortfalls and price fluctuations become an important risk-sharing mechanism. Larger term commodity storage becomes a form of speculation. Banks spread risk by lending to farmer organizations.	Producers, processors, wholesale traders and exporters/importers use forward deliverable contracts and hedging to minimize risks. Crop insurance schemes or other farm income guarantee programs emerge. Other government programs may help to spread the risk of overseas agricultural investments (e.g., OPIC).	Farms and firms able to use commodity exchanges and futures markets in commodities and currencies to manage risk. Financial system well-integrated into global financial markets. Private insurance companies willing and able to insure against wide range of risks.
Market Information	Limited and localized. Disseminated by word-of-mouth.	Private market information networks develop, where traders have superior knowledge to producers. Government may begin to provide limited, but typically not very timely market news.	More reliable, widely disseminated information on production, stocks, trade volumes and prices becomes available and is used by producers and marketing agents in their marketing decisions. Prices printed in newspapers or broadcast over the radio.	Up-to-date public market information is widely available and used. Private information services develop to meet the demands of private commodity traders, who need high-quality and current market information rapidly and are willing to pay for it.	With increasing domestic concentration in the food industry and as more food products are transferred privately within vertically integrated systems, public price information may become less representative and timely. Rational and global supply and trade information becomes widely available and critical for trading decisions in international markets.
Marketed Surplus	Incidental and unplanned. Determined primarily by weather.	Larger, better-equipped farms develop a more commercial orientation and produce most of the marketed surplus. Irrigated farms may produce much of the surplus.	Most producers develop a commercial orientation. Production of a marketed surplus is planned. Most farm production is sold, so this surplus becomes the major source of farm income.	Farms sell essentially all of their output and buy processed, ready-to-eat foods in rural or small town retail outlets.	Corporate superfarms sell all of their output.
Marketing Share of Value-Added	Low marketing margins for most products, which have short distances and have little value added.	Marketing margins begin to rise, especially for food products transported long distances or stored for some time.	Although costs for performing particular marketing functions decline, gross marketing margins continue to increase as more value is added in the marketing process.	Farmers capture a smaller share of the consumer dollar, as time, form and place utilities are added to food products. As scale and efficiency expand, unit costs for performing specific marketing functions continue to decline.	As consumers demand more and more convenience and eat more of their meals away from home at food establishments, farmers capture a small proportion of the consumer dollar.

the stages presentation assumes that land is relatively abundant, as in North America, Oceania and South America, and not highly restricted, as in the densely populated Asian countries. A brief description of key features of the different stages follows.

Stage I. African countries in stage I are generally poorly integrated into world agricultural markets, often landlocked and quite vast (so that many producers are far from borders). Their marketing infrastructures are generally undeveloped or dilapidated. Trading networks for most agricultural commodities are localized, and interregional trade is limited. Private marketing agents are generally small-scale, undercapitalized individuals who attempt to turn over their stocks as rapidly as possible. Many producers focus on satisfying their own households' food security requirements, although they generally sell small quantities of staple foods to meet cash needs (or tax requirements) after the harvest. African countries with this set of conditions are CAR, Chad, Guinea-Bissau, Guinea, Congo Republic, and much of Angola, Mozambique and Zaire.

Stage II. Countries in stage II generally have a more extensive marketing infrastructure than those in stage I. The road (or river, lake) transport system is better developed and in better condition. Interregional domestic trade in staple commodities has emerged. Marketing becomes more competitive and specialized at each stage, and the scale increases for certain functions (wholesaling, processing). Trading networks emerge for manufactured (often imported) input and consumer goods. Larger and better-equipped producers plan, to the extent possible in dryland agriculture, to grow larger marketed surpluses as they are assured of a market. Farmers still process staple foodstuffs for their own consumption. As urban population expands, production of more income-elastic agricultural commodities, such as horticultural and dairy products, for the domestic market increases, particularly in areas close to demand centers. Much of Africa falls in stage II.

Stage III. As countries enter stage III, they expand trade with neighboring countries and distant suppliers and markets. Specialization and increased scale in performance of agricultural marketing functions intensifies. Processing of crops increasingly occurs off the farm, as producers have the income and sufficiently high opportunity cost of labor to have their crops processed for their own consumption. Vibrant wholesale markets emerge with significant demand pull to serve the needs of large and growing cities. Formal producer, processor and trade associations form, and governments develop and enforce formal grades and standards (weights and measures). Contract law, private land markets, and stronger formal sector financial institutions emerge. Integrated commodity systems develop for selected high-value commodities with backward integration by processors or traders to producers. African countries in stage III include Kenya, Côte d'Ivoire, and some areas of Senegal and Nigeria.

Stage IV. No African countries have marketing systems that have reached stage IV across most commodity subsystems. Stage IV countries have strong links with international markets for several commodities, including traditional exports and grains. There is evidence of increasing concentration at each stage of the production-distribution system, as food system

participants strive to achieve scale economies. Formal financial institutions become far more important than informal credit in meeting investment and working capital requirements of marketing agents. Domestic and international communications that facilitate long-distance trade have improved and are used by traders in their marketing decisions. As rural incomes increase, the demand for consumer goods expands. Specialized, large-scale agro-input wholesalers are able to support or provide extension services for selected, higher-value products. Government regulatory bodies monitor commodity trading and agro-input quality and reliability assiduously. Foreign direct investment expands, and vertical integration of commodity systems (where production contracts are increasingly prevalent) increases. Countries in stage IV include Argentina, Brazil, Costa Rica and Thailand.

Stage V. Countries that attain stage V organize and operate their agricultural sector in a scientific and industrialized fashion. State-of-the-art technology is used in agricultural research (e.g. biotechnology), production (high degree of mechanization and high levels of inputs), transport, processing, storage and input and product distribution. A low percentage of the population works on the farm and farm holdings have become large, consolidated units. Farmers understand and use sophisticated financial instruments and commodity futures markets. Agricultural trading companies use telecommunications extensively and have worldwide trading networks. Public and private market information is widely available and used in production and marketing decisions. Transport infrastructure is well-developed and penetrates deep into rural production zones. Much of Western Europe, the U.S. and Canada have achieved this stage.

4.3 Beyond General Classification to Subsector Classification

A major drawback to the above classification scheme, which lays out stages of general agricultural marketing system development, is that commodity subsystems within a given country can be organized and perform in strikingly different ways. In some African countries a traditional cash crop marketing system can be well-organized, coordinated and integrated and use technology, inputs, market information and management practices which can be characterized as stage III or higher. At the same time, the commodity subsystem for a staple crop, such as millet or beans, might be very poorly developed and coordinated, use rudimentary technology and post-harvest handling practices, and suffer from policy distortions and mismanagement by a parastatal agency (that has a monopoly or competes with private firms on a subsidized basis). Such a commodity subsystem could be classified as stage I or II. A good example illustrating this divergence can be found in Kenya. Export marketing of tea and coffee in Kenya is well-organized and relatively efficient, characteristic of a country in stage III. In contrast, marketing of maize and beans is far less efficient and more characteristic of a country in stage II.

Before arriving at a general characterization of market development for a particular African country, it is important to identify key commodity subsystems and to classify them separately. Different African countries can then be compared commodity subsystem by commodity subsystem. Broad subsystem categories could be as follows:

- o Coarse grains (maize, millet, sorghum)
- o Livestock (including ruminant livestock such as cattle; small ruminants; and camels, pigs, and poultry)
- o Horticultural products (fruit, vegetables, ornamentals)
- o Oilseeds (groundnuts, sunflower, safflower, sesame)
- o Legumes (cowpeas, soybeans)
- o Tree crops (coffee, tea, cocoa, rubber, palm, cashews)
- o Fiber crops (notably cotton).

In some instances, these broad categories include quite diverse commodities, for which generalizations are difficult. The most meaningful cross-country comparisons will probably come from comparing the characteristics and stages of development of the most disaggregated and specific commodity subsystems.

4.4 Policy, Program and Project Instruments for Commodity Subsystems at Different Stages of Marketing System Development

Given the above evolutionary schema and the greater ease of making cross-country comparisons by commodity subsector, the analytical task for A.I.D. is to classify commodity subsystems in African countries into stages and to consider public good types of investments, policies and an economic environment that will best facilitate the emergence of efficient and competitive marketing systems. Specifically, it is important to identify constraints that are likely to be most binding for a commodity subsystem at a particular stage, and how African governments and A.I.D. can relax those constraints. Note that this process is never-ending. Relaxing one constraint will marginally improve the performance of the commodity subsystem, but other binding constraints will emerge. The key is for A.I.D. to develop an iterative and flexible process of constraint identification, thorough diagnosis, prescription, and monitoring and evaluation of any changes. Prescriptions can be in the form of policy reform, changes in regulations affecting marketing and trade, pilot technology innovations, marketing system organization and management innovations, and training to strengthen human capital. There is no cookbook for this process.

Despite the absence of formulae, general guidance can be offered for African countries in which most of the commodity subsystems are in stage I of marketing system evolution. These countries need to concentrate on upgrading transport and communications infrastructure, improving farm productivity in order to expand marketed surplus, and providing a policy, regulatory and macroeconomic environment that encourages producers and marketing agents to respond to market signals reflecting underlying supply and demand conditions. Furthermore, the economic and policy environment should foster private entrepreneurship and investment, rather than massive government intervention to compensate for alleged "market failure." Most of these countries are more likely to face a general failure of markets to develop at all, rather than a

particular market failure. Agricultural research needs to be strongly supported in stage I countries, and donors should be prepared to meet investment and operating costs of public research organizations.

Countries where key commodity subsystems are in stage II require different emphases. Infrastructure will continue to require upgrading, but equal emphasis will be placed on maintenance. As more farmers produce surplus crops and as the need grows to encourage greater surplus production, rural road networks should be expanded. Although many African governments have created marketing boards to distribute inputs, assemble outputs, and transport, process and store commodities intended for domestic consumption or export, they are strongly encouraged to strengthen the policy, regulatory and legal frameworks for facilitating private enterprise. Special incentives or subsidies may be necessary in certain cases to encourage poorly capitalized and risk-averse traders and processors to undertake input distribution, to provide inputs on credit to contract growers, and to assemble, store and process outputs. As an example, African governments may need to subsidize fertilizer distribution (particularly the transport function) to keep fertilizer costs down.¹¹ In addition, agricultural research needs to go beyond increasing farm productivity to exploring technological, organizational and managerial improvements that would increase the efficiency with which marketing functions are performed.

As African commodity subsystems become better integrated into world markets and farmers become more commercially oriented (stage III), the nature of public interventions will also change. Telecommunications infrastructure, electricity and water supply, and sewage systems/waste removal need to expand beyond the larger cities to secondary market towns. Specific policies and regulatory streamlining may be required to promote exports aggressively. Export crop production and marketing technology need to be mastered, so that high-quality, attractive commodities are produced, handled through the use of improved post-harvest technology, efficiently processed and stored, and effectively packaged for demanding terminal markets. Governments need to take the lead in developing and enforcing uniform grades and standards for export and staple crops. Specialized training and export commodity-specific extension programs may also be required for producers and marketing agents. Financial instruments will become more sophisticated to meet the needs of exporters, who will need letters of credit, ease in converting domestic and foreign currencies, and the means to hedge exchange rate fluctuation risks. The legal system must enable firms to enforce contracts strictly and sanction violators. As land markets emerge and farmer credit requirements expand, governments need to secure land tenure and facilitate land transactions. Governments also need to strengthen regulation of private seed, fertilizer and agro-chemical markets, assuring competitiveness and minimizing abuses (e.g. adulteration, misrepresentation).

¹¹In some African countries, producers in more isolated, less commercialized areas lack the purchasing power to pay the full price of fertilizer (including all transport and handling costs). Yet the incremental gain in output and revenues (from sales) obtainable from using fertilizer would increase farmers' income and enable them to purchase some of their fertilizer requirements.

4.5 Key General Marketing System Development Variables

Macroeconomic and agricultural sector variables compiled in World Bank and U.N. publications are useful for comparing the general economic and agricultural development of less developed countries. These variables are typically too broad-gauged for comparing agricultural marketing systems (or commodity subsystems), however. Indicators such as per capita income, population growth rate (overall, urban, rural), historical inflation rates, and agricultural GDP are related to marketing system development but may be misleading for comparative purposes.

If A.I.D. wished to classify African countries with reference to key indicators, however, which are related broadly to agricultural marketing system development, some of the characteristics might be as follows:

- o Transport costs to the nearest ocean port.¹² Rationale: Transport costs are a key determinant of how well a country is integrated with international markets.
- o Domestic transport costs. Rationale: High domestic transport costs limit opportunities for interregional trade.
- o Population density, particularly in agricultural production zones. Rationale: Population density affects input distribution and product assembly costs.
- o Percentage of total population in urban areas and urban population growth rates. Rationale: A large and expanding urban population has a growing demand for foodstuffs, which provides opportunities for producers and marketing agents. A related factor is that declining farm population is usually (though not always) associated with increased agricultural productivity, consolidation of holdings, and new employment opportunities in urban areas.
- o Estimates of the magnitude of marketed surplus of key commodities (especially grain) and its distribution by farm size or equipment level or farm income. Rationale: In the African context (lower stages of marketing system development), a high concentration in sales of key commodities might suggest the need for broad-based agricultural research and development programs to increase the productivity of the majority of farms.
- o Inflation rates (both the general price index and the index of food prices). Rationale: Although not strictly a marketing variable, inflation rates have an important effect on incentives to invest in agricultural production and marketing.

¹²In cases where high-value commodities, such as horticultural crops, are air-shipped to foreign markets, air-freight charges to a common (European) market would be a better measure.

- o Relationship (degree of integration) of prices of key commodities to world market prices; and
- o Staple food (grain) crop self-sufficiency ratios (i.e. percentage of domestic disappearance or "consumption" met by domestic supplies).
Rationale: This ratio requires interpretation in each country context. Low self-sufficiency may indicate a poorly developed and functioning staple food crop production and marketing system, or exchange rate or trade policy-induced imports of staples. It may also signal lack of comparative advantage in food crop production, which may be fine if export crops generate the foreign exchange for imports.

5. Fostering a Process of Agricultural Marketing System Development

This section discusses key elements of a A.I.D. strategy to strengthen the capacity of African countries to do the following:

- o Carry out programs of applied research on agricultural marketing systems;
- o Identify and diagnose marketing system constraints; and
- o Design, implement, monitor and evaluate projects, programs and policies affecting the agricultural marketing system.

5.1 Building Local Capacity

Capacity building is conventionally viewed as the training of public sector analysts to do agricultural marketing policy and price analysis. Training can be on-the-job (or in-service), in local degree programs or in other countries (both short- and long-term). Analysts trained in such programs typically work in government ministries of agriculture or planning, agricultural or economic research institutes, and universities. African countries clearly need to expand their supply of well-trained analysts and to upgrade training programs, especially for junior analysts.¹³ The capacity to analyze potential policy changes and evaluate the consequences of marketing projects or reform programs are prerequisites for improved policy formulation and ongoing fine-tuning. Strengthening public sector capacity to do marketing policy analysis is a high priority for African countries in the first two stages of marketing system development when the supply of well-trained analysts is limited and the potential for making policy decisions with adverse long-run consequences is high.

As marketing systems become more sophisticated, more specialized skills are necessary. Specifically, special expertise in engineering, food technology, processing, bulk storage, financial analysis, and marketing management become important. A key issue is whether A.I.D. has a comparative advantage in funding short- and long-term training in these areas. During the past 20 years, most Africans trained overseas under donor or foundation funding have received degrees in the agricultural (production) sciences, natural resources and agricultural economics. As food production expands and marketing constraints become more binding in the "second generation," more specialists need to be trained in disciplines that address how commodities are handled, processed, transported, stored, packaged, distributed and promoted after harvest. Private U.S. agribusiness firms and consultants, as well as university specialists, can provide expertise in these areas.

¹³As an example, USAID/Kenya is providing funds and TA to Egerton College, an agricultural undergraduate training institute in Kenya. The Stanford Food Research Institute is training junior analysts to use the PAM (Policy Analysis Matrix), an analytical tool developed by Scott Pearson and Eric Monke.

5.2 Engaging in Effective Policy Dialogue

Policy advice from donors has tended to be based more on the logic of neo-classical economic theory than on empirically grounded observations. Hard information with which to gauge the micro-level impacts of macroeconomic, trade and agricultural policy reform programs is very limited in African countries. Some A.I.D.-funded projects such as Food Security in Africa are beginning to provide a valuable empirical base of information on the behavior, constraints and perceptions of rural households and private marketing agents that can be used to inform policy analysis more effectively (Weber et al., 1988).

Expanding the supply of policy analysts has not and will not guarantee more effective policy formulation in African countries. Improvements in substantive excellence and presentation to policymakers, along with more collaboration between expatriate and local analysts, are crucial. Teams of expatriate advisors performing sophisticated economic analyses are no substitute for joint collaborative research efforts by African analysts and expatriate advisors.

Applied agricultural marketing research programs need to present empirical findings to policymakers on a regular basis to influence policy formulation. Periodic working papers, seminars and workshops can keep government analysts and policymakers informed about the micro-level impacts of market reform programs. Local analysts need to become heavily involved in this process, progressively replacing expatriates as presenters and advocates. Local analysts have an intimate knowledge of idiosyncratic local economic, social and political conditions, which gives them a legitimacy that few expatriate analysts can claim. Expatriate analysts can provide advice and support to ensure that the periodic working papers and seminars are as high as possible in substantive quality. In this way the credibility of local analysts in the policy dialogue process is strengthened. Furthermore, regular research outputs, however preliminary, provide valuable empirical findings to policymakers who need to make decisions on the basis of limited yet current and best available information. By the time research results are final and ready for publication, they are often out-of-date and no longer useful to policymakers (except to expand the historical record and to illustrate key lessons).

In addition to providing research support and management input, expatriate agricultural marketing policy analysts, working under contract to A.I.D., represent a free market and only mildly interventionist economic system. The American ideals of democracy, free and open markets, free trade, and transparent public institutions are emerging in many countries in Eastern Europe, Asia (in the Philippines and gradually in India), and South America (Argentina, Brazil, Chile and Panama). Africa is lagging behind the rest of world with its preponderance of one-party dictatorships and military-led governments, weak markets, heavy protection of inefficient domestic industry, and public agencies and officials who account to no one other than perhaps the IMF and the Paris or London clubs of donor agencies. Recent political unrest in several African countries indicates, however, that African governments will increasingly face challenges to their legitimacy and authority.

In a very real sense, the A.I.D. policy advisor is advocate as well as impartial scientist. Our foreign assistance programs are driven by the belief that the moderately regulated economy of the U.S. is the best possible system and that government needs to provide basic public goods (infrastructure, public education, a safety net of social services) but not intervene heavily in markets and specific types of economic activity. In contrast, many African countries are highly interventionist in agricultural marketing systems and other types of economic activity (transport, industry, international trade). It is to be expected that African analysts and policymakers who have spent their professional lives working in such interventionist systems may challenge the free enterprise and trade views of A.I.D. policy advisors. The ensuing debate can be beneficial.

5.3 Public and Private Sector Mix in Market System Development

What the public sector can and should do in African countries is currently not a very popular topic in A.I.D. Having lived in a highly industrialized country with a strong legal framework, a government willing and able to regulate economic activity, and a good infrastructure, U.S. analysts assume that light regulation of economic activity, characterizing the U.S. during the 1980s, will ensure transparent and competitive markets.

In African countries, where inadequate infrastructure is a fundamental marketing constraint, and heavy-handed market intervention by public agencies has in many cases decimated private trading systems, the public sector can and must do much to facilitate and strengthen private sector marketing. At a minimum, regulating input and product trading practices is important. Ensuring that agricultural inputs are high-quality and correctly labelled or described is a top priority in areas where opportunities to dilute or tamper with fertilizer and agro-chemicals can present a real problem.

Clearly defining the role of public agencies in the marketing system is also critically important, especially as resource availability (budgets and government willingness to cover operating deficits) and agency functions change. In countries where the mandates and operations of parastatals are changing, private traders need to know the purchase, storage and sales intentions (with respect to price intervention points, quantity targets, and the handling of food aid) of these organizations. Uncertainty with respect to government policy and the operations of parastatals is the worst enemy of private trade. Clarifying rules of game as well as the operations and intentions of public marketing organizations is an important step in the market reform process.

Providing at least minimal market information, particularly crop production forecasts, estimates of stocks, and price and trade data, is another important public sector function, especially for staple food crops. There is clearly a tradeoff between academic excellence (comprehensive data collection and sophisticated analysis) and the needs of policymakers and private marketing agents. Production and marketing information has to be disseminated in a clear, timely manner to meet their needs. It is in the public interest for these staple crop marketing systems to be as competitive

and transparent as possible, since staple food purchases represent a high proportion of consumer expenditures and inefficient and uncompetitive systems increase costs and hence consumer prices. Private traders or trade associations may be able to generate their own market information for export crops or niche commodities, which are not widely produced and traded. As a countervailing measure, producer associations may need to collect and interpret some price information to offset private traders' advantage (i.e. information asymmetry).

The public sector can also play a useful resource-coordinating role in assessing the costs and benefits of alternative investments of scarce public and donor resources (in public good infrastructure and services). Governments should not use scarce funds to crowd out the private sector or co-opt opportunities that private agents are capable of pursuing. Careful analysis and selection of investment alternatives that facilitate private agro-enterprise is an important public sector function.

Relating issues of public-private sector roles to the marketing system evolutionary stages presented in section 4.0, it is important to emphasize that governments of countries in stage I or early stage II face the temptation of intervening heavily in food systems to compensate for private sector weakness or alleged market failure. This temptation should generally be avoided, unless a very strong and convincing argument can be made for direct public sector participation in the production, assembly, storage, processing and distribution of agricultural commodities. The appropriate role of the public sector for countries in stage I of marketing system development is as follows:

- o Invest (or encourage donors to invest) heavily in basic infrastructure, particularly roads, ports or waterway development, and urban electricity, water supply and waste disposal.
- o Strengthen legal systems and fundamental institutions, including property rights, contract law, an independent judiciary, a political system with adequate checks and balances (which is capable of restraining dictatorial executives) and land title.
- o Foster a positive economic and investment climate through sound macroeconomic management, laws and incentives that encourage direct foreign investment and joint ventures, minimal but effective regulation of economic activity, and trade and agricultural price policies that promote the development of efficient, competitive agricultural marketing systems.
- o Invest in agricultural research (adaptive), extension and policy analysis capacity.
- o Invest in basic education to expand literacy and numeracy, and in agricultural education.

Governments of African countries in stage II of marketing system development can facilitate the emergence of efficient, competitive marketing

systems by continuing measures recommended for countries in stage I (as above) and emphasizing the following:

- o Increased investment in maintenance of infrastructure, especially transport.
- o Investment in communications infrastructure, particularly telephone and telex.
- o Selective investment in infrastructure and facilities to promote exports and encourage foreign investment.
- o As marketed surpluses emerge, development of market information systems that generate minimal but timely information, which is disseminated by radio and newspaper to private marketing agents.
- o Investment in educational systems to strengthen more specialized fields of agricultural marketing, including agribusiness management, food technology, financial analysis (accounting) and marketing price/policy analysis.
- o Streamlined yet effective regulation of input distribution (to prevent adulteration and mislabeling/misrepresentation) and product markets (to ensure competition and fair play).

In African countries with weak legal systems, or little capability to implement laws affecting marketing, A.I.D. could consider conducting legal and institutional profiles. These would focus on those aspects of law and the legal environment that foster entrepreneurship, protect private property, guarantee contracts and strengthen the commercial code. A potential problem with such profiles is that the African countries that most need to strengthen their legal systems are likely to be those that most vigorously resist careful examination and legal reform.

5.4 Monitoring and Evaluating Programs of Market Liberalization

As Berg (1989) and others have pointed out, marketing policy reform and market liberalization are not a one-time occurrence but an ongoing, protracted process. Donors and African governments need to carefully monitor reform programs and provide feedback to policymakers, who can make timely adjustments in policies or regulatory measures to strengthen reform efforts where necessary.

M&E schemes tend to be unwieldy, despite World Bank efforts (Casley and Kumar, 1987 and 1988) to develop straightforward, standard guidelines. They tend to have enormous data requirements, which place a premium on mastery of micro-computer technology and statistical software. While local analysts should strive to acquire this mastery over time, there is clearly a tradeoff between timeliness and the depth/scope of data collection efforts. More thought needs to go into identifying necessary variables and minimal data analysis requirements. This is not to argue that there is no place for longer term, highly data-intensive studies of the type done by IFPRI or Food Security

in Africa Cooperative Agreement researchers. The latter are necessary for improving our understanding of the investment and crop production choices of small farmers, food-cash crop complementarities, and household transactions and consumption behavior. Ongoing monitoring and evaluation of market liberalization requires, however, a leaner, more focused type of data collection and analysis that can provide timely feedback to decision-makers.

In addition to monitoring and evaluation, USAID Missions in Africa need technically competent, dedicated analysts to become deeply involved in overseeing market reform programs. As an example, USAID/Cameroon, with the help of the AMIS Project, is closely monitoring the privatization of fertilizer distribution in Cameroon. An A.I.D. economist is an ex-officio member of the Technical Supervisory Committee, an inter-governmental agency coordinating body that makes important decisions affecting the fertilizer privatization program. Participation in this type of supervisory body requires financial leverage; A.I.D. is providing \$17 million to finance private sector fertilizer importation and distribution (funds are channeled through commercial banks). A.I.D. has also hired a full-time analyst to help monitor the activities of importers, banks, wholesalers and distributors.

5.5 The Micro Complement to Marketing Policy Reform Programs: Commodity Systems Research and Development

In the medium term, most African countries will rely heavily on agriculture as a source of employment, income and foreign exchange. African countries need to export agricultural commodities to generate foreign exchange, which is necessary to pay for imports of capital goods, agricultural inputs such as fertilizer and agro-chemicals, and in many cases grain. In this context, doing careful analyses of comparative advantage and making strategic choices about investing scarce public resources becomes absolutely critical. The MADIA study calls for integrated commodity systems research and development programs to reinforce existing comparative advantage.

The AMIS Project is attempting to implement a commodity systems research and pilot-testing program in its field studies with USAID Missions, which involves a cycle of diagnostic studies (multi-disciplinary rapid appraisal and longer term programs of applied research) and design, testing and monitoring of pilot innovations in technology, organization and management. This approach is largely microeconomic, although it recognizes the overriding importance of a positive and facilitating policy/regulatory environment and positive economic incentives.

MSU researchers argue that small changes in the organization and operation of a commodity subsystem can lead to major incremental gains in efficiency and improved performance, provided the change relieves a significant and binding constraint (Riley and Staatz, 1981). Provided the economic environment is generally positive and the government has a facilitating approach to the private sector, AMIS supports this view, which it is attempting to put into practice in several countries. For example, a key recommendation of a coarse grain processing study in Senegal is that the Government and donors should consider pilot-testing experimental, semi-industrial processing units through private firms, rather than collective village organizations, such as the

conventional vehicle of women's organizations. In Niger, AMIS proposed following up a cowpea marketing rapid appraisal with an in-depth, exploratory study of women cowpea processors and vendors. A possible institutional prescription to emerge from this study could be the need to organize individual women vendors into larger economic units to achieve scale economies in processing, cost savings in input procurement, and improvements in product quality.¹⁴ These micro-level institutional modifications could, over time, have positive system-wide consequences.

5.6 Agribusiness Development In Africa¹⁵

5.6.1 Introduction

A.I.D. development assistance has focused on production agriculture and food self-sufficiency for much of the past 30 years. Appreciation is increasing, however, of the need for a broad-based strategy aimed at activities that promote rural income growth. Neither food security nor broader access to improved standards of living can be achieved through policies and programs that focus exclusively on domestic agricultural production and marketing. Emphasis is shifting to strategies that both increase agricultural production and develop other sources of revenue, permitting individuals and countries to buy food, capital goods and consumer goods, while specializing in what they can produce most efficiently and competitively.

A common feature of the economic development process is that production agriculture occupies a declining percentage of national labor forces as incomes grow. At the same time, the food and agricultural supply, assembly, processing and distribution industries grow rapidly. As greater value is added to agricultural products after they leave the farm, the proportion of consumer prices received by farmers declines steadily. In the U.S., for example, value added in the food marketing system is about triple the farm value of agricultural products. Furthermore, labor income in the food marketing system is about one-third greater than the total farm value of food products.

¹⁴In Nepal AMIS has recommended that USAID develop an institutional mechanism for screening, transferring and adapting internationally available technology in vegetable seed production, harvesting, processing, testing and packaging to the nascent temperate vegetable seed industry in Nepal.

¹⁵This section draws from papers by Mark D. Newman, Director of Agribusiness and International Trade Research at Abt Associates, discussions with Timothy J. Mooney, AMIS agribusiness analyst, and James Austin's EDI publication on Agroindustrial Project Analysis. See references to Mark D. Newman in the bibliography, particularly Promoting Agribusiness in Asia, Eastern Europe, the Near East, North Africa and the South Pacific: A Strategy for A.I.D.'s ANE Missions, January 1990.

5.6.2 What is Agribusiness?

Agribusiness participants are engaged in a broad range of production and marketing activities, including farm production, research and development, transportation, packaging, storage, distribution, promotion, risk management, financial services and marketing intelligence. Key agribusiness participants include input producers and farm suppliers, producers, assemblers, processors, wholesalers, brokers, importers, exporters, retailers and institutional distributors to consumers. In some cases parastatals might be considered agribusinesses, but we define agribusiness to be essentially private or cooperative enterprises engaged in input supply, production, assembly, processing and distribution activities.

In the book Agroindustrial Project Analysis, James Austin characterizes the agribusiness system as composed of "operators, supporters and coordinators."¹⁶ The operators are firms and organizations that take title to and handle physical commodities as they move from the farm to the consumer. They include input suppliers, farmers, first handlers, processors, distributors, transporters, storage firms and in some cases parastatal organizations. Supporting organizations are financial institutions and intermediaries, research centers, extension services and equipment vendors and repairers. Coordinators are governments, contractors, formal commodity and futures markets and industrial and trade associations. As argued below, A.I.D. will find the payoff highest from working directly with the supporters and coordinators, rather than with specific firms in the food system.

Austin also highlights three distinguishing characteristics of the raw materials used by agro-industries.¹⁷ These are seasonality of supply, perishability of supply, and variability in quantity and quality of raw materials. Agro-industrial firms consequently face problems of inventory management, production scheduling and coordination in procurement, processing and distribution. The perishable nature of raw material used in agro-industry and of high-value commodities (particularly horticultural products, ornamentals, herbs, spices and essential oils) shipped directly (in unprocessed or semi-processed form) to demanding, high-income markets requires processors and exporters to use special care in handling and shipping. Supply variability puts pressure on agro-industry's capacity to sort and grade quickly and effectively and to schedule production to process lots of varying quality and quantity.

5.6.3 Reasons for Promoting Agribusiness

In advocating free markets and private enterprise in developing countries, A.I.D. should emphasize agribusiness development for several important reasons:

¹⁶See James Austin, Agroindustrial Project Analysis, p. 15.

¹⁷See James Austin, op. cit., pp. 3-5.

- o Agribusiness lends itself to decentralization--a shift of jobs and other income-generating opportunities to rural areas. It can slow the massive migration to urban areas and ease the resulting growth pressure. Where decentralization does not lead directly to rural growth, it can encourage the development of smaller urban centers, where the costs of providing public services and performing agricultural marketing functions are often lower.
- o While production agriculture's share of employment and GNP may shrink as countries grow, the importance of non-farm related input supply, assembly of agricultural products, processing and distribution is likely to increase.

As incomes rise and demand for better quality and more highly processed food products increases, agribusiness will play a greater role throughout Sub-Saharan Africa. This process is evident as one scans marketing system development in low-income agriculture-based economies, transitional economies, and middle-income industrializing economies in the developing world (Figure 2).

Agro-processing industries can provide import-substituting products while creating jobs and other economic benefits. At the same time, growth in product processing for domestic and export markets can fuel demand and improve the ability to pay for imports. For example, Côte d'Ivoire exports coffee, cocoa and horticultural products, principally to Western Europe, while importing rice, livestock products and capital and consumer goods that foreign suppliers can produce more efficiently.

- o Linkages between specific projects and the rest of the local economy can lead to important multiplier effects on the growth of a country. For example, growth in processing is likely to stimulate demand for a variety of related services including packaging, transportation and distribution, which will stimulate development of additional small-, medium- and large-scale enterprises.

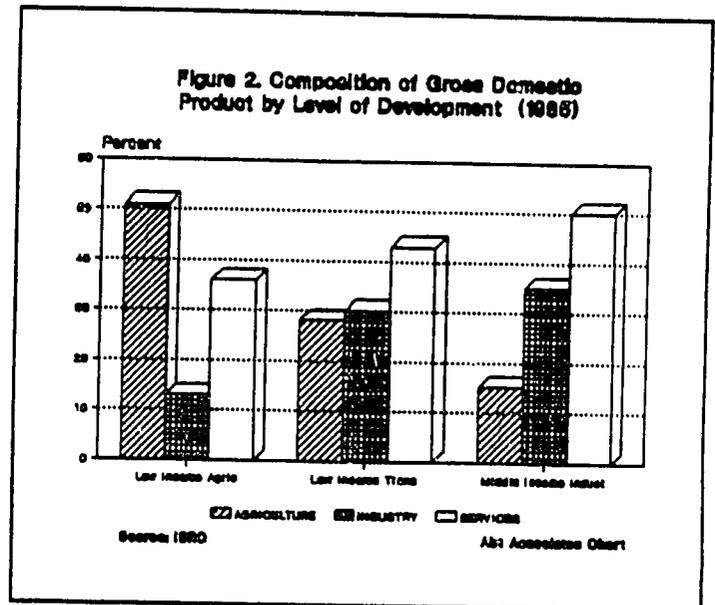
In a recent paper, Haggblade, Hazell and Brown (1989) state that forward linkages from agriculture to processors and distributors are strongest. Forward linkages to distribution and storage (agricultural marketing) are also quite prominent. Backward linkages between agriculture and farm implement repair are substantially weaker, but their emergence is also important in stimulating growth. The authors also estimate that global rural agricultural growth multipliers are on the order of 1.5 (i.e. a \$1 increase in agricultural income will generate about \$.50 of additional rural income), about 60 percent of the level of multipliers in Asia, where interindustry linkages are stronger.

Evidence around the world indicates that the importance of services related to food and agriculture grows as countries move up the income ladder, so that larger multipliers can be expected over time. In Pakistan A.I.D. has supported development of an input-output model to

estimate the magnitude of some of these effects. Recent estimates for the U.S. indicate that every dollar of agricultural exports generates an additional \$1.51 in other sectors and every dollar of import-substituting agricultural production generates an additional \$1.64 in supporting economic activity.

5.6.4 The Foundation for an Agribusiness Promotion Strategy

Providing an environment and resources to encourage private sector agribusiness growth was not an A.I.D. priority during the 1970s and much of the 1980s. A.I.D. has devoted considerable resources to private sector oriented activities over the last decade, particularly through small- and medium-scale firms, but those activities have often remained essentially separate from the technical resources focused on agriculture and rural development, A.I.D.'s traditional strength in many African countries. New skills, knowledge, and networks of contacts will be essential to A.I.D. in launching a successful agribusiness promotion strategy.



Many previous A.I.D. initiatives related to agribusiness have been directed at projects or programs implemented by public agencies or parastatals (e.g. marketing boards and government run processing facilities) in client countries. Thus, USAID Missions have gained the necessary skills to work with these organizations to design and implement fundable initiatives that respond to host government and A.I.D. requirements. For example, public research system improvements have been supported in a number of countries, market facilities and storage warehouses have been built, and commodities have been procured through private supply sources. Policy reform efforts have been directed at loosening government regulations that inhibit trade and investment and at facilitating imports of inputs, commodities and equipment.

USAID Missions will find it suitable and expedient to work with the supporting and coordinating institutions and agencies in the food system, rather than directly with private agribusiness firms. The flexibility of USAID Missions in contracting directly with businesses in developing countries is limited by a host of public procurement regulations. A.I.D.'s traditional public sector clientele and its potential private partners also differ in standard operating procedures for decision-making and action. In addition, USAID Missions would incur charges of favoritism if they worked with individual firms. As a result of these limitations, A.I.D. is encouraged to work with host country governments to provide public goods and services, such as food system research, marketing information systems, and improved

infrastructure and communications, that will facilitate and support agribusiness development. In some countries USAID Missions may also be able to work productively with agribusiness industry and trade associations.¹⁸

Another possible area of A.I.D. and African government interest is investments in special agro-processing zones. Agricultural processing industries require access to roads, electricity, water supplies, waste disposal facilities, transportation, communications, health care and educational facilities. Entrepreneurs must evaluate costs associated with securing such facilities and services, as well as risks associated with uncertain supplies or quality. Many African countries have poorly developed and maintained infrastructure for agro-industry. Developing countries sometimes offset the disadvantages of inadequate infrastructure with easy financing, advantageous tax treatment of earnings and investment, favorable tariff treatment of imported inputs and exports, and a variety of other mechanisms. The establishment of export free zones, typically near ports, can provide sufficient infrastructure for manufacturing, assembly and processing of products for export. Special agro-processing zones with adequate infrastructure and benefits from various policy incentives should probably be set up near supply or production sites in order to minimize costly transport to facilities near a port, however.

A.I.D. programs can increase the attractiveness of investing in agribusiness to entrepreneurs in developing countries and foreign partners by doing the following:

- o Helping to create a policy environment conducive to investment;
- o Preparing countries to identify and respond to new demands on human skills, financial capacity and technology that influence the economic interest of entrepreneurs in a given project or region;
- o Assisting governments in structuring incentives and regulatory mechanisms, and in some cases providing for public programs that increase the probability of private sector investment in agribusiness; and
- o Helping governments and business to collaborate in identifying promising agribusiness projects or commodity subsystems and the necessary public goods and services to support projects and the emergence of competitive, efficient commodity subsystems.

¹⁸The USAID funded PROEXAG Project in Central America works directly with various trade associations for "non-traditional" export commodities. The non-traditional products are, for the most part, horticultural products and ornamentals, which are shipped mainly to North American markets.

5.6.5 Elements of a Strategy to Promote Agribusiness Development

Over the last several decades A.I.D. project assistance has addressed a number of specific components of the package required for fostering agribusiness development, sometimes without explicitly recognizing it as a target. An agribusiness strategy for the 1990s can build on A.I.D.'s experience, while recognizing the importance of strengthening public goods and services to support agribusiness development. The major emphasis of such a strategy is on the following components:

- o Reforming macroeconomic, trade and agricultural sector policies to support a healthy business climate;
- o Strengthening market information systems in African countries;
- o Providing African agribusinesses with clear sources of information on policies, regulations, market opportunities, and sources of finance in African countries, as well as prospective foreign partners;
- o Providing in Washington and at USAID Missions information to help U.S. agribusiness firms interested in exploring investment opportunities in Africa to evaluate opportunities, capabilities and constraints in selected African countries;
- o Developing capacity on agribusiness related issues within A.I.D. and the countries in which it works; and
- o Playing an important facilitating role in helping private business, African governments and other donors and financial institutions to identify and undertake high priority investments and public sector supporting goods and services.

5.6.6 Strengthening Supporting and Coordinating Institutions

Considering likely A.I.D. resource limitations in Africa during the 1990s and the continued emphasis on policy reform and market liberalization, USAID Missions are strongly encouraged to work closely with African country governments in removing key constraints of a general nature to agricultural marketing system development, such as the following:

- o Policy and regulatory uncertainty;
- o Conflicting and disincentive policies;
- o Poor transport and communications infrastructure (and maintenance);
- o Excessive administrative burdens and tax burdens on private firms; and
- o Limited market information of poor reliability, suitability and timing.

Addressing these constraints that cut across commodity subsystems is a first priority for African governments and A.I.D. Once they are effectively addressed, A.I.D. could consider strategic investments to strengthen commodity subsystems that promise to substitute for imports in a cost-effective way or to export agricultural commodities that will be competitive on international markets. Given A.I.D.'s strengths and standard operating procedures, it can support agribusiness most effectively by working closely with African governments, industry and trade associations, and other supporting and coordinating participants in the food system rather than with specific firms.

5.7 The AMIS Approach to Improving Commodity Systems: Diagnosis, Applied Research, Pilot Innovations, and Monitoring and Evaluation

The AMIS Project has developed a process for examining constraints to the development of commodity marketing subsystems and prescribing opportunities and innovations for system improvement. The steps in this process are as follows:

- o Diagnose agricultural marketing system constraints, using rapid appraisal techniques;
- o Conduct in-depth analysis of specific marketing problems identified during rapid appraisals or other studies;
- o Identify promising institutional, organizational, technological and management innovations for improving system efficiency and productivity; and
- o Pilot-test and monitor selected innovations.

A rapid appraisal typically initiates the process. RA is a preliminary diagnostic overview of marketing system constraints and opportunities. It begins as a broadly gauged, fact-finding exercise but increasingly focuses on key problem areas.¹⁹ Rapid appraisals (RA) are short-term assessments which may be completed in as little as two weeks or as long as two or three months. To be most effective, RA exercises should concentrate on one or two related agricultural commodity subsystems. RA may also be region-specific, so as to make the best use of limited time and resources. While RA may generate specific policy prescriptions or pilot innovations, it is more likely to identify promising areas of further applied research.

RA is usually followed by longer term programs of applied research (AR), which focuses on in-depth diagnosis of key constraints to increasing the productivity of agricultural production and marketing subsystems identified in

¹⁹See Holtzman, John S., "Rapid Reconnaissance Guidelines for Agricultural Marketing and Food System Research," MSU International Development Working Paper No. 30, Department of Agricultural Economics, Agriculture Hall, Michigan State University, East Lansing, Michigan, 1986; Holtzman, John S., Richard Abbott and Gerard Martin, "Operational Guidelines for Rapid Appraisal," AMIS Project, Abt Associates, Washington, D.C., 1988.

the RA. AR may also, in selected cases, be designed to monitor and evaluate implementation of A.I.D. agricultural marketing projects or agricultural production projects with marketing components. Finally, AR may monitor the progress of pilot innovations. Monitoring and evaluation can identify implementation problems, as well as emerging bottlenecks and policy/regulatory constraints, so that policymakers and project managers can make changes to improve the chances of project success.

AMIS hopes, wherever possible, to conduct applied research in collaboration with local analysts and research organizations in developing countries. These organizations will not necessarily be government agencies. For example, A.I.D. has identified a private consulting firm to assist in implementing marketing studies and pilot innovations in Nepal. Whether the implementing agent is a government entity or a private company, the AMIS project intends to develop local capability to do applied marketing system research. AMIS staff will help local analysts design programs of applied research, provide training, monitor the progress of AR, assist in interpreting data, prepare working papers and seminars for policymakers, and identify selected consultants to assist in technical areas such as processing, storage or post-harvest handling.

In attempting to remove constraints to commodity subsystem development, AMIS recommends or prescribes pilot marketing system innovations of a technical, management, or institutional nature. An example of a technical innovation is using state-of-the-art shrink wrap methods to package fresh fruits and vegetables in growers' fields for shipment. A management innovation would be training selected firms to use improved accounting methods or possibly micro-computer based inventory tracking systems. An example of an institutional innovation might be designing processor-producer forward contracts that specify the quantity, quality, delivery date and location, and a minimum price that processors guarantee contract farmers for their produce.

The AMIS project activities described above are not intended to be separate and discrete exercises but part of an integrated applied research and action agenda, as shown in Figure 3. RA identifies promising areas of further research, binding constraints that can be relaxed through policy or regulatory changes or removal of specific bottlenecks (e.g. infrastructural problems), and promising pilot innovations of an organizational, institutional, management or technical nature. AR is intended to deepen and improve the quality and accuracy of analyses of problems diagnosed during RA, or to monitor pilot innovations. In some instances, AR may uncover problem areas not identified or incorrectly identified as non-binding during RA. Or in the course of monitoring a pilot innovation, analysts may judge that innovation to be unsuccessful and impossible to implement at the current level of marketing system development in a particular developing country. In either case, AMIS could conduct additional, targeted RA in selected problem areas. Through this second-round RA, promising areas of further research or additional pilot innovations could be identified.

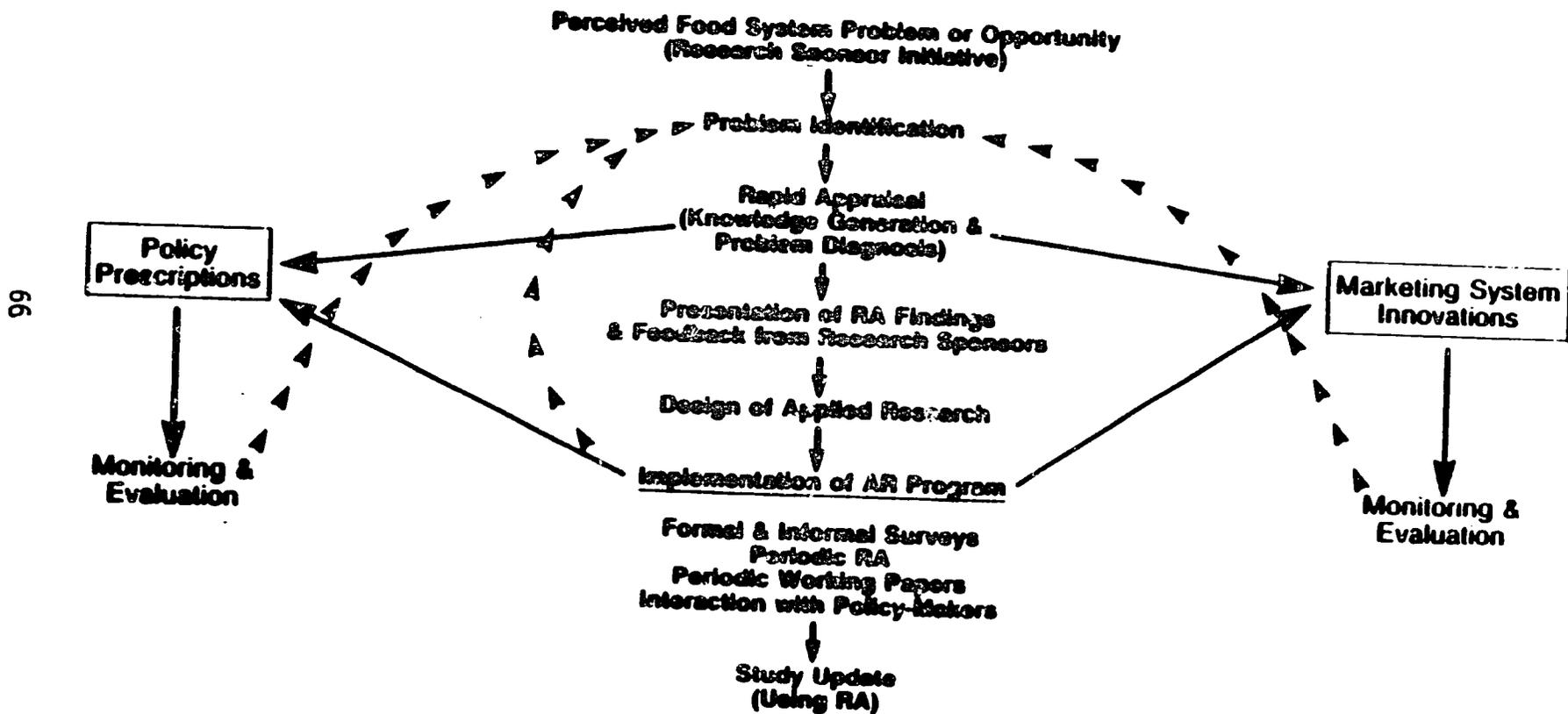
An important incidental benefit or joint product of doing RA, AR and monitoring PI with local researchers is that local analysts become more effective at identifying and diagnosing marketing constraints and

opportunities. This strengthened local capability will ensure more continuity in applied research efforts, and an accumulation of knowledge and practical experience among local analysts and organizations. Of course, no marketing innovation is guaranteed success. What AMIS hopes to foster is a willingness to experiment and monitor/evaluate carefully the impact of such experiments. Through such monitoring and evaluation, AMIS aims to improve the ability of A.I.D. and local analysts to identify and rank order constraints, to design pilot innovations and projects to remove these constraints, and to develop the flexibility to change policies, programs and projects in mid-stream to increase the probability of project success.

The AMIS Project is deliberately interventionist in hopes of stimulating change in marketing systems by introducing pilot innovations and prescribing policy/regulatory reforms that are likely to improve marketing system productivity. AMIS staff are aware that marketing problems in many developing countries are complex and in some cases intractable, depending for their resolution in part on improved macroeconomic conditions and a more positive climate for business and private investment. Effective market system reform and improvement requires careful sequencing of policy change and public and private investments in a manner that encourages entrepreneurship and removes the most binding constraints facing the food system at a given time. Given the complexity of the task, developing countries are more likely to improve food system performance through incremental changes rather than dramatic breakthroughs.

FIGURE 3

Schematic Overview of Rapid Appraisal and Applied Research Linkages



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Note: Unbroken lines indicate flow of applied research activities. Broken lines indicate feedback loops. Boxed off items are project outputs.

Annex 1

Analytical Approaches to Agricultural Marketing

Approaches to agricultural marketing, as discussed in the academic literature and modified for our purposes, are laid out as follows:

1. Market Structure, Conduct, Performance Approach. As adapted to commodity subsector or subsystem analysis by Bruce Marion (1976, 1985) and others, this approach focuses on the relationship between the organization of a commodity subsystem, the behavior or conduct of individual firms, and the resulting performance in terms of efficiency, progressiveness, equity (rewards as they relate to risks, rights, responsibilities of firms), and other performance attributes. See Figure A-1 for a detailed depiction of this analytical framework.
2. Institutional Approach. This incorporates elements of the SCP paradigm, but examines more fundamental issues of property rights, preference articulation (whose preferences count), contract enforceability, and the broader institutional and political environment (stability, uncertainty). At the micro level, this approach examines advantages and disadvantages of alternative institutional arrangements, and at the macro-micro interface it focuses on issues of public and private sector roles in performing agricultural marketing functions. One of the better discussions of this approach appears in a paper presented at an ICRISAT conference on grain marketing by Shaffer et al. (1985 and 1987).
3. Functional Approach. Agricultural marketing is viewed as a series of tasks or functions, such as first handling, sorting and grading, transport, storage, processing, wholesaling and retailing. This approach focuses on performance of these functions as efficiently as possible in order to lower costs and increase marketing system productivity.
4. Commodity Systems Approach. This approach examines the whole set of issues, including system organization, technology choice, marketing costs, and world commodity prices, associated with improving the performance of commodity systems. Commodity situation and outlook analysis in domestic and international markets is an important part of this approach.
5. Marketing Policy Approach. This approach focuses on policy and regulatory barriers to more efficient performance of the food system, giving special attention to agricultural price policy, exchange rate adjustment, macroeconomic variables (government expenditures, money supply, inflation) and their effect on incentives and marketing system performance, and trade policies affecting agricultural imports and exports.
6. Agribusiness Approach. Pioneered by Ray Goldberg and his colleagues at the Harvard Business School in the 1960s, the agribusiness approach has both private enterprise promotion and commodity systems elements. It focuses on the dynamic, coordinating role played by agro-industry in the production, transformation (processing), and distribution of agricultural commodities. As

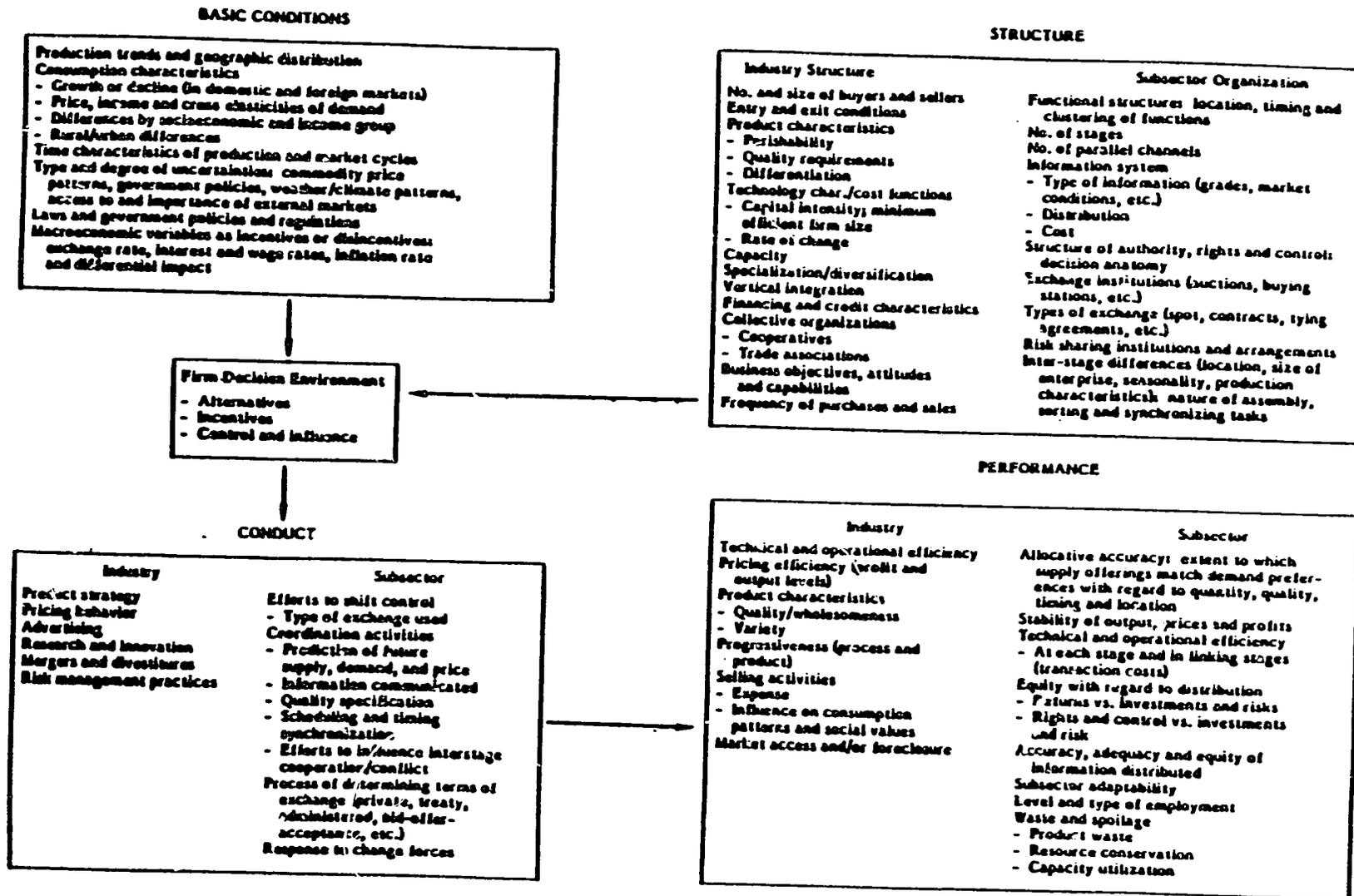
applied to developing countries, this approach emphasizes the development and refinement of integrated commodity systems which produce (and add value to) commodities destined for higher income urban and foreign markets.

During the late 1980s advocates of different approaches to marketing system development have been the following:

- o Marketing policy approach;
- o Commodity systems research and development approach;
- o Food security approach, which advocates concentrating scarce resources on research and development of key staple food crops (especially coarse grains), the complementarity of food and cash crop production/marketing systems (e.g., CMDT cotton farmers in Mali), and specialization and trade options for achieving food security;
- o Agribusiness promotion school, interested primarily in promoting large-scale local agribusiness investment and joint ventures with foreign, particularly U.S. based, firms; and
- o Market town development school, arguing that investing resources in emerging secondary cities (infrastructure, local government services and improved revenue generation, credit and technical assistance for private agro-industry) has a potentially high payoff in terms of strengthening rural-urban linkages.

Advocates of these different approaches to programs and investment operate from quite different assumptions about the process of economic growth and investment priorities for fostering growth.

Figure A-1 shows key components of the food system and commodity subsystem approaches. The basic economic, financial and legal conditions affect incentives facing individual firms in the food or commodity subsystem. The organization of the food system and specific commodity subsectors influences how individual firms behave in conducting business. The interaction of the basic conditions, food system organization, and the conduct of individual firms in large part determine performance, which is evaluated against specific norms, which can be both quantitatively and qualitatively expressed.



Key Components of the Structure, Conduct, Performance Paradigm as Applied to Commodity Subsector Analysis

Figure A-1

Adapted from Bruce W. Marion and NC 117 Committee, The Organization and Performance of the U.S. Food System, D.C. Heath and Company, Lexington, Massachusetts, 1986.

Annex 2

Agricultural Marketing: Definitions and Approaches

This annex will define key terms used in the body of the paper. It will also lay out key elements of important approaches to agricultural marketing research and development.

2.1 Definition of Terms

The term marketing means many things to many different people. It has become a late 1980s/early 1990s bandwagon of sorts, upon which policy-makers and analysts with quite different ideological predispositions and programmatic agendas have converged. It has come to be broadly associated with private enterprise promotion and development, as reflected in the use of terms such as free and open markets. Agricultural marketing is also usually thought of primarily as agricultural product marketing. In a broader sense, agricultural marketing includes both product and input marketing, however. Before proceeding, terms used in the body of the paper will be defined.

Ithaca International defines a market as "an economic institution which enables sellers and buyers of a defined good or service to negotiate the legitimate transfer of that good or service between them and over space and time" (p. 2). They go on to classify markets as competitive, monopolistic, monopsonistic and oligopolistic. They also state that there are markets for factors of production, commodities (products) and inputs. We would add that a market is broadly defined as an instrument of exchange, although not all exchange arrangements can be classified as markets (as in vertically integrated systems). Furthermore, negotiations over the transfer of a good or service can designate the form (or degree of value-added) in addition to space and time, as specified by Ithaca International.

The concept of a marketing system refers to actors at different stages of the transformation process as well as to the process of value-adding and transformation itself (from input supply to final product distribution). In this light, agricultural production is viewed as one step in the transformation or marketing process. A marketing strategy should focus on how to improve the efficiency and productivity of agricultural production by improving performance of credit, input distribution and product marketing systems.

Agricultural economists from Michigan State University (MSU), which has been a leading institution in the design and implementation of applied research programs in developing countries, define a marketing system as follows:

"A marketing system is a primary mechanism for coordinating production, distribution and consumption activities. When viewed in this manner, marketing would include the exchange activities associated with the transfer of property rights to commodities, the physical handling of products, and the institutional arrangements for facilitating these

activities. Many of the important business decisions by farmers and managers of agro-industrial firms involve production planning in relation to market opportunities. Hence, marketing can be considered as part of the set of activities coordinating various stages in a production-distribution channel, such as the food system or a commodity subsystem. In this context, it is useless to try to establish an arbitrary definitional division between "production" and "marketing." For this reason we do not subscribe to definitions of agricultural marketing that 'are limited to the activities that occur after the products pass through the 'farm gate'.' (from Harrison et al., MSU International Development Paper Reprint No. 9, 1987, p.4).

MSU researchers also think of agricultural marketing as a process of adding value to an agricultural commodity at each step of the input supply-production-distribution system (see Shaffer, 1973). AMIS thinks that it is critical to highlight the emphasis on the economic coordinating role of agricultural marketing systems.

Thinking about agricultural marketing in this context leads us to the concept of a food system. The food system encompasses all the stages in the input supply-production-distribution system, as well as actors that comprise that system. In addition, the food system includes staple commodity subsystems, such as coarse grains, as well as higher value export commodity systems, such as coffee, cocoa and horticultural products.¹⁸ The food system can be viewed as being comprised of numerous commodity subsystems. A commodity subsystem is a vertical cut of the food system organized around the production and marketing of a common agricultural commodity or group of commodities (e.g., grains, horticultural products). Subsystems are sometimes referred to as subsectors. As with a marketing system, it involves both actors and processes (or functions).

Any discussion of agricultural marketing usually focuses quickly on actors or marketing organizations in the system. Agribusiness refers to private enterprises or mixed private/public enterprises engaged in agricultural production, marketing and trade (export or import) functions. Parastatal organizations are public agencies involved in performing agricultural marketing functions. Marketing agents refers to any actor, whether public or private, sole proprietor or large institution, involved in the value-adding process. In this sense farmers are marketing agents, as they combine inputs in productive transformation and add value in the production process. Thinking in more conventional terms, they usually must transport their produce to a physical marketplace or some other receiving point for sale, adding time and place utilities to commodities. Processors are also marketing agents, because they must procure raw material from growers and distribute processed products to end users.

¹⁸So-called industrial crops, such as cotton and rubber, are technically outside of the realm of the food system. However, it is important to note that industrial crops often have by-products or joint products which are foods, such as cottonseed oil.

The food systems approach views agricultural marketing agents as active coordinators in agricultural production-distribution systems. The role of these agents is multi-faceted:

- a) To identify potential demands and, in order to meet the demand, offer information (on market conditions and input availability/use) and incentives to potential producers.
- b) To influence farm production decisions, understand producers' problems (in production and marketing), and help solve them.
- c) To promote availability of farm inputs, and facilitate matching of the supply of different types of production inputs (seed, fertilizer, other agricultural chemicals, equipment, draft animals) with farm demand.
- d) To assure (product) markets, reducing uncertainty faced by producers.
- e) To actively seek markets for products adapted to local production conditions if the value of output is to be maximized.

(paraphrased from FAO, "Structural Adjustment and Agricultural Market Liberalisation in Sub-Saharan Africa," April 1989).

In this context, marketing agents are not seen as "middlemen," typically regarded by many government officials as parasites who (unfairly) take a large cut of the retail price, in African countries. Rather, they are active coordinators who facilitate farmers' access to inputs, market information and product markets. This is not to say that all agricultural marketing systems are competitive and progressive; there are oligopolistic elements in African agricultural marketing systems, particularly in isolated production zones. It is important to emphasize, however, the positive and facilitating functions played by private marketing agents, which are often not well understood or appreciated.

Given the institutional orientation of the AMIS Project, it is necessary to define institutions, institutional arrangements, and property rights. Conventionally, institutions are equated with organizations. Hence marketing institutions are typically thought of as parastatals, private agribusiness firms, farms, associations which represent these actors (trade associations and farmer organizations) and perhaps government agencies which regulate or oversee the marketing system. This is one element of institutions. To this it is necessary to add the formal and informal rules governing exchange, risk-sharing, property, and contracts. In this broader sense, commodity exchanges, price auction systems of exchange, vertically integrated commodity production and marketing systems, commercial law and codes, contract law and arrangements, and property rights are all institutions.

Institutional arrangements refers to ways in which agricultural production, input supply, product assembly and distribution are organized. Different examples include contract farming (between processors or parastatals and growers), farmer organizations which procure inputs and market products, joint ventures, and retail stores organized into an association and serviced

by a common full-service wholesaler (i.e., voluntary chains or associations). Different commodity subsystems are often organized in different ways. A high-value horticultural or ornamental crop produced for export is often grown under contract. Contract farming is a way of assuring a market to a grower, who has few or no alternatives, securing a source of supply for a processor or exporter, and managing the risks of unpredictable price and/or income fluctuations for both parties to the contract. An institutional arrangement defines a set of expectations with respect to input use and product quantity, price, quality, form and delivery for the participants in that arrangement.

The concept of property rights has two levels of meaning. At the literal level, property rights are ownership and use rights to tangible physical assets, such as resources and factors of production, especially land and capital, which generate income streams. At a more subtle, deeper level, property rights define, either formally or informally, opportunity sets for different actors in the food system. As an example, being able to speak and write French is a valuable property right for some people in Francophone African countries. French provides access to employment opportunities that generate income streams and often unearned rents. Another example would be a seat on the Chicago Board of Trade. The seat is not a tangible physical asset, but a privilege or the right to participate in futures markets, which will generate income streams (and in some cases losses).

Annex 3

The USAID Field Perspective: How to Review, Formulate Design and Implement Marketing Projects and Programs

I. Whether to Invest in Agricultural Marketing Projects and Programs

Although it is beyond the scope of this paper to provide guidance on making inter-sectoral or intra-sectoral resource allocation decisions, this section raises some issues that USAID Mission officers in African countries may wish to consider when deciding whether to invest in agricultural marketing. This subsection will review a number of key factors affecting the likely viability and potential impact of marketing investments.

A. Macroeconomic Environment

The experience of A.I.D. and other donors in African countries during the 1970s demonstrated the folly of investing in development projects when the macroeconomic environment and price signals (broadly defined) provided grave disincentives. As Peter Timmer (1980) has pointed out, "Getting prices right is not the end of development, but getting them wrong usually is." Prices are broadly defined to include exchange rates, relative agricultural input and output prices, wage rates, interest rates, and prices of key factor inputs such as land and capital. When any of these prices are nominally out of line with social prices or real opportunity costs, the ensuing distortions in incentives and resource allocation have potential to harm any agricultural development efforts.

In addition to price-induced distortions, the macroeconomic environment can have an unfavorable impact on agricultural sector investments if any of the following are present:

- o Large government budget deficit, and its negative impact on domestic credit markets (public sector crowding out of private sector access to capital);
- o Burdensome international debt and channeling of significant export earnings to paying this debt;
- o Large current account (trade) deficit in the balance of payments; and
- o High rate of inflation, generally a result of too rapid expansion in money supply.

In broader and general terms, analysts need to ask themselves whether macroeconomic conditions are conducive to the emergence of efficient, competitive agricultural input and output markets, to expanded domestic and foreign investment, and to medium- to long-range business planning. As an example, high rates of inflation are not conducive to investment or business planning. Excessive inflation induces net capital outflows and discourages domestic capital formation.

B. Structural Adjustment

The decision by an African government to implement a program of macroeconomic reform and to create a policy environment that encourages the emergence of open markets and entrepreneurship is a positive sign. The extent to which the country complies with the program in general and with specific targets that affect the emergence of efficient, competitive markets is even more important. In cases where countries fall out of compliance with the IMF for long periods, as in Zambia and Somalia, the chances that investments in agricultural marketing will have intended impacts are greatly reduced.

C. Agricultural Marketing Liberalization Program

Many African countries are implementing programs of agricultural marketing liberalization. It is important for A.I.D. officers to consider the effects of reform programs on input and product marketing. Typically, they are not empirically documented. They often need to be better monitored. A.I.D. has a strong comparative advantage in this area, given the expertise of U.S. universities and consulting firms in data collection and analysis, and in micro-computer data entry and processing. Many former Peace Corps volunteers who have lived and worked in African countries have acquired skills in business administration, economics, agricultural economics, financial analysis, and policy analysis. Many are now working in PVOs, universities or private firms on problems of economic development and constitute a valuable skilled resource.

D. Political Economy

Political economy factors often have an important effect on the perceptions of private entrepreneurs and marketing agents. If a country has a too turbulent political environment or if major political changes are in the wind, private investors will typically wait until the direction of change is clear before making commitments. Even after major reform programs are underway, private entrepreneurs will be understandably cautious in countries with post-colonial histories of suppressing and over-regulating private enterprise. As an example, two years after the Senegalese Government announced the New Agricultural Policy (Nouvelle Politique Agricole), I interviewed a private grain trader who said that he was uncertain whether grain marketing liberalization measures would endure beyond the next election.²¹

In countries where there is or has recently been a great deal of real political instability, such as Ethiopia, Somalia, Burkina Faso and Mozambique,

²¹In a sense, he proved to be right. After the April 1988 elections in Senegal, President Abdou Diouf was pressured by the political opposition to cut the tariff on imported rice and retail rice prices. As the retail rice price fell 19%, downward pressure was put on coarse grain prices, which would be expected to have a negative impact upon prices received by farmers. In the short run the marketing margins of traders were squeezed, leading to trading losses on stocks of coarse grain in storage or transit to market.

private entrepreneurs have little incentive to make longer term investments in marketing facilities (i.e. storage, transport and processing equipment). Developing efficient and effective marketing systems is likely to be impossible in countries where there is warfare, ongoing civil unrest, or a roguish military with a past history of confiscating private firm's assets with impunity.

The broad economic orientation of an African country is also critically important in thinking about policies and programs to improve the performance of marketing systems. Many governments in African countries are quite dirigiste, having intervened heavily in agricultural marketing systems from the 1960s through the 1980s. These interventionist countries tend to be either military-backed governments (e.g. Zaire, Uganda, Burundi) or socialist governments (e.g. Zimbabwe, Zambia, Tanzania, Senegal). In such countries, the most important initial A.I.D. efforts in agricultural marketing probably need to be directed to the policy level. The top priority is policy reform and liberalization of agricultural marketing systems. Parastatal restructuring, divestment or redefinition of roles is usually also imperative to improving marketing system performance.

In African countries with a more mixed economy or even pro-private sector orientation, such as Kenya, Côte d'Ivoire and Botswana, it is more likely that policies are liberal, the government generally facilitates rather than impedes private enterprise, and agricultural commodity systems are relatively efficient and competitive, given existing technological, financial and management constraints. In these countries, A.I.D. efforts are best directed toward relieving those constraints. Broad-based programs of macroeconomic and agricultural policy reform are typically unnecessary. Reforms in the financial system may be required. Investments in public-good type marketing infrastructure are universally needed. Beyond that, the focus of donor efforts will likely be more microeconomic or subsectoral in orientation than macroeconomic. Streamlining banking and trading (including export) procedures will probably continue to be a high priority in those countries with a more positive attitude and policies towards the private sector.

II. Reviewing Government (and Other Donor) Policy Positions and Programs, and Past A.I.D. Experience

It is endlessly amazing how often zealous donors and consultants reinvent the wheel in developing countries, especially in Africa. This is due to the following factors:

- o High turnover in donor agency officials in African countries;
- o Lack of continuity in using TA in the form of universities, consulting firms and PVOs;
- o Poor management of information, particularly documentation and data sets, by donors in African countries and by African governments; and

- o The cycles which characterize certain schools of development thought, so that particular world views and action agendas fall periodically in and out of favor.

A key first step for A.I.D. officers is to learn if A.I.D. has funded marketing projects or project subcomponents and whether such efforts were successful. If not, what can be learned from implementation problems or failure? Unfortunately, factors affecting success or failure are rarely candidly documented. Even when they are, analyses and evaluation documents may be difficult to retrieve, particularly in a USAID Mission in Africa.

A second step for A.I.D. and other donors is to become better informed about others' activities in a particular African country. Rather than recommending better "donor coordination" in the form of more meetings, usually among senior aid officials, technical advisors and project managers need to have more informal coordination and information-sharing. One concrete step that A.I.D. could take to improve information-sharing would be to create an information officer (local hire) in each USAID Mission in Africa. This person would not be a passive documentalist but would actively collect (and catalogue) government documents and data sets, donor project and program papers, consulting reports, and university and research institute outputs. Establishing well-managed, up-to-date and reasonably comprehensive information centers in USAID Missions would greatly facilitate the access of USAID officers and consultants to much needed information. It would also help to avoid the common mistake of proposing or designing an intervention that has already been tried (often within the previous 10 years), or that another donor is already doing in part.

An issue likely to generate a good deal of debate is the extent to which A.I.D. should design its interventions around current African government policy views (as reflected in recent statements) and the current policy environment. Many argue that this is the only legitimate approach. Advocates of private enterprise and free/open economies hold that this approach endorses a very imperfect status quo (i.e. too slow policy and market reforms and half-hearted implementation efforts because rent-seeking officials stand to lose so much). A pragmatic approach is to strengthen local capacity in policy analysis and research on agricultural marketing through expatriate collaboration with local policy analysis units. Expatriate advisors can influence the research agenda and the quality of research output, and more importantly, push strong local analysts into the limelight by having them present research findings to policymakers. These findings, if cogently and effectively presented, are likely to influence government policy thinking and statements over time. Hence, USAID can work from inside an African country's government to shape the policy environment and even the details of specific policy pronouncements and measures. Taking the policy objectives of a dirigiste government, which are not in line with A.I.D.'s, and using them as a guide to formulate A.I.D. programs and projects is strongly discouraged.

Despite potential problems in relying on the policy statements of African governments, USAID Missions are strongly encouraged to review carefully past, ongoing and proposed interventions in policy, program and project domains. Although host country planning offices are supposed to coordinate donor

investments, they rarely do so effectively. Donors can improve this process by avoiding costly duplication of effort and not working at cross purposes. Maintaining good contacts with counterparts in other donor agencies and development of (informal) subject matter working groups that meet periodically is a priority.

It is also important to review stated (and unstated) government priorities, strategies and policy pronouncements. Agricultural sector or subsector statements (e.g. New Agricultural Policy and Cereals Plan in Senegal) should be required reading. Agricultural development officers and economists should also cultivate access to key analysts in the government (assuming access to top policymakers is extremely limited), perhaps journalists, and local researchers. Learning as much about the political economy of the country as possible is also desirable and useful. Key questions to ask and answer include the following:

- o What are the powerhouse ministries or agencies, and who are the most influential officials and advisors?
- o What are their views on key agricultural development and marketing issues and policies?
- o Which groups outside of government are the most powerful--business or trade associations, labor unions, religious organizations, farmer organizations, financial institutions?
- o Are particular ethnic, clan or caste groups predominant in government, trading, research and other fields?

III. A.I.D.'s Comparative Advantage and Complementarity with Other Donors

During the 1970s and early 1980s donors funded a number of area development projects or strengthened regional development agencies in African countries. Different geographical areas (within countries) were carved out as if they were spheres of influence. In many countries national institutions (agricultural research, extension, policy analysis, social services, infrastructure) suffered at the expense of this regional approach. Fortunately, this approach appears to be on the wane, although donor coordination and specialization along the lines of comparative advantage are far from ideal.

A. Strengthening Local Capacity

In reflecting on the Indian experience as part of the MADIA study (see Lele, 1988), Uma Lele has argued that the most valuable U.S. contribution to Indian agricultural development was the development of the land grant university research and extension system and the strengthening of human capital. Developing local capacity was a key component of A.I.D.'s strategy in India and should be a fundamental objective in Africa. A.I.D. has a strong comparative advantage in this area with its excellent university training programs, applied research and training capacity of U.S. universities and selected private firms, and large numbers of professionals with first-hand

African development experience (acquired initially in most cases in Peace Corps assignments).

Related to capacity building, A.I.D. has an important role to play in improving the quality, timeliness and relevance of policy analysis and in emphasizing extension of empirically based research findings to policymakers. A.I.D. should continue to give high priority to policy reform programs and technical assistance for strengthening African policy analysis and building local capacity. The exact mix of technically competent policy analysis and training in conducting applied research, monitoring and evaluating, and presenting policy findings will vary from African country to country. In countries with very limited capacity for policy analysis, such as Chad, CAR or Zaire, the initial emphasis will be on expatriate analysts carrying out routine policy analysis and long-term training of Africans overseas or in regional centers of excellence. In those African countries where many analysts have already received overseas training, such as Kenya, Senegal or Zimbabwe, expatriate analysts will play more of an advisory role or provide very specialized expertise. That expertise in agricultural marketing can be in the form of agricultural engineering, food technology, specific commodity production, marketing and export, and post-harvest physiology. While U.S. universities can provide some of this expertise, it is more likely that private firms will be interested and motivated to do so. Specialized university expertise is often too academic and high-tech for African countries, whose marketing systems need relatively simple, low-tech management systems and specific technologies.

B. Venturing Beyond Past Programmatic Emphases to New Potential Areas of A.I.D. Comparative Advantage

In thinking about A.I.D.'s comparative advantage in foreign assistance to Africa, it is important to examine what the agency has done most successfully over the past 20 years. A.I.D. efforts in training and capacity building have been successful and continue to merit priority. Agricultural development and area development projects working through public agencies have had a mixed record. Since USAID operates on a government to government basis, it has had little or no experience in African countries in working directly with the private sector. Nevertheless, given the vastness and significance of changes in Eastern Europe and the pressures to reallocate development resources away from Sub-Saharan Africa to Eastern Europe, A.I.D. will have more leverage than during the 1970s and 1980s in policy reform and in working outside of government agencies.

Careful thinking and planning is required in order to work effectively with the private sector in African countries. A prevailing image of the private sector in agriculture and agribusiness is one of relatively large-scale firms operating in the formal sector, with access to commercial bank credit. These firms are typically based in larger cities and affiliated with an association such as the Chamber of Commerce. The private sector is actually very diverse in African countries. It includes large, formal sector firms but also many other participants, such as the following:

- o Small farmers, who often operate small, part-time agro-enterprises, where they hire out traction animals and agricultural equipment, train draft animals, repair and maintain agricultural equipment, provide non-motorized transport services, process crops and prepare food, market crops and livestock in rural areas, and finish livestock for higher-income urban or festival markets. Many also provide wage labor to other, often larger farms.
- o Medium to large-scale farms, which may become directly involved in processing and marketing of agricultural commodities.
- o Specialized, full-time, small-scale agro-entrepreneurs, who provide the wide range of services also provided by part-time firms, as well as seed multiplication, livestock breeding, input distribution, and crop or livestock assembly in association with larger-scale, wholesale traders.
- o Wholesale traders.
- o Retail traders in urban areas.
- o Medium and large-scale crop and livestock processing firms. In addition, private ownership may vary from entirely private to slightly more than half private.
- o Exporters and importers of agricultural commodities.
- o Financial intermediaries, ranging from commercial banks to local moneylenders and savings associations.
- o Purveyors of market information and assessors of risk, in the form of brokers.
- o Transporters of varying scale.
- o Farmer cooperatives, which procure inputs, and process, store and distribute outputs.

This list could be longer but the key point is that the very diversity of private agents in the food system requires quite different strategies for working with any one group. USAID's choice of groups of agro-entrepreneurs to work with depends in large part on what the Agency is trying to accomplish. For example, USAID might promote improved processing of local food products through small firms, while promoting exports through well-financed and organized companies. Despite the need for targeted assistance, there is increasing evidence that broad-based marketing policy reform can reach all of these actors, improving the business environment and eliminating disincentives. Some policy reforms, such as removing high duties on imports on raw materials, tools and equipment used by smaller firms, may directly affect certain types of firms. Such measures which level the playing field will usually indirectly affect the ability of larger firms, which did not face high duties on imports (following the above example), to compete on a fairer

basis. Specific, microeconomic measures and interventions can be targeted to different types of entrepreneurs.

The main point of the above discussion is to illustrate the underlying complexity of new approaches, particularly fostering private agro-enterprise development, which is often masked by heavy promotion and slogans. The reallocation of resources away from "traditional" areas of comparative advantage in U.S. foreign assistance should be accompanied by an enlightened debate and thoughtful analysis of the following issues:

- o What are the best mechanisms or vehicles for assisting firms of different types? Quite different strategies are likely to be necessary for targeting different classes of enterprise.
- o Is A.I.D., as a government-to-government foreign assistance agency, set up to assist private enterprise directly? Have specific instruments proven successful for directly assisting private firms in African countries, such as provision of seed capital, subsidized management and technical assistance, or debt-for-equity swaps? Should A.I.D. concentrate on creating a conducive policy environment and business climate for private investment?
- o How can A.I.D. most effectively encourage private American and multinational firms to invest in the African agricultural sector? What is the effectiveness of various tools, such as subsidized exploratory trips to particular African countries by business executives, agribusiness roundtables, and investment guarantees?
- o Should A.I.D. subsidize feasibility studies necessary to estimate in detail costs, returns and risks of investments by U.S. or multinational agribusiness firms in African countries? Such studies would rigorously assess prospects of proposed commodity exports in international or interregional markets.

C. Hardware Versus Software Investments

Hardware constitutes rural roads, storage, processing and sorting/grading facilities, marketplaces in rural and urban areas, offices and equipment for marketing researchers, communications, and electricity. Software includes training programs for analysts and market participants, local institutional capacity to do marketing system research and development and to monitor/evaluate the impacts of marketing projects and programs, MIS/market information systems, and improved systems of financial and marketing management. As A.I.D.'s resources are likely to decline in real terms during the 1990s, the Agency will continue to shift its emphasis from hardware to software. Improving the efficiency of marketing systems of course requires hardware investments, but donors with greater resources, such as the Japanese and the World Bank, should concentrate more on hardware than software. At the same time, however, it is important for hardware investments to be accompanied by attention to organization, institutional, management and information issues (all of which are software concerns).

It is strongly recommended that A.I.D.'s scarce resources be concentrated more on agricultural marketing software than on hardware. Strengthening policy dialogue and developing policy analysis capacity is a high priority. Attempting to improve the performance of commodity marketing systems through software investments in analyses and experiments in technology choice and alternative institutional arrangements for fostering greater system productivity is also important. Development of both public and private sector human capital for improved commodity marketing and marketing research is critical. In USAID Missions where resources are limited, emphasis on the first priority is strongly recommended. In Missions with more resources, the second and third priorities can be contemplated.

D. Improvement in Marketing of Staple Food Crops, Traditional Cash Crops or Non-Traditional High-Value Exports

The correct mix of investments in programs and projects to improve marketing of different types of crops will depend very much on the African country's agricultural development objectives and the extent to which national food security has been achieved. Interest in improving the performance of staple food crop marketing systems remains high in the Africa Bureau, due in part to excellent applied research and policy extension done by Michigan State University in Mali, Senegal, Rwanda, Somalia and Southern Africa. In most African countries, staple crop production and marketing systems perform poorly. Much of the problem stems from inadequate rural marketing infrastructure, particularly roads. In many countries, coarse grain production technology has not improved beyond traditional methods. Farmers also lack access to and credit with which to acquire improved seeds, fertilizer, other agricultural chemicals, and agricultural equipment. As a result, many of them cannot respond effectively to incentive producer prices. If the African country in question is strongly committed to improving national and rural household food security (as demonstrated by policy statements and patterns of public investment), USAID Missions are advised to focus on policy reform programs and project investments that improve the productivity of coarse grain and bulky staple crop production and marketing systems.²²

Strengthening commodity systems of traditional cash crops has not historically been an A.I.D. priority. In the African context these crops include cotton, palm oil, cocoa, coffee and groundnuts. A.I.D. cannot work directly on cotton production issues, because the Bumpers Amendment to the Foreign Assistance Act forbids it. African countries have lost their comparative advantage in palm oil production and export to Malaysia, and it is highly unlikely that they will ever regain it. A.I.D. does not have a strong track record in promoting the cocoa, coffee and groundnut subsectors, as they have historically been dominated by parastatal organizations and supported by

²²It is important to distinguish between governments of African countries that aim to improve food security as opposed to those that confuse food self-sufficiency with food security. The latter approach is fundamentally flawed. It encourages satisfying all national food requirements through domestic production. This is autarkic and discourages specialization along lines of comparative advantage and trade.

the World Bank. To the extent that live animal exports can be considered a "traditional cash crop," USAID has supported livestock projects in some African countries, although these projects have rarely had explicit marketing components. Furthermore, the performance of livestock projects generally has been disappointing. During the 1980s and probably during the 1990s, USAID was and will be reluctant to invest significant resources in livestock commodity improvement programs.

Improving the performance of commodity subsystems for high-value export commodities is receiving a good deal of attention in the Africa Bureau. This is in large part due to the renewed emphasis on economic growth through specialization in agriculture and trade. The U.S. is a world leader in horticultural production, marketing and processing. Domestic fresh produce marketing systems are among the most advanced technologically, the best managed, and the best organized in the world. Multinational firms based in the U.S., such as Dole, Conagra and Del Monte, are known worldwide for their products and their expertise in horticultural production, processing and marketing.

Although it is important to keep this expertise in mind, it is also necessary to look very critically at market opportunities--current and projected. International markets are increasingly well-integrated and competitive. South American countries greatly expanded exports of horticultural commodities and ornamentals during the 1980s. Israel, Turkey, Egypt and Morocco are formidable competitors in European markets for certain commodities. Spain, now integrated into the EC, is expanding off-season production of temperate vegetables and fruit, as well as some tropical horticultural products. Kenya, Côte d'Ivoire and South Africa are already well-established exporters of several commodities. Clearly, neither the American nor European markets are places where small lots of produce of variable quality following an unpredictable delivery schedule can be shipped on a competitive basis. Furthermore, small, irregular lots of produce are invariably exported to terminal markets on a consignment basis, whereby the exporter bears all the risk of loss following sudden, adverse price movements. In contemplating market entry or expansion of market share in industrial country markets, African countries will need to focus increasingly on niche markets and to evaluate their competitiveness relative to established exporters. This will require first-class analyses of market potential in different terminal markets on a commodity-by-commodity basis during different months (or week/two-week periods) or during the counterseason.

Identifying, designing and implementing horticultural, ornamental, spice, herb or essential oils projects requires specialized expertise which few USAID agriculture officers possess. Whether private U.S. agribusiness expertise can be tapped is questionable. An initial bugaboo is A.I.D.'s unwillingness to pay agribusiness consultants (with hands-on marketing management experience) anything close to a competitive, private sector consulting rate. A second problem lies in simply attracting their attention. African governments have generated a lot of negative publicity during the past 20 years. Sub-Saharan Africa is not regarded as a region offering enlightened political leadership, a favorable investment climate, or a positive business environment. Local

agribusinesses without public subsidies of some form are small-scale, poorly capitalized, low-tech and perceived as unreliable prospective partners.²³

Short of interesting prospective U.S. or multinational agribusiness investors in high-value commodity production, processing and marketing in Africa, expertise outside of the U.S. private sector can be tapped to strengthen technical aspects of commodity subsystems. The faculties of U.S. Land Grant universities have horticulturists, agronomists, agricultural engineers, post-harvest physiologists, and agricultural economists who work on high-value commodity subsystems and who generally have good contacts with U.S. agribusiness. The stronger and better private-sector plugged analysts tend to command consulting rates approaching those of agribusiness consultants. Nevertheless, some may be interested in providing short-term technical services to USAID Missions in Africa studying the feasibility of investments in high-value commodities. Often, absence of foreign language capability is a problem, as many U.S. based specialists do not speak French, Portuguese or African languages.²⁴

To entice senior executives to make exploratory trips to carefully selected African countries, A.I.D. can pay all expenses (other than salary) of prospective joint venture partners. Countries for exploratory visits need to be carefully selected according to several key criteria: government approval, favorable economic and business environment and investment climate, strong legal system, existence of financially viable local partners of sufficient scale and experience, producer knowledge of horticultural production (or production of some other high-value commodity), among others. Using these criteria, countries such as Chad and Burundi would not appear to be promising places to promote high-value commodities for export. On the other hand, countries such as Kenya, Côte d'Ivoire, and perhaps Senegal and Zimbabwe would offer promise.

²³In a study of the Senegalese horticultural subsector, AMIS interviewed selected American importers of tropical and counter-seasonal horticultural products based on the East Coast. In inquiring about the possibility of importing produce from Senegal, most importers were surprised at the question and responded that they had never considered it.

²⁴U.S. agribusiness and university analysts are more likely to speak Spanish, if any foreign language at all.

I. Trade and Development Program (TDP)

The Trade and Development Program provides U.S. investors with interest-free financing for feasibility studies and other planning services for projects in developing countries. TDP also funds project assessments for foreign governments for projects that, if implemented, are likely to result in large purchases of U.S. technology.

Each year, TDP lends approximately \$19 million to study 90 to 100 projects. Recent projects planned with TDP financing include irrigation in Algeria, coal gasification in Brazil, port development in Gabon, airport management in Pakistan, and electrical transmission in Thailand.

Additional Information: Inquiries concerning TDP should be directed to the following address: Trade and Development Program, Room 309, SA-16, Washington, D.C. 20523-1602, Phone (703) 875-4357, Fax: (703) 875-4009.

II. Office of the United States Trade Representative (USTR)

The Office of the United States Trade Representative is the presidential office that coordinates U.S. trade negotiations. As most of its activities are focused on negotiations, it provides only limited direct services to the private sector. However, as the agency supervising the United States Generalized System of Preferences (GSP), USTR does provide some informational services explaining how to export to the United States under GSP. GSP is a system of preferential tariff duties reserved for certain goods from developing countries. GSP is designed to help developing nations compete against more developed nations in the markets of industrial nations. Most other industrial nations have GSP programs as well.

USTR publishes a GSP guidebook entitled, *The Guide to the U.S. Generalized System of Preferences*. This book explains how the United States GSP operates, which countries and which goods are eligible and how an exporter can gain access to the system. In addition, the guidebook provides a comprehensive listing of GSP tariffs for eligible goods. This book is available directly from USTR at the following address: 600 17th St., N.W., Washington, D.C. 20506, Phone: (202) 395-3350, Fax: (202) 395-3911.

In addition to the GSP guidebook, USTR provides occasional technical seminars overseas on GSP for private sector audiences. These seminars explain how to use GSP, what forms to fill out and how GSP coverage can be expanded. These seminars are organized on official request from foreign governments. Requests can be made through the U.S. Embassy, to USTR directly through Mr. Hiram Lawrence, Executive Director, GSP, at the above address or through the United Nations, which coordinates GSP informational services for member governments.

III. Export-Import Bank of the United States (Eximbank)

The Export-Import Bank of the United States is an independent U.S. government agency dedicated to facilitating the financing and purchase of U.S. exports. Eximbank provides a

wide range of programs to achieve this objective, including medium-and long-term direct loans to foreign purchasers and their financial intermediaries, medium- and long-term loan guarantees, and an array of credit insurance programs. In recent years Eximbank has initiated several programs to support the export efforts of small- and medium-scale U.S. firms.

Except for the direct loan program, and in rare cases, the guarantee program, Eximbank services are contracted with either a bank or other financial intermediary providing export financing, or the exporter. The foreign buyer benefits from these programs indirectly, as Eximbank programs allow banks and firms to provide better financing terms.

In order to allow for effective financial planning, Eximbank will provide a "Preliminary Commitment" which details, in advance of a particular transaction, the terms and conditions of loan/guarantee support. This commitment is valid for 180 days and is renewable at the discretion of Eximbank.

Apart from the direct loan program and the guarantee program, the foreign buyer rarely contacts Eximbank directly, but rather would direct his supplier or bank to do so in order to facilitate the financing. All programs require an \$100 processing fee with application. Requests for applications and further information can be received from the Office of the Corporate Secretary at the following address: Eximbank, 811 Vermont Avenue, N.W., Washington, D.C. 20571, Phone: (202) 566-8871 and Fax: (202) 566-7524. Eximbank has no foreign offices.

IV. Overseas Private Investment Corporation (OPIC)

The Overseas Private Investment Corporation provides qualified businesses in over 100 developing countries with political risk insurance; loans and loan guarantees; pre-investment information and assistance; and special programs for contracting, exporting, energy exploration and leasing.

Additional Information: For more information about OPIC, its programs and services, write or phone the Information Officer at the following address: 1615 M Street, N.W., Washington, D.C. 20527, Phone: (202) 457-7010 or (800) 424-6742.

V. Department of Agriculture (USDA)

The Department of Agriculture provides the following services:

A. Informs Producers of U.S. Health Regulations

The Animal and Plant Health Inspection Service (APHIS) provides potential exporters with valuable information on health and sanitation standards for animals, plants, and agricultural products entering and exiting the U.S. market. A list of APHIS publications is available from USDA/APHIS/PD&M, 6505 Belcrest Rd., G-110, Hyattsville, MD 20782, USA. Phone: (301) 436-8413, FAX: (301)436-8445.

The Agricultural Research Service (ARS) also publishes studies on insect control, control of pesticide residues, and the best ways to select, pack and ship for export. To receive ARS publications and reports, write or call: Information Staff, Agricultural Research Service, USDA, Room 107, Building 005, BARC-West, Beltsville, MD, 20705, USA. Phone: (301) 344-2264.

B. Provides Credit and Credit Guarantees for Commodity Purchases
The Commodity Credit Corporation (CCC) assists foreign buyers to purchase U.S. farm commodities from private U.S. exporters, with financing ranging from 3 - 10 years from U.S. banks at commercial rates.
Additional Information: Contact the General Sales Manager, Foreign Agricultural Service, Room 4509-South Building, USDA, Washington, D.C. 20250, USA. Phone: (202) 447-3224.

C. Provides Access to Trade Opportunities
Located in 72 posts covering more than 100 countries, the Foreign Agricultural Service (FAS) assists foreign buyers and potential buyers by providing up-to date information on trade opportunities. To list a request to purchase a product, contact the Foreign Agricultural Service representative at the nearest U.S. Embassy. To subscribe to publications, write to Agricultural Information and Marketing Services, Room 4951-South Building, Foreign Agricultural Service, USDA, Washington, D.C. 20250-1000, USA.

D. Provides Timely Market Research Information
The Economic Research Service offer timely analytical and statistical periodicals that can be used for market research, and to estimate trends in prices and demand for particular products of commodities in the U.S. and world markets.
Additional Information: Contact the Economic Research Service at (202) 785-1494. To order free publication catalog, call (800) 999-6779, or write to ERS-NASS, P.O. Box 1606, Rockville MD, 20850, USA.

E. Assures Quality of Food Imported from the United States
The Food Safety and Inspection Service assures that meat and poultry products are properly labeled and U.S. inspected and approved. The Food Quality Acceptance Service assures, on a fee basis, that any product shipped overseas meets contract specifications.
Additional Information: Contact the Deputy Administrator, Food Safety and Inspection Service, USDA, Room 341-E, Administration Building, Washington, D.C., 20250, USA. Phone: (202)447-3473.

VI. Department of Commerce - International Trade Administration

The International Trade Administration (ITA) is the chief source of export assistance provided by the U.S. Government to U.S. business. ITA's export services are particularly useful for small- and medium-sized firms that lack complex marketing organizations. The services provided are practical and information-oriented, as opposed to financial, and focus on securing foreign customers for a U.S. company's products or services.

ITA has a domestic arm and a foreign arm. The domestic arm is comprised of 47 district offices and 21 branch offices in cities throughout the United States and Puerto Rico; the foreign arm consists of about 122 offices worldwide.

Additional Information: For additional information, contact ITA at its headquarters (14th Street and Constitution Avenue, N.W., Washington, D.C. 20230), the nearest district office, or the FCS office located in the nearest U.S. Embassy.

VII. International Finance Corporation (IFC)

The International Finance Corporation, an affiliate of the World Bank, is the largest source of direct project financing for private investment in the developing world. Its primary objective is to raise capital needed for business ventures in developing countries by serving as a bridge between international capital markets and local businessmen. The IFC will participate financially in a minority position, through a broad array of financial instruments, but more importantly works to obtain the participation of other investors. The IFC does not compete with or replace private initiative or capital, but rather works to raise funds for viable projects that otherwise would be held back because adequate funding is unavailable.

There is no standard form of application for IFC financing. A company or entrepreneur, foreign or domestic, can approach IFC directly by requesting a meeting or by submitting preliminary project or corporate information. The IFC can be contacted at its headquarters in Washington (14th Street and Constitution Avenue, N.W., Washington, D.C. 20230), at 10 regional offices in developing countries, including Abidjan, Bangkok, Cairo, Casablanca, Istanbul, Jakarta, Lagos, Manila, Nairobi, and New Delhi, or at offices in major international capital markets, including Tokyo, London and Paris. After a preliminary review, the IFC will request a detailed feasibility study or business plan to determine whether to appraise the project.

VIII. Multilateral Investment Guarantee Authority (MIGA)

The Multilateral Investment Guarantee Authority, the newest member of the World Bank Group, is dedicated to promoting foreign investment in developing countries by providing:

A. Guarantee Program (Political Risk Insurance) - guarantees to foreign investors against a range of political and legal risks

Additional Information: Contact Mr. Leigh P. Hollywood, Vice-President, Guarantees, at the following address: MIGA, 1818 H Street, N.W., Washington, D.C. 20433, Phone: (202) 473-6168, Fax: (202) 334-0488.

B. Advisory and Promotional Services - advisory and investment promotion services to developing member countries on means to improve their attractiveness to foreign investment and to increase investor awareness of opportunities in these countries.

Additional Information: Contact Mr. Ghassan El-Rifai, Vice-President, Policy Advisory Services at the above address and teletax number. Mr. El-Rifai's telephone number is (202) 473-6162.

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The Agency for International Development
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Agriculture and Rural Development Division
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Annex 5

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