Working Papers in
AGRICULTURAL ECONOMICS

May 90-7

Mozambique in the 1980's: Economic Reform and Armed Conflict

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ECONOMIC REFORM AND ARMED CONFLICT

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May 1990

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ABSTRACT

This paper discusses the evolution of the Mozambican economy in the 1980's. Particular emphasis is placed on the effects of the policy reform package implemented by the government beginning in 1987. This reform, centered around the restoration of economic incentives to the agricultural sector, is an example of a structural adjustment package pursued under extremely adverse conditions. The new strategy has yielded some favorable results, but also illustrates some of the limits of price policy in Sub Saharan Africa.

MOZAMBIQUE IN THE 1980'S:
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Introduction

Mozambique has endured extremes in both economic policies and in terms of armed conflict during the decade of the 1980's. The beginning of the decade saw the intensification of foreign efforts to disrupt the country through a proxy army, RENAMO (Mozambican National Resistance). The general armed conflict and disruption which continue to the present time, resulted in a decline in aggregate output of nearly one third by 1986 and the death or dislocation of millions of people, mostly from rural areas. (See Tables 1 and 2.)

Though it is clear that the war has had a severe effect on aggregate output in Mozambique's predominantly agricultural economy, past economic policies were seen by the government as an important factor in the decline and as an obstacle to improved performance. With the support of international lending institutions, Mozambique has embarked upon an economic rehabilitation program designed to provide incentives for smallholder agricultural production and to restore some stability to external accounts. Table 3 shows the extent to which the balance of payments had deteriorated, with current account deficits of nearly US$ 500 million in the early 1980's. Though reactivation of manufacturing also has a role in the new strategy, agriculture is the focus of reform efforts and the success achieved in this sector will determine the overall success of the policy package. The policy reforms since 1985 and the results obtained are the subject of the next section of this paper. Following this is a discussion of the lessons to be learned from Mozambique's experience and prospects for the future.

Economic Policy and Agriculture

The Agricultural Sector at Independence - At independence in 1975 approximately 80% of the population was engaged in agriculture, most of them subsistence farmers growing various staple crops. The most important of these is maize which is grown at higher elevations in the north and west and in dryland areas in the south. Cassava is also grown widely on lower elevations particularly in the north while millet and sorghum are cultivated in various areas. Rice is grown in coastal areas near the Zambezi delta.

The two main export tree crops, coconut and cashew, are grown in the eastern regions of the country, while cotton is grown mostly at medium elevations in the north. The departing Portuguese abandoned approximately 2000 estates growing mainly tea, sisal and sugar cane.[1] These crops, together with cotton and cashews grown by smallholders, constituted the main exports from the agricultural sector.

Table 4 shows the relative sizes and contributions to production of the principal types of farms in 1983. Family farms are by far the most important in terms of land area, but state farms contributed disproportionately to marketed surplus and exports. Private farms are also significant producers for the internal and export markets while cooperatives account for a very small share of land and production.

The state farm focus of the government's rural strategy in the years immediately following independence emphasized rapid mechanization and expansion of the area under cultivation. In accord with this plan, massive equipment purchases, including 1200 tractors and more than 500 combines were made in 1977, followed by additional acquisitions the following year. Overall, 90% of centrally planned agricultural investment went to the state sector prior to 1983.[2] Agronomists from socialist countries were brought in to assist in coordinating state farm production. All of these efforts succeeded in reversing the production declines of the early 1970's, though almost exclusively through area expansion rather than productivity increases.[3]

However, the emphasis on state farms encountered various problems which eventually caused the government to rethink its strategy. One serious problem was an extreme lack of managerial and administrative personnel in what were some of the largest plantations in Africa. In addition, much of the machinery purchased was used only seasonally, which together with repair problems, left it idle a large percentage of the year. Extreme seasonality of labor requirements on large monocropped units led to difficulties as well. Finally, state farms proved to be vulnerable targets for rebel attacks after 1981.

Marketing - The departure of all but 20,000 of an original 250,000 Portuguese settlers at independence left the government in charge not only of the plantation sector, but most of the rural trading network as well since the departure of many traders left large areas without any network for distribution and marketing of goods.[4] This situation reinforced the government's vision of a centrally directed development in which provision of goods to rural populations could be controlled. The need for rural marketing of consumer goods was met with a network of government stores called lojas do povo.

Though the government set up its own trading organizations it was recognized from the outset that private traders would continue to operate at the retail level. In fact, this was necessary since the system of government stores did not prove adequate in many areas. Nevertheless, traders' margins were regulated and the government retained a monopoly on wholesale trade, which was under the direction of the Ministry of Internal Commerce.

Exclusive responsibility for crop marketing was vested in government organizations. The Ministry of Internal Commerce was responsible for all agricultural trading and the supply of goods to rural areas. Cashews and cotton were each controlled by separate parastatal organizations, the Secretaria de Cajú and the Secretaria de Algodão. The Ministry of Agriculture was responsible for marketing of state farm output.

In 1981 all marketing of crops (except cashew and cotton) and distribution of goods to rural areas was consolidated in Agricom, a new government enterprise under the control of the Ministry of Internal Commerce. Agricom is obliged to buy all crops offered to it at the stated government price. Throughout the post-independence period until the reforms of the mid 1980's, the government viewed the terms of trade of agriculture vis-a-vis non-agriculture in barter terms. That is, policy and planning was based on the quantity of consumer goods required in exchange for marketed surpluses; the fact that money changed hands in the process was of secondary importance to planners.[5]

Table 5 presents data on crops marketed in the 1980's. It is clear that maize and rice are by far the most important marketed food crops. It is important to note that these figures, as with virtually all agricultural statistics in Mozambique, are of very uncertain quality. Nevertheless, the broad outlines of the data seem to conform with observable trends.

Price Policy - Prices are set centrally by the National Price Commission and the National Planning Commission. A high priority in early years was the setting of prices on a pan-territorial basis. These prices were left unchanged for long periods of time. Official prices for major crops in the post independence period are shown in Table 6 where it is clear that prices were sometimes left constant for as long as seven years.[6]

To present these prices in real terms is difficult in Mozambican conditions, given the repressed nature of inflation resulting from the highly controlled economic structure. Nevertheless, it is clear from the Consumer Price Index in the table that the relative terms of trade of rural producers declined drastically in the 1980's.[7] Table 7 shows producer prices deflated by the CPI. It is clear that by the mid-1980's real terms of trade had deteriorated significantly for most producers. Even so, in the years preceding the sharp rise in the CPI the purchasing power of the metical dropped in rural areas more as a result of extreme scarcity of goods to buy than as a result of price inflation per se. When goods are available they are often sold outside of official channels at prices well above official levels.

By the end of 1980, production in many sectors had been restored to 1975 levels but were still below levels achieved in 1970 before the struggle for independence began to disrupt economic activity. In addition, large external deficits of the years since independence resulted in a large external debt, with an associated debt service well in excess of export earnings.[8]

War and Collapse

External Shocks Throughout the first half of the 1980's, the Mozambican economy suffered from severe external shocks which resulted in a sharp decline in production. Most important was the South African backed armed resistance of RENAMO, which engaged in a campaign of economic disruption throughout the country. This, together with severe drought conditions in the southern part of the country resulted in a decline in production of almost 30% by 1986 and a decline in exports of almost 75%.

The resulting shortages together with monetization of government and state enterprise deficits resulted in repressed inflation in the face of officially fixed prices and centrally allocated distribution of goods. In addition, Mozambique suffered substantial losses in earnings from transportation services to landlocked countries to the west due to disruption of railroads by rebels and a decline in traffic to northern portions of South Africa. Also, the decline in wage remittances from miners working in South Africa further constrained foreign exchange availability.[9]

Government Policy - The government recognized in its party congress of 1983 that its own economic policies were a contributing factor in the economic collapse, and that a significant reorientation was required even though it was clear that the problem of rural insecurity and virtual state of war in many areas could be expected to persist for the foreseeable future. The attempt to promote rural development on an Eastern European model centered on large state farms and centralized allocation and pricing, was not successful. Concentration of available capital on low productivity state farms prevented a more efficient use of resources, while family sector production for the market declined in the face of fixed prices and lack of goods to buy in rural areas.

In addition, efforts to organize the rural population in "communal villages" had an added disruptive effect. By 1982 nearly 20% of the farm population lived in these villages.[10] However, most villages produced little if anything on a communal basis as family plots remained the preferred unit of production. The lack of incentive for communal production was exacerbated by government inability to provide needed inputs or services on time. Reversion to subsistence production occurred on a widespread basis as the crop marketing network failed to operate.[11]

Overall, the situation in both peasant and state farm sectors resulted in a sharp decline in marketed surplus. An important contributing factor to this problem was the extreme imbalance in foreign accounts, where imports exceeded exports by a factor of six by 1986, partly because of the need to import food. This prevented imports of consumer goods as well as the raw materials needed to manufacture those produced locally. Of particular importance was the lack of agricultural implements - hoes and plows - which hindered family sector production. Azzam & Faucher (88) present estimates of manufactured goods supplies to rural areas and find that these supplies are a significant determinant of marketed agricultural production, especially in cotton/cashew growing area.

The Economic Rehabilitation Program

One of the first steps toward liberalizing agricultural pricing and marketing was the freeing of vegetable and fruit prices from administrative controls in 1985. As shown in Table 5 this resulted in a substantial increase in production, primarily in the relatively secure "Green Zones" surrounding the principal urban markets of Maputo, Beira, and Inhambane. The success achieved with this initial effort paved the way for more radical subsequent reforms in response to continuing declines in marketed output.

The Economic Rehabilitation Program (ERP) implemented in 1987 and subsequent years succeeded in arresting the drastic decline in economic activity of the preceding years, and in restoring moderate growth in 1987 and 1988. GDP stopped declining in 1986 and GDP per capita posted a modest increase in 1987. This section discusses the goals of the ERP and the degree to which these were achieved by 1989.

The broad objectives enunciated by the government were:

a. to reverse the decline in production

b. to ensure a minimum level of consumption

c. strengthen the balance of payments

d. lay the foundation for economic growth.

More specifically, the ERP aimed to:

a. increase agricultural production for domestic consumption, export, and agro-industries,

b. increase industrial production to support agricultural marketing, for import substitution, and to stimulate the development of exports such as minerals and marine products,

c. rehabilitate physical infrastructure and industrial capacity, in particular for the support of directly productive activities,

d. increase international rail and port traffic,

e. mobilize external resources, both in kind and in the form of grants and debt relief.

In contrast to policy prior to 1984, which placed emphasis on increasing production in the state farm sector, the new strategy was directed toward increasing incentives to market production from the family farm sector which accounted for more than three quarters of the population. In particular, it was recognized that the system of fixed prices for agricultural products had gradually eroded incentives for marketing output from the smallholder sector. Also, the extreme scarcity of consumer goods in rural areas represented a significant constraint to the effectiveness of price incentives.

Overall, the ERP was designed to promote growth based on Mozambique's abundant agricultural resources through a program of liberalization of marketing and prices. Though the government relinquished direct administrative control of much of the agricultural production and marketing systems, it remains committed to centralized distribution of consumer goods and government guaranteed markets for smallholder production since the security situation prevents private reestablishment of the rural trading system which suffered virtually total collapse upon the departure of the Portuguese at independence. Both the lack of capital and the high risk relative to return of rural trading hinder private sector expansion into trading and distribution.

The first steps toward realigning prices and restoring incentives were two large devaluations of the metical: by 80% in dollar terms in early 1987, and by another 50% in June of the same year. These moves had an immediate effect both on the official foreign exchange market and on the parallel market, where rates for the US dollar exhibited a tendency to converge to the newly devalued official rate from about 1500-1800 MT/$ to about 1200 by 1988. Though quite variable, the parallel rate has remained at a level about 100-120% higher than the official rate through 1989.

Concurrently with the devaluations, producer prices for most crops were raised and steps were taken to restore fiscal balance in order to end financing of government deficits through monetary expansion. The increase in the money supply of 50% in 1987 and of 43% in 1988 represents a substantial decrease in the real supply of money after the large price increases are taken into account. Periodic devaluations since 1987 have provided additional real depreciation. From an initial rate of 40 to the US dollar at the end of 1986, the metical was devalued by more than 2000% to 805 to the dollar by fall of 1989.

In addition to raising official prices for agricultural products, the number of commodities with fixed prices was reduced from 44 at year-end 1986 to 28 by mid 1988 and to less than 20 by the middle of 1989. At the same time, the number of goods subject to distribution by central allocations was reduced from 43 at the end of 1986 to 30 by the middle of 1988, and to 11 by the middle of 1989. Continued distribution of some goods at fixed prices will continue in order to ensure minimal levels of supply to all areas in the absence of an efficiently operating trading system. In particular, a rationing system was put into effect in the two largest cities of Beira and Maputo in order to counteract the effects of the drastic price increases on the large numbers of refugees and poor in those areas.

These efforts have been supported by large amounts of food aid from the U.S. and European countries. Indeed, this aid has been essential in preventing mass starvation, as can be seen from the figures in Table 8, which show that 78% of marketed grain supplies were imported in 1988, much of this in the form of food aid. These figures are even more striking when it is realized that they do not include imports provided under the emergency program conducted under the auspices of the United Nations, since these imports are not included in customs statistics. Overall, grain imports amounted to more than 85-90% of total marketed supplies over the period of the ERP.

In addition to large quantities of food aid, the support and assistance of the World Bank and the IMF has been an important factor in the design and implementation of the program. The approval of these two organizations has been a prerequisite for debt relief. The need for this relief is obvious from Table 3 where the ratio of exports to debt service (pre-debt relief) can be seen to have been as low as 16% during the 1980's.

In general, the international organizations have reinforced the government's overall strategy of restoring price incentives and dismantling administrative controls; in this case the need for liberalization was clearly seen by the government. The ruling Frelimo party congress of 1983 recognized the need for change. Nevertheless, it is clear that the international organizations played a significant role in the formulation of the program. Nevertheless, the government's determination to pursue its strategy has, if anything, meant that it has outpaced its own implementation capacity with the speed of its reforms.

This discussion touches upon what is perhaps the most striking aspect of the policy reforms as supported by the international organizations - their heavy emphasis on price incentives to reactivate production. Removal of administrative controls is seen as a necessary condition for resources to flow where newly restored price incentives direct. Physical barriers to production and resource flows have received a lesser emphasis in both government plans and in the loan programs of the World Bank and the IMF.

There are several reasons for the heavy emphasis on price incentives. First was the fact that prices had been fixed at low levels with few major changes since 1975. Neither absolute not relative prices bore any relation to market conditions.

A second major reason for emphasis on prices was the fact that they could be changed relatively quickly. The war conditions affecting large parts of the countryside make investment in physical infrastructure or capital extremely difficult to achieve and if achieved, difficult to maintain. Progress remains slow in rural areas. Of particular importance are road building and the reconstruction and expansion of warehouses and rural stores to serve agricultural producers. Many of the rural stores constructed by the government in the late 1970's as well as those stores built in the early 1980's were destroyed by rebel forces along with schools and rural health posts. This highlights the fact that much of the necessary physical infrastructure is simply missing.

A major constraint to physical investments on the part of the government is the austerity program implemented to bring government finances into balance. As noted above, financing of deficits through money creation had led to a situation of repressed inflation which undermined attempts to restore price incentives. The need to bring expenditures into line with revenues means that the government has been severely constrained in the investment programs in can initiate. Given the large percentage of expenditures financed by foreign donors, spending priorities have inevitably been influenced by donor priorities.

Lack of donor support for physical investments to support the government's rural strategy of development has been cited as an ongoing problem in the foreign aid program.[12] The government has struggled to ensure that a minimum of 40% of foreign aid is directed toward rural areas in the face of donor preference for urban or large showcase projects such as hydroelectric facilities.

In summary, both donor emphases and war conditions have contributed to a heavy emphasis on price reform as the principal vehicle for government policy reform. The extreme nature of the price reforms with increases of between 500% and 1000% for most agricultural products and a devaluation of the exchange rate of more than 2000% in dollar terms over the three year period 1986-1989, together with the lack of complementary physical investments make Mozambique an interesting case study in the possibilities for and limits to price reform in structural adjustment programs.

Results - Successes and Failures

The effort to restore price incentives for agricultural production has resulted in substantially higher prices both nominally and in real terms. The change in the trend of producer prices is readily evident in Tables 6 and 7 where it can be seen that real and nominal producer prices were revised sharply upwards starting in 1987. What is striking is not only the sharp upward revisions experienced during the past three years, but the realignment of incentives away from food crops and toward export crops.

The real prices of principal agricultural export crops suffered both in absolute terms prior to 1987 and also relative to important food crops. As can be seen in the table, real prices for the three export crops shown had declined by between 34 and 67% between 1980 and 1986, while the prices for all important grain crops had either risen somewhat or declined by a lesser amount.

These adverse incentives contributed to the drastic fall in marketed production shown in Table 5. For cashews, widely grown by smallholders in coastal areas, incentives were so poor both in terms of prices and because few consumer goods were available for purchase that harvest was neglected or left for children to harvest while adults worked at growing food crops for subsistence consumption.

Clearly, the sharp rise in exports of smallholder crops, cashew and cotton, are in large part due to restoration of price and material incentives. The failure of state farm production of tea and sisal on former plantations is a testimony to the effectiveness of guerrilla raids against such concentrated targets as well as the inefficiency of these production units. Current policy promotes conversion of many of these large units into small holdings, allowing what in many areas are the best lands to be farmed by peasants willing to return to formerly devastated areas.

The increases in marketed production of maize in 1988 are quite impressive, though levels achieved are still well below those of earlier years. Further increases will be dependent on coordination with the massive amounts of food aid distributed at low prices. Reports on marketing of maize in the 1989 season are favorable but there is evidence that Agricom has had difficulty selling stocks it is obligated to buy from farmers due to the ready availability of cheaper supplies in the form of food aid. The resulting cash squeeze in Agricom necessitates the use of letters of credit in lieu of cash when paying for maize. This policy, which is unavoidable given the constraints on funding of parastatal deficits from the Treasury, will inevitably have a negative impact on future marketed surpluses. The intention to have Agricom serve as a buyer of last resort must be credible, and ultimately that means that it must pay cash.[13]

Overall however, it is clear that the restoration of price and material incentives for agricultural production has been effective in terms of supply response. The elasticity of marketed supply with respect to the real price (deflated by the urban CPI) cannot be determined with any certainty given the quality of the data from Mozambique and the short time period, but based on Tables 5 and 7 it is clear that the response of maize and rice marketings to the policy package implemented in 1987 has been positive. Those for export crops have been less so, a result that is somewhat surprising given the clear tilt in incentives toward these crops in terms of real prices.

Table 9 presents data indicating the response of marketed surpluses to price incentives over the 1986-1988 period. It is clear even from these crudely calculated elasticities that the short run response has been good. One striking aspect of these figures is the fact that food crops all show a price response that is greater than that of export crops. This is not surprising in the case of cashews, a perennial crop, but it is also true in the case of cotton, an annual crop.

These estimates compare favorably with what has been seen in other African countries.[14] The short run supply response has been quite high for individual crops while the aggregate supply response has been less impressive. This is shown by the 6% growth rate in sectoral output over the 1986-88 period, which is evidence of the difficulty in achieving a large aggregate response in the short run even when relative prices are altered dramatically and land availability is not a constraint.

Other sectors of the economy have recovered somewhat in that production has stopped falling and in some cases has increased; nevertheless, as can be seen from Table 1, the value of output overall has increased at a relatively slow pace. Overall, Gross Social Product, the aggregate output measure used by the government, as well as estimates of GDP, have grown at a rate of about 4 to 5% since the implementation of the ERP at the end of 1986.

Manufacturing output remains dependent on imports of intermediate inputs and raw materials, which are subject to sporadic shortages due to foreign exchange constraints. Manufacturing, like grain production, has been subject to some adverse influences from foreign aid. The Ministry of Commerce has reported that sales of hoes and plows, considered priority items, have suffered due to large imports of these items as foreign donors desiring to support the agricultural sector have unfortunately tied donations to procurement at home rather than in Mozambique.

Lessons from Mozambican Experience in the 1980's

Mozambique's experience with structural adjustment over the 1986-1989 period is an interesting case study in the efficacy and limits of price policy because of the extreme difficulty in pursuing complementary policies of investment in physical infrastructure and inputs. In addition, the overall context of war, dislocation, and active attempts to sabotage economic activity makes the country the most adverse environment imaginable for economic reform or, in fact, economic activity of any description.

That a program of structural adjustment can have any positive results at all under such circumstances is rather remarkable. The implementation of the ERP resulted in a reversal of the falling economic activity in all sectors that had characterized the previous five years, but so far has generated only moderate rates of growth, in the area of 4% to 5% in the aggregate. Normally, much higher rates of growth would be expected in a country in which production remains far short of installed capacity. Two reasons underlie this somewhat disappointing performance.

First, obsolete and/or destroyed capital stock means that the installed capacity is not in fact available to be used. This is true both because of the war and because much of the vintage equipment left at independence is in need of replacement. Second, even where capacity is available, foreign exchange for raw materials is not. Bureaucratic allocation of foreign exchange together with donor tying of counterpart funds both contribute to this problem which, at root, is a result of export levels less than one fifth of imports.

Agricultural supply response is constrained far more by the massive dislocation of agricultural population and the war conditions affecting producing areas than by lack of installed capacity. However, the most important economic constraint to increased production aside from war is the inability of peasants to convert marketed surpluses into consumption goods or agricultural inputs. This is a result both of the breakdown of the rural distribution system and more recently of Agricom's problems with timely payment.

Given the extremely low incomes of much of the population, the effects of the massive price increases on consumption and nutrition has been severe for those not covered by the ration system in Maputo and Beira, or free food aid distributions. Though marketed food is generally available in the cities, much of the urban population, especially refugees, lack sufficient income. Even for those with access to the rationing system, these official distributions cover only half of estimated minimum food requirements.[15]

The problem of malnutrition in the countryside is generally due to an absolute lack of supplies in many areas, rather than of insufficient cash income. This observation does not imply that these people are not poor - rather, it means that aid in the form of cash income supports will not alleviate the hunger problem. Given the virtual collapse of markets both for food and for cash crops, schemes which must rely on functioning markets in order to be successful will do more to raise prices than to alleviate hunger.

The most important lesson from the Mozambican case is that progress will take time - more time than is commonly allowed for in planning reform programs. Even without Mozambique's problems of incessant and widespread warfare, the building of physical and institutional infrastructure will constrain the pace of any reform program. As it is, it is clear that a resolution to the armed conflict is a prerequisite for substantial progress to be made.

Second is that price reforms "work" in the sense that increases can help promote marketed surpluses, but that there are limits to the response that can be expected on the basis of price incentives alone. Once physical or institutional constraints become binding, additional price increases will do more to push the price of available supplies out of reach of the poorest than it will to promote additional production in the short to medium run.

This is not to say that price incentives should not be pursued - the evidence presented in this paper indicates otherwise. Rather it means that there is reason to believe that reforms should be pursued at a pace that takes into account the various complementary programs and policies that must be in place to maximize the impact of the reforms and minimizes adverse impacts on vulnerable groups. Food aid is a useful, and in Mozambican conditions indispensable, component of such complementary actions, but can conflict with the need to provide incentives for the reactivation of domestic production.

Third is that a desire for market based solutions should not be pursued in situations where markets are nonexistent or poorly functioning. In particular, income supports for malnutrition cannot address the base problem of nonfunctional food markets. This is particularly important to bear in mind when assessing projects with the attributes of a public good. Market based solutions are unlikely to be effective in areas involving infrastructure such as roads or water systems.

Finally, the provision of foreign aid can at times conflict with an emphasis on rural development and smallholder agriculture, even apart from donor tendencies to fund large projects. The mere fact of large centrally administered foreign aid flows together with the large number of associated foreign "experts" can result in an unintended urban bias since most of these advisors stay in the capital where they are willing to pay high prices for manufactures and urban amenities.[16]

Overall, it is clear that the Mozambican case demonstrates that reform packages based on price incentives and exchange rate realignments can be effective, even in extremely adverse conditions. However, it is equally clear that they cannot by themselves create the necessary conditions for growth over the medium to long run.

Notes

1. See Isaacman and Isaacman (83) p. 149.

2. See Tarp (84).

3. See Barker (85) and Isaacman & Isaacman (83) p. 149 for discussions of state farm organization and production.

4. Isaacman and Isaacman p.145.

5. See Mackintosh (87) and (88) for a description of agricultural marketing during this period.

6. The accuracy of Mozambican price data and information on marketed output is uncertain. Various sources conflict, especially for the years immediately after independence. The data presented here are the most comprehensive and consistent series available.

7. This index applies to the capital Maputo.

8. See Munslow (83).

9. See Lucas (88).

10. See Isaacman and Isaacman (83) p. 155.

11. See Harris (78) and Roesch (84) for a discussion of the establishment of communal villages.

12. Minister of Finance, interview August 1989.

13. Noticias August 21, 1989 p. 3.

14. For surveys of aggregate supply elasticities in Africa see Bond (83) and World Bank (86). For an earlier survey including estimates of crop specific response in various countries, see Askari and Cummings (77) and for a more recent survey, Rao (89).

15. Interview, Ministry of Health, August 1989.

16. As of Fall 1989, there were approximately 10,000 foreign "cooperantes" in Maputo, a large number compared to the number of counterparts in the government with whom they are working.

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Table 1. Growth of Global Social Product (10^9 meticais at 1985 prices).*

	1981	1982	1983	1984	1985	1986	1987	1988
Agriculture	89.6	88.8	69.1	70.2	70.8	70.4	75.2	78.7
Industry and Commerce	43.6	37.6	30.1	23.8	19.4	18.6	19.7	20.7
Construction	6.8	7.1	7.2	6.5	6.2	9.0	7.5	7.5
Transport and Communications	23.0	21.1	16.8	13.0	11.5	12.2	11.7	12.1
Commerce and Other	25.2	25.2	23.8	25.5	23.8	23.8	24.4	25.1
TOTAL	188.2	179.8	147.0	139.0	131.6	133.7	138.4	144.1

Source: CNP

* Gross Social Product is the income aggregate used by Mozambican authorities. Though based on physical outputs and not on conventional income accounting methods, the rate and composition of growth of GSP is close to that estimated for GDP.

Table 2. Mozambique - 1988 Population (millions)[1].

Urban	2.6
Rural	12.6
Dislocated[2]	1.7
Affected[3]	2.8
Other	8.0
Refugees Abroad	1.2
Employed Abroad	0.1
TOTAL	16.5

Source: Ministry of Commerce.

Notes:

1. Totals may not add due to rounding.
2. Internal refugees.
3. Approximately 40% self-sufficient in food production.

Table 3. Mozambique: Balance of Payments (10^6 U.S.$).

	1981	1982	1983	1984	1985	1986	1987	1988
Trade Balance	-520.3	-606.8	-504.8	-444.0	-347.1	-463.6	-528.0	-665.3
Exports (fob)	280.8	229.2	131.6	95.7	76.6	79.1	97.0	98.3
Imports (cif)	801.1	835.9	636.4	539.7	423.7	542.7	625.0	763.6
Service Balance	55.8	30.9	-0.1	-32.2	-93.0	-158.7	-148.0	-124.2
Current Account	-464.5	-575.9	-504.9	-476.2	-440.1	-622.3	-676.0	-789.5
Debt Amortization (Scheduled)	309.2	329.3	296.5	337.8	278.5	335.5	384.1	363.1
Debt Exports/Service	81.4	58.8	34.2	22.9	19.3	16.1	18.2	32.0
Exports/Imports	35.1	27.4	20.7	17.7	18.1	14.6	15.5	12.9
Exchange Rate (meticais/U.S.$)	35.35	37.77	40.18	42.44	43.18	40.42	400.00*	620.00*

Source: Banco de Mocambique

* Yearend; Rate = 805 as of October 1989.

Table 4. Mozambique: Land Use in 1983.

	Area 10^3 Hectares	Percent of Marketed Production	Percent of Agricultural Exports
Family	1929.7	51.2	19.4
State	118.6	43.4	65.6
Cooperatives	7.9	1.5	0.1
Private	41.2	3.8	14.9
Total	2097.5	100.0	100.0

Source: Ministry of Agriculture; Azzam and Faucher, (1988).

Table 5. Mozambique - Marketed Agricultural Production (10^3 metric tons).

	1980	1981	1982	1983	1984	1985	1986	1987	1988
<u>Food Crops</u>									
Maize	65.0	78.3	89.2	55.8	82.6	58.6	21.5	27.3	48.2
Rice	43.6	28.9	41.5	17.3	19.1	17.9	19.0	31.5	30.7
Sorghum	0.6	1.0	1.6	1.3	2.1	1.8	0.6	0.5	1.0
Beans	9.6	14.9	6.9	4.8	3.5	4.6	4.0	9.2	8.4
Cassava	8.8	10.9	9.5	8.5	6.9	6.4	6.0	7.3	6.5
Groundnuts	6.3	5.0	1.5	0.7	2.0	2.0	0.9	2.1	1.8
Vegetables	6.4	6.8	5.6	7.9	20.0	33.9	23.9	20.7	33.1
<u>Export Crops</u>									
Cashew	87.6	90.1	57.0	18.1	25.3	30.4	40.1	37.5	50.0
Copra	37.1	54.4	36.6	30.7	24.8	24.0	28.6	25.5	24.5
Cottonseed	64.9	73.7	60.7	24.7	19.7	5.7	10.8	27.3	19.2
Sisal	298.0	233.8	139.9	122.4	136.6	78.8	22.4	4.4	n.a.
Tea	90.2	99.2	109.7	51.1	59.8	25.0	6.4	1.8	n.a.
<u>Other Crops</u>									
Sunflower	11.8	12.1	10.8	7.3	5.0	5.7	1.0	1.1	1.1
Sesame	0.0	0.5	0.9	0.3	0.3	0.3	0.1	0.3	n.a.
Mafura	0.0	3.8	6.4	5.7	5.3	2.6	2.2	9.3	n.a.
Tobacco	1.4	0.8	0.9	0.7	0.8	0.3	0.4	0.1	0.1
Tomato	6.4	2.1	6.0	3.4	16.6	13.4	23.6	8.0	17.9

Source: Informacão Estatistica, CNP: 1980-87.
Ministry of Commerce: 1988.

Table 6. Mozambique Producer Prices (Meticais/kg).

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Food Crops														
Maize	2.50	3.20	3.20	3.20	4.00	4.00	6.00	6.00	6.00	13.00	13.00	40.00	65.00	110.00
Rice	5.50	6.20	6.20	6.20	6.20	6.20	10.00	10.00	10.00	16.00	16.00	48.00	75.00	95.00
Wheat	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	11.50	11.50	50.00	80.00	------
Sorghum	2.30	3.00	3.00	3.00	3.00	4.00	5.00	5.00	5.00	12.00	12.00	35.00	50.00	95.00
Beans[1]	6.50	10.00	10.00	11.00	15.00	15.00	15.00	15.00	15.00	23.50	23.50	100.00	150.00	230.00
Cassava	n.a.	n.a.	n.a.	3.50	2.00	3.00	4.50	4.50	4.50	free	free	free	free	free
Groundnuts	8.50	10.00	10.00	10.00	10.00	13.50	15.00	15.00	15.00	20.00	20.00	100.00	150.00	255.00
Sugar[2]	n.a.	n.a.	n.a.	n.a.	12.72	12.72	12.72	12.72	12.72	12.72	12.72	18.30	148.50	178.00
Export Crops														
Cashew	3.50	3.50	3.50	3.50	5.00	5.00	5.00	5.00	10.00	10.00	10.00	60.00	105.00	165.00
Copra	3.20	4.70	4.80	4.85	4.85	5.00	5.00	5.00	5.50	5.50	5.50	30.00	60.00	100.00
Cottonseed	8.00	8.00	8.00	8.00	11.00	11.00	11.00	12.50	12.50	16.00	16.00	65.00	104.00	175.00
Other Crops														
Sunflower	7.00	8.50	8.50	8.50	8.50	8.50	10.50	10.50	10.50	15.00	15.00	50.00	75.00	130.00
Mafura	2.20	2.20	3.00	3.00	3.00	3.00	5.00	5.00	5.00	8.00	8.00	30.00	40.00	70.00
Tobacco[3]	57.00	57.00	57.00	57.00	57.00	57.00	63.00	63.00	63.00	63.00	320.00	320.00	512.00	830.00
CPI (1975=100)	*101*	*103*	*104*	*106*	*107*	*109*	*129*	165	216	278	325	531	796	1035

Source: AGRICOM, CNP, and Estatistica.

Notes:
1. Type 1.
2. Yellow.
3. 1st grade.

Table 7. Mozambique: Real Producer Price Indexes (1980=100).

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
<u>Food Crops</u>														
Maize	66	83	82	81	100	98	124	97	74	125	107	202	218	284
Rice	94	104	103	101	100	98	134	105	80	99	85	156	163	158
Wheat	106	104	103	101	100	98	83	65	50	101	86	229	244	
Sorghum	81	104	103	101	100	131	138	108	83	154	132	235	224	327
Beans	46	69	69	74	100	98	83	65	50	60	52	134	134	159
Cassava				177	100	147	187	146	111					
Groundnuts	90	104	103	101	100	133	124	97	74	77	66	202	202	264
Sugar					100	98	83	65	50	38	33	29	157	145
<u>Export Crops</u>														
Cashew	74	73	72	71	100	98	83	65	99	77	66	242	282	341
Copra	70	101	102	101	100	101	86	67	56	44	37	125	166	213
Cottonseed	77	76	75	73	100	98	83	74	56	56	48	119	127	164
<u>Other Crops</u>														
Sunflower	87	104	103	101	100	98	102	80	61	68	58	119	119	158
Mafura	78	76	103	101	100	98	138	108	83	103	88	202	179	241
Tobacco	106	104	103	101	100	98	92	72	55	43	185	113	121	151

Source: Table 6.

Table 8. Mozambique Grain Supply, 1988.

	1000 tons	Percent
Marketing of Domestic Maize	60	13
Marketing of Domestic Rice	41	9
Imports of Food Grains	360	78
Total Market Supply	461	100
Cost of Food Imports	U.S.$98.9 million	

Source: CNP

Table 9. Response of Agricultural Production to Real Price Increases, 1986-88.*

Food Crops	
Maize	1.08
Rice	1.17
Sorghum	0.96
Beans	0.80
Groundnuts	0.66
Export Crops	
Cashew	0.18
Copra	-0.12
Cotton	0.59

* $\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$ where P and Q are taken as average of 1986 and 1988 figures.

Source: Tables 5 and 7.

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