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MACRO-ECONOMIC FRAMEWORK FOR AGRICULTURE AND FOOD POLICY IN THE COMMONWEALTH CARIBBEAN

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INTRODUCTION

For most of their post-colonial histories, government of Commonwealth Caribbean countries have maintained a variety of policies and measures intended to foster and encourage the development of agriculture. Within recent times, there has also been some policy recognition of the importance of adequate nutritional standards and food availability. The set of policies and measures have included producer and consumer subsidies, commodity price controls, guaranteed producer prices, public infrastructural investment, and have traditionally extended to government negotiation of international markets. This entire gamut of policies and measures is termed the "incentives and supports system".

Whatever targets are specified for the food and agricultural sector, the system of incentives and supports serves larger economy-wide and social objectives. Shifts in these objectives result in changes in the nature and emphasis of the incentives and support systems. A knowledge of macropolicy objectives therefore illuminates the understanding of incentives and supports. Similarly, the effectiveness of the latter set of policies and measures is frequently dependent on the macroeconomic framework within which they are conducted. The performance of the economy in critical areas such as the balance of payments, prices, exchange rates and economic growth is central to the design, implementation and success of incentive and support systems.

This paper attempts to elaborate the macro-economic framework for agriculture and food policy in the Commonwealth Caribbean. The material is organized under three broad heads: macro-objectives, macro-economic conditions and budgetary constraints. Empirical references are made mainly with respect to the less underdeveloped CARICOM countries, that is Barbados, Guyana, Jamaica and Trinidad and Tobago, but much the same can usually be said for the member countries of the Organization of East Caribbean States and for Belize.

MACRO-ECONOMIC OBJECTIVES OF INCENTIVES AND SUPPORT SYSTEMS

By examination of the myriad ministerial statements, budget presentations, and policy documents (including development plans) it is possible to derive a profile of the macro-economic objectives of Caribbean governments. Such an exercise is by no means foolproof. Governments are notorious for the divergence between announced objectives and real intentions. It is usually advisable to try to establish their revealed preference functions by analysis of

official actions, at least as a adjunct to the identification of policy objectives on the basis of public pronouncements.

Without attempting to describe such exercises in this paper, five sets of macro-policy objectives can be identified for these countries within the past decade or two. Not all of them are valid for each country; nor is the full set of objectives applicable to all years. Public policy has been neither universal or steadfast.

Nutrition

Within fairly recent times, the achievement of adequate nutritional intake has become an important policy objective of several governments. This policy concern reflects a slow but growing awareness within the economics profession that the quality of people as productive resources depends not only on intellectual complements but on organically determined receptive capacity and physical capacity of individuals. It reflects also the permeation of the "basic needs" philosophy or approach into economic policy. Health is the most basic of basic needs.

No Commonwealth Caribbean country can realistically claim to have satisfied minimum nutritional intakes for its population, even though for some segments of society the claim is assuredly valid. Nutritional deficiency within these countries results not only from wide income disparities and low poverty thresholds. It is also a consequence of weak food production systems, weakness being defined in relation to both levels and composition of food production. The statistics in Table 1 illustrate the magnitude of the production problem. Output has remained stationary for several commodities and declined for several others. Furthermore, output of high nutrition food products has not been impressive. There is thus a clear necessity to stimulate expansion of agriculture and food production in pursuit of the broader nutritional objective.

Given the agricultural resource endowments of the Commonwealth Caribbean and the major problems of altering the caloric mix or output-mix of agriculture in the short and medium terms, the pursuit of adequate nutrition levels of necessity implies a continued demand for food imports. There are two important roles for domestic agriculture in this context. One role is to substitute for food imports, thereby releasing foreign exchange for non-substitutable imports. The other role is to earn foreign exchange to finance necessary food imports. The fulfilment of both roles is contingent upon efficient and growing agricultural and food sectors.

Food Dependence and Food Security

The Commonwealth Caribbean historically has been a region dependent upon imported supplies of food. In the contemporary period the degree of dependence is readily indicated by the ratio of food imports to total food availability, a measure which nonetheless understates the degree of dependence with respect to particular categories of food products and nutritional intake.

Food dependence is inextricably linked to the issue of food security. There are at least three dimensions to the concept of food security. The first and perhaps the most commonly understood meaning of the term is the possibility of supply shortages and unavailability because of external events, be they random neutral events such as crop failures or transportation problems (including dock strikes) or

politically inspired embargoes.

The second dimension is that of food price inflation. Food prices are an important component of the cost of living in less developed countries. Empirical support for this conclusion can be found for Jamaica (Manhertz, 1977), Brazil (Cardoso, 1981) and several Asian countries (Bhalla, 1981). Some pertinent data is also presented in Table 2. Furthermore, nominal wage rates are adjusted upwards in response to increases in the cost of living, e.g. Bourne and Persaud (1977), St. Cyr (1979), and Holder and Worrell (1985). Thus, food prices interact dynamically with wage costs and the general price level. Since, as stated earlier, imported foods are a sizeable proportion of food supply, national food prices would be highly sensitive to changes in the foreign currency price of imported foods and in the exchange rate. The national inflation rate as a consequence becomes responsive to external price developments and to the country's exchange rate. As a corollary, exchange rate policy may be constrained by the potential effect of exchange rate changes on domestic prices.

Food prices are of significance not only because of their inflationary implications. In poor countries where food expenditures comprise a large proportion of total personal expenditures, especially for the poorest of the poor, food price inflation has major welfare consequences contrary to basic needs and nutritional objectives. No less important are the implications for social stability. Food price inflation is politically explosive.

The third aspect of the concept of food security is the inability (or ability) to afford imports. In normal political circumstances where trade embargoes are not export restrictive measures are not present, a food dependent country can always import what it requires subject to the availability of foreign exchange. The caveat is crucial. Many less developed countries (not least the Caribbean) have experienced food insecurity since the first oil shock simply because their foreign purchasing power was greatly eroded by import price inflation and by falling exports. Thus for instance, Jamaica food imports which stood at US\$131m in 1974 decreased to US\$89.7 million in 1984.

Balance of Payments

All Commonwealth Caribbean economies now experience some measure of balance of payments difficulty. Except for Trinidad and Tobago during the oil boom period, i.e. 1974 to 1984, the countries typically have sizeable current account deficits relative to their gross domestic products. Foreign capital inflows are the essential balancing mechanism. Table 3 provides some statistical data on the balance of payments situation in recent years.

The agricultural sector has an important role to perform in the alleviation of balance of payments pressures. It can help to offset, although not to a great extent, the decline in mineral exports. It may in general assist in foreign exchange conservation and foreign exchange earning.

However, the fulfilment of this balance of payments role requires a reversal of the persistent down trend in actual agricultural export performance. Table 4 presents data to show that the main agricultural exports either declined or stagnated for most of the past decade. From this perspective, agricultural sector objectives are complementary to balance of payments objectives. Improvements in agriculture exports

also improve the balance of payments.

Employment and Incomes

Agriculture, the Cinderella sector of economic development policy between 1945 and say 1980, is once more accorded some importance to income and employment objectives. Manufacturing sector performance has continued to be disappointing with respect to its income generating and employment generating effects. Moreover, the contraction of the mineral sector in Jamaica and Guyana has added to their unemployment problems and further deteriorated income levels. Fine things cannot be expected of these two sectors in the immediate future. Partly because of this disenchantment with the income and employment prospects of the modern sectors and partly because of the labour intensity of agricultural production, the pursuit of national income and employment objectives cannot be divorced from agricultural policy.

Distribution of Income and Welfare

The Commonwealth Caribbean is far from being an egalitarian society. There is considerable inequality in the distribution in income, wealth, and material well-being among individuals and households. Paradoxically, personal incomes have become more unequally distributed during both recessions (Bourne, 1985) and booms (Henry and Harewood, 1983). Although always on the policy agenda of Commonwealth Caribbean governments, distributional objectives are more acutely focussed and more highly ranked now than before. The presence of socialist and communist political parties has ensured that the question of inequality is not sidestepped or deferred.

A policy concern with inequality leads to certain facets of agricultural policy for at least two reasons. First, rural inequality is itself an important dimension of national income inequality in many countries (Jain, 1975) and Von Ginnekin, 1976). Thus alleviation of inequality within the agricultural sector would make a direct contribution to the improvement of distribution at the national level. Second, much of labour income inequality at the national level may be due to (or associated with) intra-sectoral labour income disparities. Certainly, labour incomes are unevenly distributed across sectors, particularly in less developed countries (Bourne, 1986 and Lipton, 19--). Agricultural labour incomes are greatly below labour incomes in other sectors in the less developed countries. This is a matter for concern in its own right, quite apart from its role as an element in overall income inequality.

An international study of the sources of intrasectoral labour inequality establishes that sectoral differences in labour productivity, profitability and product market conditions are major influences on sectoral income disparities (Bourne, 1986). Reductions in aggregate income inequality and improvements in the rather lowly position of agricultural workers thus require the adoption of policies for agricultural development and efficient marketing.

Macro-economic Conditions, Food and Agriculture

The performance of the agriculture and food sectors is conditioned by the performance of the overall macro-economy. Trends with respect to the general price level, factor prices, exchange rates, the balance of payments, and intersectoral resource transfers all may affect the agricultural sector and may indeed negate the

intended effects of incentive and support policies within the sector. Some possible connections are outlined in this section of the paper.

Perhaps the easiest point of departure is the model of the farm firm in a stylized Caribbean setting presented in Bourne and Graham (1983). There it is assumed that the prices of capital services and current non-labour inputs are determined by the local currency cost of imported inputs and by the degree of foreign exchange rationing. The local currency cost of imported inputs is itself a composite of foreign currency prices and the foreign exchange rate. The model assumes that farm firms are debt financed with foreign capital so that debt service obligations are affected by exchange rate changes. This assumption reflects the prevailing practice and conditions of agricultural development credit. Another assumption is that agricultural wage rates are determined by the overall price level (among other things). This amounts to invoking a wage rate response function within the framework of a dynamic recursive system of price formation. The model assumes that agricultural product prices are determined by the overall price level, government pricing policy, and the local currency price of agricultural exports. The last mentioned embodies exogenously determined foreign currency price (given the institutional arrangements for Caribbean agricultural staples, bananas, sugar, coffee, spices) and the exchange rate.

With these assumptions, it is shown that general price inflation can reduce farm profits, depending on the official pricing policies for agriculture, the share of domestically marketed agricultural output in total agricultural output, and the wage response to inflation. If the share of domestically marketed production is unchanged (i.e. the balance between 'domestic' agriculture and export agriculture is constant), then general price inflation will depress farm profits if adjustment is fuller for wage rates than for 'domestic' agriculture commodity prices. Both wage policy and general price policy are therefore critical to the performance of the agriculture and food sectors.

Governments have exhibited more willingness to regulate commodity prices for food and agriculture as anti-inflation policy than to constrain wage rates and other factor prices. The adjustment of food prices to increases in production costs is usually not 100 per cent and is generally delayed. When the price of the domestic product is uncontrolled, the price of the imported competitive commodity is sometimes set substantially below the price of the locally produced good, thereby squeezing profits from the demand side. In either of these circumstances, the broader economic policy objective conflicts with the objectives of the incentive and support system. Anti-inflation policy negates agricultural development policy.

Balance of payments effects on the agriculture and food sectors are pervasive. Reference has already been made in a previous sector to the constraining effect of foreign exchange availability on food imports. Foreign exchange scarcity also restricts the importation of producer goods. The severity of foreign exchange pressure can be appreciated from the rapid build-up in negative net foreign reserves shown for Jamaica and Guyana in Table 5. In both of these countries, severe cutbacks from accustomed levels of producer goods imports in the agriculture and food sectors are evident.

Acute and persistent balance of payments pressures have resulted in exchange rate devaluations in Guyana and Jamaica. Exchange rate

changes provide another link between the balance of payments and the agriculture and food sectors. Exchange rate devaluation or depreciation increases the cost of capital services and current imported inputs and thereby depresses profits. Furthermore, exchange rate depreciation increases the local currency value of debt obligations when these are denominated in foreign currency and the borrower contractually bears the foreign exchange risk. Much of agricultural development banking failures in Jamaica during the 1978 to 1980 period is attributable to massive changes in debt servicing costs resulting from the 1978 devaluation and its sequel of mini-devaluations (Bourne and Graham, 1983).

The system for exchange rate determination and foreign exchange allocation may itself present major difficulties. In the face of agricultural commodity price controls or price inelastic product demand agricultural producers may not be able to afford black market prices for foreign exchange and thus may be rationed out of the import markets. Similarly, the Jamaican so-called auction rate system may be structurally biased against producers whose commodity prices are constrained by government policy or by commodity demand conditions.

Intrasectoral resource transfers may also be a complicating factor in the formulation of appropriate agriculture and food policies. An important mechanism for resource flows out of agriculture is the terms of trade between the agricultural sector and other sectors. In most, if not all countries, the internal terms of trade are adverse to agriculture mainly because of differences in income elasticities of demand, differences in price elasticities of demand, official pricing policies, and exchange rate policies. However, it is not certain that there is a net transfer of resources out of agriculture. The sector has been the beneficiary of fiscal and credit transfers. Careful quantification of all resource flows into and out of the agricultural sector is necessary before any judgement can be made about the net incidence of intersectoral resource transfers on the food and agriculture sectors.

Macro-economic Constraints: Fiscal Economics and Politics

Two basic points will be made in this penultimate section of the paper. First, fiscal resources for incentives and support systems are not stable, and have tended to decrease during the 1974 to 1985 period. There is a veritable "fiscal crisis" of the State in some countries. Although no attempt is made here to document the decline in fiscal flows to the agricultural and food sectors, some data are presented in Table 6 to indicate the weak fiscal situation of Commonwealth Caribbean governments.

Second, there is intense competition for the allocation of fiscal resources. The intensity of competition may even increase when aggregate resources diminish sharply. Resource competition exists among economic sectors and among geographical regions. Allocations are considerably influenced by the strengths of political lobbies, the short term calculation of political costs and political benefits, and the economic balance of power (Stone, 1974). Judging from the agriculture and food processing share of total public expenditures, one cannot credit these sectors with much success in the politics of budgetary allocation.

CONCLUSIONS

The macro-economic framework for food and agriculture in open, less developed economies is so broad as to invite a discussion of global economic events and policies. No such grand analysis was attempted in this paper. Instead, the more modest and realistic approach adopted was that of identifying and analysing a few of the main elements of the macro-economic framework as determinants of, and constraints on, food and agriculture policy.

Rather than attempt a summary of the broad brush analysis in this paper, it is perhaps best to conclude by emphasizing that in the Commonwealth Caribbean (as elsewhere in this hemisphere) the macro-economic framework is dominant. Those who formulate policies for food and agriculture without due regard to the critical role of macro considerations and development are unlikely to succeed.

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TABLE 1: Percentage Changes in Production of Selected Food Items:
Jamaica

Year	Poultry Meat	Condensed Milk	Flour	Cornmeal
1980	- 4	-11	29	
1981	9	4	4	
1982	0	- 1	18	-3
1983	13	- 6	12	-21
1984	- 7	-17	39	-39
1985	-36	-25	42	78

Source: Statistical Abstract and Statistical Review. Jamaica Institute of Statistics.

TABLE 2: Consumer Price Inflation (%)

Year	Jamaica		Barbados	
	Food & Drink	All Items	Food & Drink	All Items
1978	54.1	49.4	10.0	9.5
1979	24.5	19.7	11.1	13.2
1980	33.6	28.7	n.a.	14.5
1981	0.8	4.8	14.8	14.6
1982	7.5	7.0	7.3	10.3
1983	17.2	16.7	2.7	5.3
1984	31.6	31.1	4.0	4.6

Source: Jamaica: Bank of Jamaica Statistical Digest.

Barbados: Central Bank of Barbados Economic & Financial Statistics.

TABLE 3: Current Account Balances and Capital Accounts
Balance Relative to Gross Domestic Product (%)

Country and Item	1980	1981	1982	1983	1984
Barbados:					
Current Account	-3.1	-13.1	-4.2	-4.8	1.2
Capital Account	7.1	12.7	4.8	4.9	-0.5
Guyana:					
Current Account	-14.5	-21.1	-18.3	-17.5	-10.1
Capital Account	1.5	13.3	5.5	-8.3	-6.6
Jamaica:					
Current Account	-7.0	-12.9	-13.4	-17.3	-16.1
Capital Account	4.4	8.6	16.4	n.a.	n.a.

Source: Central Bank of Barbados Annual Statistical Digest and International Monetary Fund International Financial Statistics.

TABLE 4: Exports of Sugar (US\$m)

Year	Barbados	Guyana	Jamaica	Trinidad & Tobago
1979	29	90	57	35
1980	54	121	55	27
1981	25	109	46	27
1982	31	88	48	23
1983	19	71	58	26
1984	29	71	44	28

Source: International Monetary Fund International Financial Statistics.

TABLE 5: Net Foreign Reserves (US\$m) and US Dollar Exchange Rates

Country and Item	1979	1980	1981	1982	1983	1984
Barbados:						
Net Foreign Reserves	71	83	63	92	110	119
Exchange Rate	2.00	2.00	2.00	2.00	2.00	2.00
Guyana:						
Net Foreign Reserves	-56	-122	-123	-147		
Exchange Rate	2.55	2.55	2.81	3.00	3.00	3.83
Jamaica:						
Net Foreign Reserves	-546	-510	-606	-520	-809	-583
Exchange Rate	1.76	1.78	1.78	1.78	1.93	3.94

Source: Bank of Jamaica Statistical Digest; Central Bank of Barbados Annual Statistical Digest; International Monetary Fund International Financial Statistics.

TABLE 6: Government Expenditures and Fiscal Receipts (US\$m)

Country and Item	1979	1980	1981	1982	1983	1984
Barbados:						
Expenditures	193	266	312	304	318	307
Receipts	188	237	256	285	317	270
Jamaica:						
Expenditures	980	1216	1398	1358	1454	743
Receipts	641	686	933	886	956	345

Source: International Monetary Fund International Financial Statistics; Bank of Jamaica Statistical Digest. Central Bank of Barbados Annual Statistical Digest.

PARALLEL SESSIONS