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AGRICULTURE MARKET INTERVENTION AND PRICING POLICIES IN AFRICA

African Agricultural Policy Interventions: Problems and Opportunities

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AFRICAN AGRICULTURAL POLICY INTERVENTIONS: PROBLEMS AND OPPORTUNITIES

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The eyes of the world are on African agriculture. There are more poor people in South and Southeast Asia, but Africa is the only region of the world giving evidence in the past three decades of declining capacity to feed itself as measured by per capita food production.

A region's inability to feed itself can be the product of man or nature. To be sure, nature has played a significant role in recent years as draught devastated the Sahel and selected other areas of Africa. But man has also played a role. For example, the very different economic policy paths followed by Kenya and Tanzania since 1967 largely explain the wide difference in

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economic performance of the two countries.

My presentation first lists current economic problems and possible responses of African agricultural policy to deal constructively with these problems. This is followed by a section on priorities for emerging policies. It is traditional for critics to focus on the policies of developing countries; I shall attempt to balance the scales in the final section by briefly examining appropriate public policy for developed countries given the economic problems faced by the third world. I deal only with Anglophone Africa and my policy perspective is to improve the well-being of people.[1]

Current Problems and Possible Constructive Policy Responses

I jotted down the following commonly encountered problems after spending several weeks in Africa in 1986, but my first assignment in Africa was in 1967. The list is not exhaustive or prioritized, but is a springboard for

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[1]This perspective requires some concept of the social welfare function. A strong form of the social welfare function would indicate how well-being of societies is influenced by the level, variability, and distribution of income along with other variables. Although I have attempted to make progress on estimation of such a function, it is premature to attempt to apply such a function to developing countries. As such, I emphasize a weak form of the social welfare function which stresses three propositions:

- Regarding economic efficiency, public policies increasing national income are preferred to those which do not.
- Regarding equity, policies which transfer benefits to the poor from the more wealthy are preferred to those which do not.
- Regarding stability, policies which provide greater stability are preferred to those which do not, other things equal. (Of course, other things are not equal and it is necessary to confront difficult tradeoffs.)

These propositions may appear trivial but some public policies violate all three.

dialogue. In the listing of appropriate responses, I am not interested in ideology. I am interested in what works. I subscribe to the wisdom of Deng Xiaoping, the Chinese leader, who noted that the color of the cat is unimportant if it catches mice. At issue is what policies "catch mice". In the following paragraphs, I first list the originating policy problem, then discuss in each case a corrective policy response.

1. **Unstable Policies.** In a nation facing a highly uncertain future, public or private planning is often irrelevant. Industry, agriculture, and other sectors find themselves unwilling or unable to emerge or expand when future policies are uncertain. Long-run investment is discouraged and infrastructure declines, aggravating economic malaise.

Unstable policies in Africa have roots in culture and politics, issues too complex to address here. Instability also has economic origins. It is not enough merely to have continuity in economic policy; a steady policy must be sound. More will be said of such policy later, but buffer commodity stocks, a national food reserve fund, and open import markets can reduce instability of food supplies in the case of crop failure.

2. **Lack of Capital Investment.** Lack of capital investment traces in part to instability as noted above, but also has origins in lack of secure property rights discouraging long-term investments. Under communal ownership, lack of clear title and venture capital opportunities constrain investment. Local savings tend to be modest partly because of the critical importance of spending for consumption now rather than later and also lack of high-payoff investments that reward people for foregoing consumption to invest in the future. Many countries lack institutions to mobilize savings.

3. **Excessive Central Planning.** Decisions tend to be centralized and power to be concentrated. The tribal system continues to preclude consensus and remains a source of favoritism in a number of countries.

With increased experience, the role of the public sector in the economy is becoming more clear and is no longer simply a matter of idealogy. Excessive reliance on central planning wastes costly human resources on unsuccessful efforts to manage an economy. However, indicative planning, forecasting, and analysis with less interference in day-to-day decision of individuals and firms can be very helpful. Greater reliance on the market fosters decentralization of economic decisions and devolution of power. The role of government in the market is discussed in more detail later.

4. **Neglect of Infrastructure and Social Overhead.** Infrastructure such as roads, schools, government buildings, and some irrigation facilities have properties of public goods which the market alone will not provide. Agriculture research and extension also have such properties and frequently have been cut back sharply and operating funds curtailed in African countries. The dedication of much public sector budget to salary of civil servants and to support of parastatals leaves too little funds for day-to-day operations.

An appropriate response is to employ funds formerly used to subsidize production and/or consumption and parastatals to instead fund schools, education, roads and bridges, agricultural research and extension, information systems (including data and analysis), health and family planning clinics, and targeted food assistance. A wise strategy is to emphasize these roles in the public sector, rationing scarce government funds and able personnel to focus on functions which the private sector will not do or cannot do.

5. **Price Distortions**. Food prices are frequently held below world (border) prices for consumers while farm commodity prices are held below

world price levels for producers. Shortages are widespread. Parallel or black markets develop in response and eventually account for much of the production and marketing of food. Considerable cross-border marketing occurs. Well-paid officials benefit from low prices of food obtained from government food agencies while poor consumers are forced into the parallel market where prices not only are higher than in the controlled market, but also higher than if controls and other market interventions were terminated.

With proper attention to infrastructure and provision of market information, markets work in Africa. Allocations can be improved by allowing market forces to work, but in some cases targeted food assistance may be necessary for the very poor.

6. **Reliance on Government Agencies and Parastatals to Produce and Market**. Government bureaucracies are frequently large and underpaid. The relatively few highly qualified civil servants in top levels of government are overworked and overextended. On the other hand, salaries of persons in parastatals are often excessive. Inefficiency, waste, corruption, and favouritism are common in government agencies and parastatals.

One response is to turn over provision of consumer goods, production inputs, and services to private firms. Privatization sometimes means higher prices but delivery is more prompt; waste and favouritism are reduced. Privatization frees government resources for higher priority uses. Given initial distortions, it is frequently useful to begin transition to an open economy with a temporary dual private and public system to ease the move from public to the private and to reduce opportunities for monopoly pricing and output in the private sector.

7. **Government Provision of Subsidized Credit.** Common problems with government credit to agriculture include interest rates below

opportunity cost levels (even below the inflation rate in many cases, implying a negative real interest rate), low repayment rates, beneficiaries being primarily rural residents and larger commercial farmers as opposed to poor smallholders, and credit used for consumption instead of for intended production inputs.

One response is to use government funds to help establish local institutions such as credit clubs, credit unions, and commercial banks to mobilize savings and make and supervise loans. "Community banks" are working in some countries and are based on a cooperative credit concept with strong local involvement.

8. **Imports Substitution.** Self-sufficiency policies can deny a nation the benefits of comparative advantage and of rapid economic growth which provides a dividend to finance food security and other national needs. Movement along a supply curve by increasing output through higher commodity prices is a costly approach to self-sufficiency which most countries can ill afford. On the other hand, the policy of agricultural research and extension to move the supply curve to the right often provides highly favourable benefit-cost ratios and is a wise though initially slow move toward self-sufficiency.

So an appropriate public policy is to pursue productive investments improving agricultural technology and moving the supply curve to the right while at the same time maintaining an open economy allowing gains from trade. The more rapid income growth under this strategy provides an economic dividend of financial reserves to draw upon in times of unfavourable weather and pestilence. Food security is enhanced. The growth dividend can be used to finance targeted food assistance and other worthy programmes.

9. **Protection of Domestic Industry.** Some infant industries need protection, but persistently protecting local industry from foreign competition raises prices for agricultural inputs and consumer goods which are "wage

goods" to workers. Higher costs make it difficult for agriculture and other industries to compete in international markets.

In many cases, a useful response is joint investment ventures with other countries to provide technology and capital and thus avoid the high costs of protecting an inefficient local industry. Many countries are too small to obtain gains from specialization in isolation; the appropriate response is a common market to facilitate international trade by obtaining the benefits from specialization and comparative advantage. Here progress has been disappointing in Africa.

10. **Tax on Exports.** Developing countries frequently tax exports, a conventient source of foreign exchange. Export demand tends to be price elastic; that means higher taxes must be passed back to producers as lower returns. Production is sharply curtailed and tax revenues diminish.

The solution to the tax problem is often unclear. An obvious answer is to use fewer revenues to subsidize consumers, producers, and operations of government. But taxes are essential, and it is well to emphasize taxes on land, salaries, estate transfers (of the deceased), and luxury consumption goods including imports. Such taxes interfere less with the optimal resource allocations than do taxes on exports. Taxes on land and estates are difficult to impose, however, in part because of lack of clear title to property. And excessive taxes on even nonessential consumption goods can reduce workers' incentives to labour to earn such goods.

11. **Inflation**. Because of unfavourable policies such as those listed above, governments frequently find themselves with inadequate revenues to finance government activities. The government is likely to resort to budget deficits coupled with an increase in the money supply to finance the deficits. In conjunction with poor output performance, such action results in inflation.

12. **Overvalued Currency.** Expanding the money supply to meet budget shortfalls creates inflation at greater rates than those of trading partners. With fixed nominal foreign exchange rates, the real foreign exchange rate rises. Trade deficits increase as exports fall and imports rise. An overvalued currency causes foreign exchange shortages which, if not dealt with by devaluing the currency, must be controlled by management of imports and foreign exchange. Political rather than economic considerations frequently are overriding in such matters of rationing brought about by interventions in the economy. The result is an overvalued currency which constitutes a subsidy to consumers and a tax on producers. The more prosperous urban consumers who frequently hold strategic political advantage are favoured by such policies and provide a constituency for their continuation. The smallholder and urban poor often are not served well.

Distortions from pursuing an overvalued currency include excessive consumption versus production and investment, excessive mechanization and substitution of capital for labour, unsustainable balance of payments deficits, and heavy borrowing from abroad. When devaluation is deferred too long, the necessary adjustments not only constitute a major hardship to consumers but are traumatic to the poor because the government can no longer afford to subsidize consumers, even those in poverty.

One of the overvalued-currency responses being tried in Africa is exchange auctions. These are meeting with mixed success. Problems include "dirty" floats which exclude certain sectors of the market from the exchange auction. The remaining "thin" market for exchange means that excessively high value uses (such as spare parts for a plant shut down by a lack of foreign exchange) determine the exchange rate for the country and tend to cause overshoot. The overshoot problem of undervalued currency creates unduly high prices for imports and hardships for consumers. Higher import prices must be offset by a greater quantity of exports and lower quantity of imports; consequently the balance of payments turn around only after a sizable lag. If food prices are not allowed to rise with the inflationary pressures caused by higher input costs including those for fertilizer and other farm inputs, the result is that commercial producers are disadvantaged by the currency evaluation and production is cut back.

The supply and demand for foreign exchange especially in small developing countries of Africa are highly inelastic. That means that shocks to either demand or supply produce large changes in exchange rates. Planning is difficult in the face of such unstable exchange rates. Hence, some form of "moving peg" system of foreign exchange rate adjustment is warranted in many instances. One suggestion is to use the parallel exchange rate or an exchange float average of several weeks as an initial basis for fixing a new exchange rate. That fixed rate then is adjusted periodically, say every week if the inflation rate of the country in question is high versus that of trading partners.[2] If the inflation rate is low relative to trading partners, the adjustment can be less frequent, say every six months. Presence of exchange surpluses or deficits and of alternative exchange rates in parallel markets can signal the time for a renewed float.

In concluding this section, I stress that the time to stop a hangover is the night before. Restraint in growth in money supply and public debt, and movement toward a balanced federal budget while encouraging output growth are policies more easily recommended than implemented. Countries turn to the

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[2]If inflation is 10 percent greater in the country than in that of trading partners in a specified period, the nominal exchange is adjusted downward by 10 percent so the real rate remains constant.

IMF and the World Bank which impose austerity measures. These austerity measures are frequently harsh and politically intolerable. A major reason is because a country waits too long before abandoning unsound policies. Restructuring debt may be the only alternative in such cases to survive politically, economically, and socially. But the way to avoid such problems is to pursue sound policies before the economic situation becomes unmanageable.

Priorities for Development

Setting of priorities helps direct our attention in development. Like the list of problems in the previous section, the priorities in this section are not final or exhaustive, but provide a springboard for debate.

1. **Africa**. As noted earlier, food production per capita is falling in Africa. Foreign exchange earnings are likely to continue to decline from extractive industries such as minerals and timber. Terms of trade are unlikely to increase much for agricultural commodities, although the current low price for grains is a temporary phenomenon caused by a trade skirmish between the United States and the European Community which will not be sustained. Desertification, unstable production, storage problems in the tropics, and unpredictable and unfavourable weather cycles all combine to make the problems most severe in Africa among developing regions of the world.

2. **Agriculture**. With 50-80 percent of people employed in agriculture, it is not possible to have economic progress without a contribution from agriculture. Agricultural productivity must increase to raise the standard of living for most of the people -- those in agriculture. A strong human resource and industrial base cannot be built in Africa without a strong agricultural base to

provide adequate food supplies, other raw materials, and a market for products of an industrial economy.

3. **Smallholders**. The bulk of farmers are smallholders in Africa; that alone argues for focus on them. But in addition, the high cost of capital relative to labour reduces economies of size and gives preference to smallholders in economic development.

4. **Public Versus Private Sector.** Sole use of the market versus the public sector is not the issue -- both sectors are clearly essential. A centrally planned, command economy also is not the issue because it does not work. I am reminded of the verbal dual between Titans in which one said "I can summon the demons from the depths!" The other replied "So can I, but they don't respond to me either." It is possible to plan and publicly direct an economy down to the minutest detail, but the economic actors do not perform on command. Even the most sophisticated central planning for provision of goods and services falls short, and a parallel market economy develops. As that parallel market economy grows, it becomes attractive for the government to recognize it so as to tax it. The market has tended to drive out the state economy in several countries of Africa.

This is not to imply that planning is unimportant. Indicative planning is essential and policy analysis is critical especially in determining the appropriate balance between the public and private sectors. The priority in government is to provide security; continuity (so long-term plans can work out); infrastructure, education, and skilled training; agricultural research and extension; grades and standards; environmental protection (including pure food and drug laws and administration); health and family planning services; and targeted food assistance. That leaves the bulk of the economy to the private sector.

At issue is the role of price supports. When I first came to Africa exactly 20 years ago, I was asked the question of whether price supports on farm commodities are desirable and I replied "I don't know". I was embarrassed then by my ignorance, but after studying the issue for 20 years, I still don't know the answer. Producer price controls don't work for perishables. Whether for perishables or nonperishables, some governments tend to raise price supports to high levels which cannot be sustained. In other cases, price regulations hold prices down to producers, discriminating against agriculture and reducing output. There are advantages for efficiency in forward pricing of tradable agricultural commodities at border prices (not at the cost of production which varies too much from farm to farm, region to region, and from time to time, and whose computation is arbitrary and hence, subject to political manipulation), but few governments indeed have the discipline, competence, or resources to operate such price support systems.

Regarding research, emphasis needs to be placed on major commodities such as sorghum/millet, maize, rice, and cassava. Emphasis needs to be on labour-saving technology, but it must be remembered that yield-increasing crop varieties can substantially reduce labour by minimizing ground preparation time per unit of output. Disease and draught resistant crops are of high priority. Labour-saving technologies can reduce bottlenecks such as seasonal labour requirements.

The soil resources of Africa are frequently overrated -- many soils are old, fragile, thin, and deteriorate rapidly if exposed to the elements of sun and rain. With population pressure and fallow periods becoming shorter, new technologies will be required to maintain soil resources and food supplies in the face of population pressures. I am unaware of technologies which permit economic continuous cropping of land now in bush fallow. Two alternatives appear promising: One is to emphasize tree crops, in which our studies indicate West Africa has a comparative advantage. The other is to emphasize tsetse fly resistance in livestock to open large areas for livestock production and utilize the hugh potential for forage production. As incomes grow, demand for meat will grow. This means greater demand for forage and for feed grain production which needs to be supplied more efficiently so as to provide low-cost poultry and livestock meat.

5. **Fertilizer Distribution.** Some areas of agriculture can profitably expand utilization of fertilizer, an input which can bring a quick output response. In this as well as other priorities for improved efficiency and level of production, the full contribution will not be possible without an improvement in infrastructure to move food supplies from surplus to deficit areas at lower cost than currently. Irrigation is feasible in some areas. As a package with improved varieties and fertilizers, irrigation can form a composite which is more profitable and productive than any one practice taken alone.

6. **Export Versus Food Crops?** Given resources, producers often can buy more food when they devote resources to export crops rather than to local food crops. Linear programming of representative farming in Liberia revealed a comparative advantage in tree crops including coffee, cocoa, palm products, and rubber. Rice, the staple food, did not come into the solution. When forced in the opportunity cost (shadow price) was three times the market price. That means by producing tree crops the producer could buy three times as much rice with his resources as by producing his own. Tree crops not only have a comparative advantage in many areas, they also conserve soil. But failure of export markets can be serious, and it is important for developed countries to open markets so that normal growth processes and comparative advantage can be exploited. Producers properly will continue to produce

staples for security purposes, and any attempt to place more emphasis on tree crops needs to consider the food security issue for the nation as a whole.

It is well for countries of Africa to exploit low world food prices to lower the cost of wage goods important to comparative advantage in labour-intensive light industry. Such industry can make use of labour freed from agriculture -- a large amount given the high population growth rates found in Africa. Such a strategy is likely to work only with substantial encouragement of foreign investment as a source of technology and capital.

The normal progression for Africa will be from first improving agriculture to moving into light industry and at a later stage to service industries. Such a progression will be thwarted if world markets are not kept open. That brings us to the final section which is the responsibility of developed countries in African development.

Responsibility of Developed Countries (DCs)

Presentations such as this frequently provide a list of policies for less developed countries (LDCs), but fail to note policies of the DCs to assist LDC's development. Assistance to LDC's agricultural development need not interfere with, indeed it is likely to assist, DC exports. Those developing countries with fastest growth rates in staple food production also increased their food imports from developed countries at the fastest rates in recent decades.

I suggest the following set of priorities for developed countries.

1. **Open Markets to LDC Exports.** If countries do not import, they can't export, and the world loses. Opening up DC markets would do more to promote development in LDCs than do all current aid programmes combined.

2. **Emergency Food Reserves.** Adequate food reserves are unlikely to be held by LDCs to meet emergency food needs. Nor is it economic for them to hold such reserves. The food security facility of IMF remains in a formative stage but has promise. Financial insurance to be able to purchase food in export markets when supplies are short is much cheaper for LDC's food security than are food stocks held in the country or attempts at food self-sufficiency. LDCs must have a place to turn for food supplies in the world when nature and pestilence combine to provide a short crop. Food reserves can be held by food exporting developed countries.

3. **Basic Research in DCs.** LDCs cannot afford basic research but it is the single brightest hope for dispelling the Malthusian spector in the long run. Biotechnology offers vast promise, but LDCs cannot afford the luxury of investing in costly research with such uncertain payoffs and large spillovers.

4. **Adaptive Research in LDCs.** It is critical for the LDCs to have local research capacities to adapt research from elsewhere. Failure of LDCs to attract the brightest and best scientists available to them and maintain continuing support for their efforts is a major oversight which needs to be corrected mainly by the LDCs but with assistance of the DCs.

5. **Improve Infrastructure in LDCs.** As indicated earlier, the market will not provide adequate infrastructure. But adequate infrastructure helps the market to work better. DCs can be a big help in doing what local markets will not do in LDCs. Roads should not be built where LDCs will not maintain them, however.

6. **Human Resource Development.** DCs can help LDCs improve educational and vocational training facilities and services. Improved health care and family planning is possible in part from outside help in technology and

funding from DCs. Such help in human resources is already apparent in the lower infant mortality and death rates in LDCs.

7. **Macroeconomic, Trade, and Commodity Programme Policies.** Unfavourable monetary-fiscal policies in the United States and high rigid commodity price supports in the European Community and Japan have had serious, unfavourable repercussions for LDCs. One result is high real interest rates and instability as well as unfair competition in agricultural commodities. Ending or sharply revising such policies in developed countries would provide a big assist to LDCs.

8. **Flexibility in Restructuring LDC Debt.** In the past decade serious mistakes have been made in world finance including overextension of debt capital to LDCs. Not all of these mistakes were made by LDCs. The DCs share responsibility for the debt and for working out a compromise in debt restructuring.

Conclusions

Over much of Anglophone Africa, market intervention policies are in disarray and broad retreat. Advancing across this broad front are policies featuring market orientation, price incentives, and privatization. This turnaround is not from a reversal of ideology; it is a product of necessity. The legacy of past market distortions has left a wake of deprivation -- low productivity, poverty, and depleted infrastructure. Even the most enlightened policies will not soon turn around the situation which has left many countries worse off than at independence from colonial rule. Frustration over slow progress will tempt governments to return to former policies, but patience and persistence in continuing sound policies will be critical to the long-term vitality of agriculture and national economies throughout Africa.

At its very best, a program of policy analysis and planning would avoid the false starts and dead ends of policy encountered in some African countries. The market and the public sector both have important roles to play, but an increasing amount of world evidence indicates that in the "gray areas" where either markets or the public sector might be chosen, it is best to err on the side of choosing markets rather than the public sector.

The economic prescription for economic progress is quite simple and straightforward. The overwhelming challenge is implementation. Many conceptual and practical issues remain unresolved, but far more is known about sound agricultural and economic policies in general than is being applied. The development planners of Africa have a critical role to play in providing the kind of policy analysis that will facilitate implementation. Agricultural policies are particularly critical because agriculture as the main industry is the first line of progress in many countries of Africa. But in this effort, it is important that "agricultural" planners and analysts not restrict their activities to a narrow concept of agriculture. Macroeconomic, trade, and other national policies heavily influence agriculture and national development. Agriculturalists have a major stake in avoiding policies that retard not only agriculture but national growth.

References

Eicher, Carl. "West Africa's Agrarian Crisis." Paper for Fifth Bi-Annual Conference of the West African Association of Agricultural Economists, held at Abidjan, Ivory Coast, December 7-11,1983. East Lansing: Department of Agricultural Economics, Michigan State University, 1983.

Henneberry, Shida. *Agricultural Supply Response.* Background paper B-17. Stillwater: Agricultural Policy Analysis Project, Department of Agricultural Economics, Okahoma State University, 1986.

Mellor, John, Christopher Delgado, and Malcolm Blackie, eds. Accelerating Food Production in Subsaharan Africa. Baltimore: Johns Hopkins University Press, 1987.

Rogers, Boima, et al. *Proceedings of Conference on Agricultural Policy in Liberia.* Background paper B-23. Stillwater: Agricultural Policy Analysis Project, Department of Agricultural Economics, Okahoma State University, 1985.

Vengroff, Richard and Ali Farah. "State Intervention and Agricultural Development in Africa: A Cross-National Study." *Journal of Modern African Studies*, 23(1985):75-85.