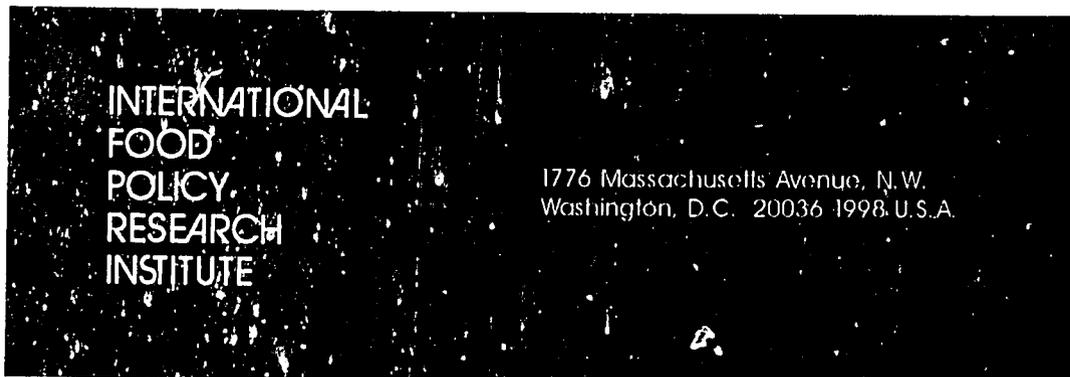


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An impediment to structural adjustment policies in sub-Saharan African countries?

Ulrich Koester, Hartwig Schafer and Alberto Valdés

Structural adjustment programmes are being promoted throughout the developing countries. The recommended policy package, including price as well as non-price policies, is geared towards export growth and a long-term sustainable balance of payments. There is considerable scepticism, however, whether developing countries can indeed benefit from an export-oriented growth strategy. First, rigidities in domestic output supply responses could preclude significant export growth. Second, external demand-side constraints could impede export revenue growth if a jointly promoted export-led strategy resulted in world market price deterioration. Analysis reveals that in the case of sub-Saharan Africa neither of the above factors should cause a failure of structural adjustment policies. However, the outcome of adjustment policies could be improved if commodity and country-specific factors were taken into consideration.

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The economic performance of sub-Saharan African countries (SSACs) has been disappointing for many years and it is generally agreed that domestic policies must change drastically in order to improve economic performance. The World Bank and the International Monetary Fund urge SSACs to adopt a structural adjustment policy which promotes export-led growth. However, there is considerable controversy among economists and among politicians in SSACs about the appropriateness of such an approach.¹ One economically founded argument against structural adjustment policies concerns external demand-side constraints. The fallacy of composition 'presumes that markets would not be able to absorb all of the exports that would materialize'² if developing countries jointly promoted an export-led strategy. It is this proposition which is investigated in this article. Since agriculture and agricultural exports play a dominant role for most SSACs, the focus will be on the impact of structural adjustment on the agricultural sector and agricultural export earnings. Thus, this article focuses on only one aspect of structural adjustment programmes and does not lead to a general statement on the effectiveness of structural adjustment policy.

The remainder of the article is organized into three sections. First, a brief description of structural adjustment policies is presented. Second, potential supply-side constraints indicating low or negligible agricultural supply responses in SSACs are discussed. Third, the main section is an empirical analysis of prospects for SSACs' agricultural exports and export revenues.

Specifics of structural adjustment policies

Structural adjustment programmes comprise a mix of demand-side policies, supply-side policies and policies to improve a country's international competitiveness. At the core of structural adjustment one finds

fiscal discipline, real exchange rate devaluation and trade liberalization. This incentive-oriented type of adjustment is not only based on 'getting prices right'. In addition, non-price factors which enhance the effectiveness of price policies are taken into consideration.³ Especially in Africa, where institutional reforms have proved to be more difficult than price reforms, reluctance to implement non-price reforms may inhibit the full effects of structural adjustment. Among the most important non-price factors are:

- technological innovations (eg high-yielding varieties);
- infrastructure to connect locations of production and consumption;
- availability of inputs (water, fertilizer, equipment);
- information network (extension and research services);
- institutional framework to provide credit and marketing services.

Ideally, structural adjustment programmes result in overall output growth, expenditure savings on imports and expenditure switching from the production of non-tradables to tradables.⁴ Thus they facilitate the long-run prerequisites for a sustainable balance of payments position and economic growth.

It has been argued that domestic supply constraints and external demand constraints could impede the success of structural adjustment policies. If domestic supply constraints actually preclude a fundamental increase in export volume, then any potential external demand constraint would not be binding. Therefore the possibilities of domestic supply constraints are briefly discussed before the prospects for SSAC's exports are investigated.⁵

Supply constraints to structural adjustment

Opponents of adjustment policy argue that the aggregate economy in general and the aggregate agricultural sector in particular have a limited capability to adjust to a change in the underlying incentive structure.⁶

Clearly, one has to distinguish between the response in the output mix of the agricultural sector and the change in total agricultural output. The former response, reallocation of production factors in line with the corrected price ratios between products, can be accomplished relatively easily and does not draw on resources used in other sectors of the economy. In general, switching from subsistence crops to export crops, holding aggregate agricultural output and factor inputs constant, is highly responsive to relative prices, as many empirical studies on agricultural supply elasticities have shown. A change in the output mix – holding aggregate agricultural supply constant – could alone contribute significantly to the success of structural adjustment policies.

The aggregate response of the agricultural sector to structural adjustment policies cannot yet be tested empirically because structural adjustment packages have not been implemented long enough to show the entire long-run effects. However, some conclusions based on other empirical studies are possible.

It is important to keep in mind that structural adjustment is not intended to be a quick fix of economic problems that have developed over the past decades. Instead, the time frame of interest is the medium and long term. The key variable for long-term agricultural output growth is the agricultural to non-agricultural terms of trade. A perma-

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¹ R.S. Browne and R.J. Cummings, *The Lagos Plan of Action vs. Berg Report*, Monographs in African Studies, Brunswick, Lawrenceville, VA, 1984, R. Green, 'IMF stabilization and structural adjustment in sub-Saharan Africa: Are they technically feasible?', *IDS Bulletin*, Vol 16, No 3, July 1985, p 61; J. Loxley, 'Alternative approaches to stabilization in Africa', in G.H. Helleiner, ed, *Africa and the International Monetary Fund*, IMF, Washington, DC, 1986, p 117.

² J.N. Bhagwati, 'Export promoting trade strategy issues and evidence', *Research Observer*, Vol 3, No 1, 1988, p 30

³ A more detailed discussion of these issues is presented in 'Priorities for accelerating food production growth in sub-Saharan Africa', in J.W. Mellor, C.L. Delgado and M.J. Blackie, eds, *Accelerating Food Production in Sub-Saharan Africa*, Johns Hopkins University Press, Baltimore, MD, 1988, p 353. P. Streeten, 'Structural adjustment: a survey of the issues and options', *World Development*, Vol 15, No 12, 1987, p 1473, and C.G. Ranade, D. Jha and C.L. Delgado, 'Technological change, production costs and supply response', in J.W. Mellor and R. Ahmed, eds, *Agricultural Price Policy for Developing Countries*, Johns Hopkins University Press, Baltimore, MD, 1988, p 190

⁴ T. Killick *et al*, 'Towards a real economy approach', in T. Killick, ed, *Towards a Real Economy Approach*, St Martin's Press, New York, NY, 1983, p 273

⁵ It is beyond the scope of this article to discuss other important aspects of effective structural adjustment. It is referred to Streeten, *op cit*, Ref 3, who presents an overview of the issues and emphasizes the problem resulting from the interdependence of political economy and structural adjustment. Killick, *op cit*, Ref 4, stresses the distribution aspects of structural adjustment.

⁶ Loxley, *op cit*, Ref 1, p 130.

ment change in the agricultural to non-agricultural terms of trade induces long-run intersectoral reallocation of production factors, ie labour and capital.

The well-known 'distributed-lag' approach that dominated the literature in the 1960s and 1970s fails to capture the response of labour migration, investment in agriculture and productivity changes to changes in the sectoral terms of trade. Recent work on aggregate agricultural supply responses – which measures supply responses through a fuller specification of agricultural to non-agricultural linkages in the labour and capital markets – provides empirical evidence for a considerable supply response of aggregate agricultural output.⁷ The theoretical reasoning throughout these studies is that improved incentives and public goods are seen as complements in facilitating agricultural growth.⁸ Some of the best empirical studies in this field are on South American countries, especially the studies by Cavallo, Mundlak and Domenech on Argentina,⁹ by Coymans and Mundlak on Chile¹⁰ and by Valdés.¹¹ Although these results refer to Latin America, they indicate considerable scope for long-term aggregate growth of the agricultural sector in sub-Saharan countries.

First, the high negative protection rates for agricultural exportables as presented by Krueger, Schiff and Valdés¹² provide considerable space for price incentives. Second, reductions in government spending as implied by the strict conditionality of structural adjustment lending should not affect the agricultural sector. Public investment in the agricultural sector accounts for rather small shares in total public expenditure throughout sub-Saharan Africa. The FAO reports average 1979–82 shares of agriculture in total public expenditure of less than 15% for sub-Saharan countries.¹³ Other sectors, such as defence, should carry the major burden of public expenditure reduction. Therefore, one can expect that – even with some reduction in agricultural expenditure – aggregate agricultural output will benefit from the full effect of complementarity between public goods and price incentives. Third, improved agricultural terms of trade will increase returns to labour input in agriculture and thus increase aggregate agricultural output. The current bottlenecks of seasonal labour supply can be removed by attracting more labour into the agricultural sector through higher real wages.¹⁴

That the level of real producer prices really matters for production growth is supported by empirical evidence provided by Cleaver.¹⁵ A classification of 31 African countries with respect to the level of price discrimination for the period 1970 to 1981 shows that 13 countries with low or no farm price discrimination experienced an average agricultural production growth of 2.9% per year; eight countries with medium farm price discrimination achieved a 1.8% growth in agricultural production per year; and ten countries with high farm price discrimination had to accept an annual production growth of only 0.8%.

We do not perceive a major supply constraint nor inelastic aggregate agricultural supply responses as long as the entire structural adjustment package is implemented. It may well be that aggregate production responses will only be small in the short run, and more significant in the long run.¹⁶ Consequently, it warrants particular attention whether increased commodity exports will be met by external demand constraints on world markets if structural adjustment policies are jointly promoted throughout SSACs.

⁷ Y. Mundlak, *The Aggregate Agricultural Supply*, Working Paper No 8511, Center for Agricultural Economics Research, Rehovot, Israel, 1985, p 56.

⁸ M. Schiff, 'A structural view of policy issues in African agricultural development: comments', *American Journal of Agricultural Economics*, No 69, 1987, p 387.

⁹ Y. Mundlak, D. Cavallo and R. Domenech, 'The effects of trade and macroeconomic policies on agriculture and macroeconomic growth Argentina 1913–84', mimeo, Washington, DC, USA.

¹⁰ J.E. Coymans and Y. Mundlak, *Agricultural and Sectoral Growth: Chile 1962–82*, IFPRI Research Report, forthcoming.

¹¹ A. Valdés, *Impact of Trade and Macroeconomic Policies on Agricultural Growth: The South American Experience*, Economic and Social Progress in Latin America, 1986 Report, Inter-American Development Bank, Washington, DC, 1986.

¹² A.O. Krueger, M. Schiff and A. Valdés, 'Agricultural incentives in developing countries: measuring the effect of sectoral and economy wide policies', *The World Bank Economic Review*, Vol 2, No 3, 1988, p 255.

¹³ K. Alagh and A. Sarma, *Report on Public Sector Flows to Agriculture*, FAO, Rome, November 1984.

¹⁴ C.L. Delgado and C.G. Ramade, 'Technology change and agricultural labor use', in Mellor, Delgado and Blackie, *op cit*, Ref 3, p 118.

¹⁵ K.M. Cleaver, *The Impact of Price and Exchange Rate Policies on Agriculture in Sub-Saharan Africa*, Staff Working Paper No 728, World Bank, Washington, DC, 1985, p 9.

¹⁶ See J.W. Mellor and R. Ahmed, 'Agricultural price policy for growth', in Mellor and Ahmed, *op cit*, Ref 3, p 272.

External demand constraints for agricultural exports

SSACs are highly concentrated in their agricultural exports. Usually one or two commodities out of the following list account for the majority of a country's agricultural exports: coffee, cocoa, tea, live animals, cotton, groundnuts, sugar, oil seeds and fixed vegetable oils, spices, fruit and vegetables. The first three products accounted for an average of 61.1% of SSACs' agricultural export earnings between 1981 and 1984. However, this does not automatically warrant the conclusion that jointly promoted structural adjustment programmes throughout SSACs lead to negative marginal revenues for exports, i.e. the fallacy of composition.

Simultaneous implementation of structural adjustment policies leads to two partially offsetting effects with respect to the external demand constraint. First, traditional markets may indeed face a demand constraint. Second, simultaneous adjustments in a range of African countries will remove barriers to trade and may help to open up new export markets. Moreover, structural adjustment, if successfully implemented, will stimulate economic growth and thus give rise to additional domestic and foreign demand. In the following, we first address the prospects for expansion of traditional exports to traditional markets.

External demand and constraints for traditional exports

Whether world market prices of a specific product may fall as a consequence of SSACs' export promotion depends on:

- (a) changes in world demand which will grow because of population growth and income growth;
- (b) the price elasticity of world demand;
- (c) the share of SSACs on world export markets; and
- (d) the reaction of supply in SSACs and competing countries to changes in world market prices.

World demand. The success of any structural adjustment policy depends very much on the prospects of world demand for SSACs' export commodities. If world demand for a specific commodity increases by 3 to 5% because of population growth and per capita income increases, SSACs' exports could grow by 3 to 5% without leading to increased world market shares. A market share analysis has revealed that SSACs have lost market shares for most commodities over time.¹⁷ In the light of SSACs' past export performance any structural adjustment policy could be termed 'moderately successful' if negative export growth for most commodities were stopped and current market shares maintained. Such a 'moderately successful' SSAC policy would most likely affect world market prices only marginally. Of course, a policy leading to such effects should not aim at the same production growth rates across all agricultural products as world demand growth for individual products varies due to differences in income elasticities.

World demand for SSACs' exports could be further stimulated if industrialized countries were to open up their markets to imports from developing countries. According to the market share analysis, the EC and other OECD countries are the most important regions for SSACs' exports. These countries have restricted access to their markets much

¹⁷ U. Koester, H. Schafer and A. Valdés, *Demand-Side Constraints and Structural Adjustment in Sub-Saharan African Countries*, International Food Policy Research Institute, Washington, DC (forthcoming).

more for processed agricultural imports than for raw products (see Table 1). Liberalization of agricultural imports would create additional demand for SSACs' exports. Moreover, removing the present tariff escalation could help SSACs to set up an export-oriented agroindustry without facing strong external demand constraints.

Price elasticity of world demand. It is quite often argued that world demand for tropical agricultural products is fairly price inelastic and increases in SSACs' exports may inevitably lead to lower world market prices and possibly even to lower export revenues. However, this argument does not hold for all tropical export products, for instance fruits and vegetables. But even small elasticities of world demand in the short run may not be of major concern for a particular SSAC. It will only cause an external demand constraint if the world demand for the country's export composition is price inelastic.

Market share and reaction of competing suppliers. If SSACs were to increase their exports of individual products significantly, this might have only insignificant effects on world markets in cases where their share of world markets is small. Real problems are expected for commodities for which SSACs' share in global exports is rather large.

Table 2 reveals the market shares and export values of SSACs' most important export products. SSACs hold high market shares for their two main export products, coffee and cocoa. Hence one might expect that

Table 1. Developed country tariff rates on selected commodities.

Product group	EC	Japan	USA
Coffee			
Green roasted	5.0	0.0	0.0
Coffee extracts	18.0	17.5	0.0
Cocoa			
Cocoa beans	3.0	0.0	0.0
Powder and butter	12.2	4.9	0.0
Chocolate	27.0	27.4	6.5
Cotton			
Raw cotton	0.0	0.0	0.0
Cotton yarn	6.0	3.6	6.8
Cotton fabrics	10.0	5.9	7.4
Cotton clothing	13.7	13.2	8.8
Sisal			
Fibres	0.0	0.0	0.1
Cordage	11.7	7.7	2.3
Wood			
Rough wood	0.0	0.0	0.0
Plywood	2.8	4.6	6.3
Wood manufactures	5.1	4.1	5.3
Paper			
Wood pulp	0.0	0.0	0.0
Paper preparations	0.0	2.1	0.0
Paper products	9.4	4.6	3.5
Rubber			
Natural rubber	0.0	0.0	0.0
Rubber products	5.3	4.8	5.3
Leather			
Hides and skins	0.0	0.0	0.0
Leather	3.9	6.2	3.7
Leather goods	11.7	11.0	14.4
Tobacco			
Unmanufactured	0.0	55.0	18.0
Manufactured	54.5	16.8	12.1

Source: World Bank, *Accelerated Development in Sub-Saharan Africa. An Agenda for Action*, Washington, DC, 1983, p 158.

Table 2. SSACs' share of world exports for major agricultural commodities in 1985.

Product	Export value (million US\$)	SSA share of world exports (%)	Commodity shares in agricultural exports (%)		
			SSACs	Asia	South America
Cocoa beans	1880.4	61.2	20.1	0.9	2.6
Palm kernels	11.9	52.9	0.1	0.0	0.1
Sisal	29.8	43.4	0.3	0.0	0.1
Coffee	2538.5	22.3	27.3	3.8	22.4
Groundnut oil	58.4	20.9	0.6	0.2	0.4
Tea	362.5	15.3	3.9	5.3	0.3
Cotton	568.9	9.4	6.1	4.0	1.9
Tobacco	370.3	9.2	4.0	2.4	2.7
Groundnuts	32.7	6.7	0.4	0.6	0.3

Source: FAO, *Trade Yearbook 1986*, Vol 4, Rome, 1987.

SSACs' export growth could affect the world market prices of these two commodities. Moreover, increased coffee and cocoa exports could result in negative marginal export revenues. However, there are other products such as palm kernels, sisal, groundnut oil and groundnuts where SSACs are dominant exporters with high shares on world markets, but the export values and their share in SSACs' total export revenue are fairly small. Hence a decline in world market prices of these commodities might cause fewer adjustment problems than in the cases of cocoa and coffee.

Table 2 shows that SSACs' main agricultural export products are in general of smaller interest for Asian and Latin American countries. The main exception is coffee, which accounts for 22% of South America's agricultural exports. The smaller share in agricultural exports of Asian and South American countries indicates that these countries are more diversified in their export pattern. There is ample empirical evidence that these countries diversified their exports significantly over time. This development probably took place in response to changes in the comparative advantage of producing and exporting non-traditional commodities. A world market price decline may enforce the prevailing trend in these countries to shift resources into producing alternative exportables. Consequently, SSACs could capture higher market shares at only marginally lower world market prices. Given such a supply reaction of competing suppliers the demand for SSACs' agricultural exports is certainly much more price elastic than world demand.

Nevertheless, it remains pure speculation to evaluate the future competitiveness of SSACs among competing exporting countries. Several countries, for instance Brazil and Malaysia, have invested in research and extension facilities. These investments will pay off in the long run in the form of reduced production costs, and in turn will improve these countries' competitive power against SSACs where investments in research and extension have been neglected in the past.

Alternatively, competing exporters might respond to SSACs' export growth with 'dumping price' policies to maintain shares in the world market. Such policies, although not sustainable in the long run, would aggravate the problem of negative marginal export revenues in the short run for SSACs. Of course, any price-depressing effect of SSAC export growth will be larger in the short run than in the long run, because adjustments in competing countries take some time.

¹⁸ Cocoa, coffee, tea, cotton, sugar, groundnuts.

¹⁹ The complete model and data are presented in J. Zietz, 'Prospects and potential for sub-Saharan export earnings from traditional agricultural export commodities', Appendix to Chapter 5 of Koester, Schafer and Valdés, *op cit*, Ref 17.

The model

A simple comparative static model was constructed for each of six independent commodity markets¹⁸ to analyse the prospects and potential for export earnings of sub-Saharan African countries.¹⁹ The model

Table 3. Short-run effects of a 5% policy-induced shift in the supply curve for specific agricultural products.

	Cocoa	Coffee	Tea	Cotton	Sugar	Groundnuts
Change in production	2.8	4.0	4.5	4.8	4.8	4.4
Change in exports	3.0	5.1	6.1	10.8	55.1	34.6
Change in world market prices	-5.6	-2.5	-1.1	-0.4	-0.5	-1.6
Marginal revenue as % of world market price	-86.7	51.0	81.9	96.3	99.1	95.4

Note: Joint action by all SSACs is assumed.

abstracts from any interdependencies in production or consumption that may exist among the commodities considered. The world market for exports consists of four country groups, Sub-Saharan Africa, which excludes South Africa, Developed Market Economies, which includes North America, Western Europe, Oceania, Israel, Japan and South Africa, Centrally Planned Countries, and all Market Economy Developing Countries except SSACs. The time horizon for long-run adjustments to take place is five years; short-run adjustment takes place within one year. The model simulates various exogenously given percentage increases in production for each commodity.

As a first round effect, an exogenous increase in SSACs' output by $X\%$ increases at constant world market prices the exportable surplus by $Y \cdot X\%$, where Y represents the ratio of production over exportable surplus in the initial period. The increase in SSACs' exports by $Y \cdot X\%$ reduces world market prices. As a second round effect, lower world market prices reduce the profitability of SSACs' exports and of exports from competing countries. It is assumed that all exporters to the world market as well as all importers from the world market adjust their supply and demand quantities in response to the change in world market prices. The price elasticities are assumed to be rather small in the short run, and somewhat greater in the long run. This adjustment in quantities establishes a new price-quantity equilibrium on the world market.

An extreme scenario from the SSACs' point of view has been investigated: the countries succeed collectively in export promotion and other competing countries reduce their supply on the world market only marginally in the short run and more in the long run. The case of increased exports from competing countries is considered unrealistic, since the level of 'distortions' against their exportables is significantly less than that prevailing in Africa.

Empirical results

The short-run and long-run effects of increasing SSACs' exports are presented in Tables 3 and 4. A 5% autonomous shift in SSACs' supply curves for the main agricultural exports would lead to short-run increases in export volume ranging from 3% for cocoa to 55% for sugar. The long-run increases in export volume are only slightly different from their short-run counterparts. In the short run, world market prices would fall between 5.6% for cocoa and 0.4% for cotton. Long-run price

Table 4. Long-run effects of a 5% policy-induced shift in the supply curve for specific agricultural products.

	Cocoa	Coffee	Tea	Cotton	Sugar	Groundnuts
Change in production	2.5	4.3	4.6	4.9	4.9	4.0
Change in exports	2.9	5.5	6.3	9.5	56.3	33.4
Change in world market prices	-2.5	-1.4	-0.7	-0.2	-0.25	-1.0
Marginal revenue as % of world market price	13.8	74.5	88.9	97.9	99.6	97.0

Note: Joint action by all SSACs is assumed.

changes, although of lesser magnitude, would be most severe for cocoa and less rigorous for cotton and sugar.

Table 3 reveals that under the worst outcome SSACs should be reluctant to promote export growth of cocoa products. The negative marginal revenue indicates that they might be better off to constrain than to expand production, even if domestic costs of production expansion were to be zero (ie the argument for an optimum export tax). The short-run prospects are also unfavourable for export growth of coffee. It would only pay in the short run if marginal costs of production expansion in SSACs were about 50% of 1984 world market prices.

The prospects are more promising in the long run. The expected reactions of competitors on the world markets will help to buffer the initial decline in world market prices. SSACs' export promotion is generally advisable either if production costs are lower in SSACs than in competing exporter countries and/or if SSACs succeed in fetching higher prices than their competitors. There seems to be potential for both. SSACs' competitors have diversified their export pattern much more than SSACs. This indicates that the competitors' advantage has moved away from the products of particular interest for SSACs. Hence SSACs may have a good chance to regain lost market shares.

Relaxing external demand constraints

SSACs may face less severe external demand-side constraints if simultaneously implemented adjustment policies were to stimulate intra-African trade in agricultural products. Intra-African trade could be boosted because adjustment policies are supposed to reduce the barriers to trade and, moreover, are supposed to spur income growth. Growing intra-African trade could play a dominant role in contributing to the successful promotion of adjustment policies. The export pattern of African countries could become more diversified and the dependence on industrialized countries' import demand could be relaxed.

However, growth in intra-African trade in agricultural products will only materialize if there is a potential for trade expansion. It is a well-known fact that African countries do not trade much with each other. 'As a percentage of foreign trade, official trade within Africa south of the Sahara has not risen above 4 percent since 1970, lagging far behind the achievements of Latin America, where [intra]regional trade has accounted for between 15 and 22 percent of total foreign trade these past fifteen years, and still further behind Asia's performance: 20 to 27 per cent of Asian countries' foreign trade is with other countries of the same continent.'²⁰ When considering agricultural trade only, the 1981-84 proportions of intra-SSAC trade were 9% and 8% respectively for agricultural exports and agricultural imports.

Past experience seems to support the widely held belief that African countries are very similar and hence there is only a small potential for intra-African trade in agricultural products. However, this view considers only natural factors, such as climate and soil fertility, as determinants of production costs. SSACs are quite different with respect to other determinants of production costs, for instance per capita resource endowment, level of development, infrastructure and institutional framework.²¹

A comparison of SSACs' production and export patterns²² on the basis of specific indices reveals that actually the SSACs differ significantly in their production and consumption patterns. Moreover, trade

²⁰ J. Egg and J. Igue, 'An approach to food trade between the Sahel countries and their coastal neighbours', in *Club du Sahel, Cereals Policies in Sahel Countries*, OECD, 1987, p 229.

²¹ See U. Koester, 'Trade in agricultural products among African countries', *Quarterly Journal of International Agriculture*, Vol 26, No 2, 1987, p 190.

²² See Koester, Schafer and Valdés, *op cit*, Ref 17, Chapter 5.

overlap indicators show that on average between 1981 and 1984 SSACs spent 23% of the export revenue from a product for imports of the same product. However, observed intra-SSAC trade was only 9% of exports in 1981-84. The potential intra-SSAC trade was more than twice its actual 1981-84 level.

Additional benefits from intra-SSAC trade accrue in several ways. First, the expansion of a country's export markets supports the development of comparative advantage in production. Second, intra-SSAC trade leads to export diversification away from the traditional exports to industrial countries, i.e. coffee, cocoa, etc. Third, intra-SSAC trade is politically desirable since it supports regional economic and political integration in sub-Saharan Africa. Of course, it has to be realized that trade expansion among African countries is not an easy task. It requires a liberalization of each country's exchange rate system, and a simultaneous liberalization effort across countries. In the African case, not much may be gained if only one country opens up its borders. Because of high transport costs to overseas markets and, thus, large differences between import and export parity prices, trade effects due to unilateral liberalization may be insignificant. However, simultaneous liberalization might allow specialization with respect to comparative advantage. Simultaneous implementation of adjustment policies can be considered as a unique chance to integrate African markets and thus relax dependence on traditional markets.

Conclusions and policy implications

Although the presented model abstracts from several variables which actually affect SSACs' export earnings, it is possible to draw out some important policy implications.

(1) Given the current composition of SSACs' agricultural exports, external demand constraints differ considerably across commodities. Coffee and cocoa are potential candidates for negative (or low) marginal export revenues if export-led growth is promoted simultaneously throughout SSACs.

(2) Countries which rely heavily on export earnings from cocoa and coffee are most vulnerable to negative repercussions from increased exports. Special problems could arise for countries such as the Ivory Coast and Ghana. On average, the Ivory Coast earned 78% of its total agricultural revenue from exporting cocoa and coffee during the years 1981-84. Moreover, agricultural export earnings accounted for 65% of total export earnings. External demand constraints may be even more severe for Ghana. This country derives nearly 100% of its agricultural export earnings from exporting cocoa bean products and agricultural export revenues contribute about 45% of total export earnings.

(3) Even for highly vulnerable countries such as the Ivory Coast and Ghana a structural adjustment policy may be appropriate. Revised domestic relative prices can induce diversification in production and exports. This process reduces dependence on one traditional export commodity and stabilizes export revenues.

(4) A ratio between marginal export revenue and world market prices of less than 1 does not necessarily indicate that export promotion is welfare reducing. If a country's marginal costs of production are lower than world market prices, production expansion will lead to welfare gains. Hence individual exporting countries, which currently enjoy a

'premium' on export prices because of a comparative production advantage, are able to absorb lower prices in response to increased exports.

(5) Structural adjustment policies in African countries will become more effective if industrialized countries open up their borders, especially for trade in processed agricultural products with high labour content.

(6) African countries have lost market shares for most traditional exports to their traditional export markets, despite growing import demand in these traditional export markets. Hence African exports could grow in absolute terms without this necessarily leading to increased market shares. No major world market price effects are expected if SSACs' exports grow as a consequence of a 'moderately' successful structural adjustment policy. There is even significant potential for export growth for international exports as African countries have not yet exploited trade preferences granted by the EC.²³

(7) Simultaneous implementation of adjustment policies across African countries can be considered a unique chance to integrate African markets and thus loosen SSACs' dependence on traditional markets.

²³ U. Koester and R. Herrmann, *The EC-ACP Convention of Lomé*, Wissenschaftsverlag Vauk, Kiel, FR Germany, 1987. The situation would be different if trade liberalization by the EC as a result of the Uruguay Round eroded trade preferences granted to African countries, raising the competitiveness of Latin American and Asian countries.