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The external crisis, adjustment policies and agricultural development in Brasil

*Fernando Homem de Melo**

At the end of the 1970s the development style based on accelerated industrial growth and on modernization and expansion of the exports segment of agriculture was looking very vulnerable. This was borne out by the sharply expansionary economic policy adopted in 1979 which generated faster inflation against a background of an increased trade deficit and a very unfavourable external situation. A first, voluntary, adjustment programme designed to control aggregate demand proved unworkable and the worsening of the situation led at the end of 1982 to the opening of talks with the International Monetary Fund. The year 1983 proved the worse in terms of economic activity, inflation and declines in the external accounts. A programme was agreed with the IMF in that year which specified devaluation, elimination of subsidized export loans, reduction of imports taxes, and wage cuts.

The existing trends in agriculture did not undergo any great changes. Export production rose slightly and irregularly, and there was a large drop in the output of basic foods, especially cassava and potatoes. A new and important development was the spectacular growth of sugar cane production as a result of the incentives provided in a special government programme. At another level, the austerity policies entailed a sharp reduction in lending to the sector, and the use of fertilizers and insecticides declined accordingly, as did the production of tractors.

Economic growth, domestic demand and food production recovered in 1984 and did even better in 1985. Nevertheless, food production remained below the 1980 levels in per capita terms. Thus one of the main challenges facing Brazil's agriculture is to increase its output of low-cost foodstuffs and reduce the gap between the exports segment and the production of basic foods for home consumption—which will necessarily involve the introduction of new technologies.

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I

The economy and agriculture in the 1970s

1. Overall performance

The Brazilian economy experienced sustained growth between the end of the Second World War and the end of the 1970s. The total gross domestic product (GDP) grew at an average rate of 6.8% a year between 1950 and 1980. The industry sector contributed 7.9% of this growth and agriculture 4.7%. These growth rates meant that the GDP increased in turn by an annual average of 3.9%.

These results were due among other factors to the strategy pursued by Brazil, which was based first, for almost two decades (the 1950s and 1960s), on the substitution of imports of industrial goods, and then, from the end of the 1960s, on the promotion of exports.

Two stages can be identified in this latter period: the so-called "economic miracle" (1968-1974) when the gross domestic product grew at between 8.3% and 14% a year; and the post-miracle stage (1975-1980) which saw a considerable drop in the growth rate, with levels of 4.8% to 9.7%, a decline due to the loss of vigour in the industry sector. The figures for São Paulo illustrate the decline in the growth rates of industrial employment—from 10% a year between 1970 and 1973, when the "miracle" was at its peak, to a final level of 2.5% a year in 1977-1980.

Furthermore, the total population grew at a rate of 2.5% a year between 1970 and 1980, but the urban growth was 4.5%. The working population, which started at 31.7% of the total, had increased to 36.8% by 1980. The changes in the sectoral distribution of the population were due to the dynamism of industrial activities and to the modernization of a large segment of agriculture.

The data given below on the distribution of the economically active population illustrate this situation for 1970-1980.

	<i>Percentages</i>	
	<i>1970</i>	<i>1980</i>
Agriculture	44.3	29.9
Manufacturing	11.0	15.7
Construction	5.8	7.2
Trade	7.6	9.2
Transport/communications	4.0	4.1
Public administration	3.9	4.1
Other activities	23.5	29.5

The sectoral contributions to the GDP evolved as follows:

	<i>1970</i>	<i>1980</i>
Agriculture	10.2	13.0
Industry	35.8	34.0
Services	54.0	53.0

As can be seen, even though industry is the largest sector, agriculture developed favourably.

During the stage of higher growth (1968-1974) inflation fell from 24.8% to 14.8%. It must be pointed out, however, that in the period immediately before 1968 the country had been subjected to a stringent programme of economic adjustment. Idle industrial capacity began to run out in 1974-1978, and the economy also suffered the impact of the first oil price rises. As a result, inflation accelerated between these two years from 27.8% to 42.7%. It reached 53.9% in 1979 and in 1980 the process became hard to control as inflation hit 100.2%. But the worst was yet to come: the second oil price shock, an economy very close to full employment, major crop losses and a maximum devaluation of the cruzeiro boosted the inflation rate to 109.9% in 1981 and then to over 200% a year in 1982.

The issue of the foreign debt played a very important role in the genesis of the crisis which occurred at the beginning of the 1980s. The problem had in fact begun before the first oil price increase and was connected with Brazil's strategy of borrowing in the international financial market to meet the requirements of growth while at the same time maintaining a high level of reserves. The way of guaranteeing an adequate flow of resources in the following years, according to this strategy, was to increase exports and the level of reserves itself.

In 1973 Brazil had its external account in balance and its total foreign debt amounted to US\$12 000 million. This debt had risen to US\$43 510 million by 1978, largely as a result of the increases in the price of oil. The economy then became steadily more vulnerable to increases in the oil price and in the interest rates which it had to pay abroad.

The year 1979 marked the onset of a very unfavourable period for the country. The second oil shock occurred, nominal and real interest rates rose sharply in the international market, and the terms of trade showed a sharp decline. The United States prime rate moved from 11.75% in December 1978 to 15.25% a year later and finally to 21.5% in December 1980. The price of the barrel of oil rose from 12 to 34 dollars, and the terms of trade deteriorated by 38% between 1978 and 1982 as a result of the fall in world trade.

The impact of these changes was reflected in increases in foreign payments of interests from US\$2 700 million in 1978 to US\$9 160 million in 1981 and to US\$11 360 million in 1982. At the end of 1982 the foreign debt stood at around US\$70 000 million.

2. Developments in agriculture

Between the 1960s and the 1970s agriculture underwent profound changes in its production structure owing to the different rates of growth of export crops and those destined to satisfy the home demand for basic foods.

Up to the 1960s agriculture had maintained a reasonable balance in its output of these two items. The situation began to change rapidly at the end of the decade when priority was given to a growth model based primarily on export crops. In these circumstances preference was given to policies that promoted the modernization of agriculture, a process which by virtue of its well known characteristics was concentrated on export crops to the detriment of crops for home consumption.

Important events in this process were the rapid growth of soybean production in the southern region and, at the other extreme, the stagnation of rice and maize production, together with the simultaneous decline in cassava and beans. The highest growth rates of per

capita output were recorded by soybeans, orange juice, sugar cane, tobacco and cocoa.

The factors which determined the reallocation of resources in favour of export crops were: the exchange-rate policy which came into force in 1968, based on frequent minidevaluations which produced favourable shifts in the real prices of these items; a period of very favourable international prices which lasted until the mid-1970s; and the model of technological modernization which spread very rapidly among export crops, particularly soybeans.

As already pointed out, the most vigorous expansion was in soybeans, a crop which increased from an average of 748 000 ha in 1967-1970 to 8 548 000 ha in 1979-1980. Growth of this kind caused intense competition in land use. The high profitability of this activity led to the displacement of traditional crops, especially basic food crops, in the south of the country.

This high profitability was due to international prices, the heavy demand, and the modern technology used in soybean cultivation which led to increased productivity and lower marginal costs.

Study of the country's experience shows that the only way of re-establishing balance between export crops and those produced to meet the home demand would be to raise the prices of foodstuffs to levels that would make them equally profitable.

On the other hand, the radical changes which took place in the production structure in 1967-1979 are an example of the flexibility traditionally shown by the big owners in reallocating their resources between these two types of crop in accordance with economic conditions.

As a result of this process the sector's per capita gross domestic product rose 6.2%. Owing to the changes, the relative share of export production in the sector's product increased from 10.7% in 1960 to 13.3% in 1970, 20.2% in 1975, and 20.2% in 1980.

A major change also occurred in the composition of exports. Exports were based mainly on coffee, sugar, cotton, tobacco and cocoa, and they showed greater diversification owing to the incorporation of soybeans and orange juice and, later, chicken meat and beef.

As a counterpart of these developments it is important to remember the unsatisfactory bal-

ance in the per capita food supply. Calories increased by 0.83% as an annual average between 1967 and 1979. This level was due to increases of 2.54% in the sugar supply, 4.98% in wheat, and 1.23% in livestock production, but it concealed a decline of 1.34% a year in the contribution of basic foods.

If the five main food crops are taken into account (rice, maize, cassava, beans and potatoes), the calorie ration falls by 2.06% a year and proteins by 1.49%.

Accordingly, the contribution of small owners to total production fell; their share was 52% in 1970 and by 1980 it had fallen to 43%. Similarly, the number of small producers, which had increased from 1940 to 1970, declined in the decade of the 1970s, with a consequent increase in the average farm size from 60 to 72 ha.

3. Problems at the end of the decade

Brazil's economic and social situation was not an easy one at the end of the 1970s. The country's main problems had to do with the development style it had adopted. Growth based on rapid industrial development by means of imports substitution and the generation of new exports and on agricultural growth centered on the expansion of the modern segment had become extremely vulnerable and at the same time had left serious problems unsolved.

Some indicators illustrate clearly the situation at the end of the 1970s:

Foreign debt (<i>millions of dollars</i>):	1973	12 600
	1978	43 510
	1982	69 650
December prime rate:	1978	11.75%
	1979	15.25%
	1980	21.50%
Terms of trade: deterioration of 38% between 1978 and 1982.		
Inflation increased by:	1979	53.9%
	1980	100.2%
	1981	109.9%
Trade balance: deficit of almost US\$3 000 million in 1979 and 1980.		
Reserves (<i>millions of dollars</i>) fell by:	1978	11 895
	1979	9 689
	1980	6 192

Balance of payments: the deficit increased.

Poverty: 31.8% of rural families in 1974-1975
28.2% of urban families

Regional imbalances: North-East 45.1% of rural families
were poor
South 14.7% idem
Sao Paulo 22.7% idem.

The new Government which took power in 1979 adopted an extremely expansionist policy. The result was the immediate launching of an inflationary spiral which reached 100% in 1980. To this was added the increase in the trade deficit and an extremely unfavourable external situation.

II

The adjustment programmes and policies

In view of the critical situation described above, the authorities introduced at the end of 1980 a "voluntary" adjustment programme with the goal of restoring internal and external balance. The measures adopted, in particular the monetary cutback supported by a policy of "soft" devaluation, had the main objective of controlling aggregate demand. Briefly, these measures were the following: i) reduction of the stock of money by 3% between April 1979 and April 1980 and by 29% between May 1979 and May 1980; ii) cutback in lending to the private sector; iii) devaluations. The policy was not clear in this respect, but it was designed to stimulate exports and make imports dearer, restricting oil derivatives most of all. The maxidevaluation of 30% in December 1979 was followed by a further one of 30% in February 1983; and iv) specific steps were taken to limit imports and stimulate exports.

The results of the implementation of the adjustment programme were briefly as follows: i) the gross domestic product fell 1.6% in 1981, rose 0.9% in 1982 and fell 3.2% in 1983, with a consequent drop in per capita GDP; ii) inflation slowed down from 121.2% to 91.2% between March 1981 and May 1982; iii) exports increased between 1980 and 1981 from US\$20 132 million to US\$23 680 million, and imports fell slightly from US\$22 955 million to US\$22 086 million, as a result of which the balance of payments improved. The situation worsened again at the end of 1982 and in 1983 exports fell by 14.7%;

iv) the current account deficit of the balance of payments moved from US\$12 800 million in 1980 to US\$11 700 million in 1981 and to US\$16 300 million in 1982; and v) the interest on the debt increased from US\$10 300 million in 1981 to US\$12 600 million in 1982.

The deterioration of the economic situation showed that the voluntary adjustment which the Government was trying to make was unworkable. From the second half of 1982 the need was realized for a closer link between exchange-rate policy and the external imbalances, owing to which, despite the devaluations made, the cruzeiro had been revalued as a result of the severe inflation and the fluctuations in the value of the dollar. In November of that same year a decision was taken to open negotiations with the International Monetary Fund at a time when the debt burden was impeding the recovery. 1983 was the worst year for economic activity: GDP fell 3.2% and inflation rose to around 200%. In view of this situation, an attempt was made to implement a more effective exchange-rate policy which would restore control over the external accounts.

The programme agreed with the IMF envisaged the following measures: i) monthly devaluation of 1% above the domestic inflation rate, which was later followed by a maxidevaluation of 23% plus monthly adjustments; ii) elimination of export subsidies and credits; and iii) reduction of wages (by decree in July 1983).

The results obtained can be summarized as follows:

a) *Overall*

- i) Improvement of the trade balance: US\$1 594 million in 1981, US\$807 million in 1982, and US\$6 472 million in 1983. This last figure was due to the reduction of imports by 20.5% and the increase of exports by 8.3%. In 1984 there was a balance of US\$13 068 million owing to the recovery of the United States economy.
- ii) The current account of the balance of payments moved in two years from a deficit of US\$16 310 million to a surplus of US\$44 800 million.
- iii) The ratio of exchange rate to wages rose from 60% in 1982 to 75% in 1983.
- iv) The industrial GDP (São Paulo) fell 15.8% between 1980 and 1983.
- v) Employment (São Paulo) fell by 22.1% between 1980 and 1984.
- vi) Wages (São Paulo) fell by 35.8% in 1980-1984 despite a strong rise in 1981, the first year of the recession.

b) *Agriculture and food*

- i) The production of basic foods fell in 1977-

1984. In 1978, 1979 and 1983 this performance was due to the weather. The per capita production of maize, rice, cassava, beans and potatoes declined by 1.94% a year between 1977 and 1984, and there has been no return to the 1977 levels.

- ii) The apparent supply, i.e., production plus imports and variation of stocks minus exports, fell by 1.73% for these same items. When meat and wheat are included, the fall was 1.66%.
- iii) The producer prices of the basic crops increased only in 1980, by 13.7% over 1977 in real terms.
- iv) The consumer prices of basic foods rose in 1983 and 1984 as a result of harvest shortfalls locally and in the United States.
- v) The international prices of tradeable goods also fell, although they subsequently made a partial recovery.
- vi) Rural wages declined in real terms, i.e., when deflated by the GPI or by Sao Paulo FPI. The best years for wage-earners were 1981 and 1982 owing to the lower food prices. Oddly, the food purchasing power of waged workers improved in the middle of the recession. This situation was reversed in 1983 and 1984 by the contraction of the food supply and the rise in international prices.

III

Effects of the adjustment policy on agriculture

As already indicated, at the end of the 1970s there was a clear division in Brazil's agriculture between a modern sector linked to the external market and a sector producing food for the home market. Changes in the international economic variables affected this situation, especially in the first half of 1985. Agriculture's performance is therefore analysed by type of crop for the period 1977-1985.

Five groups are considered in the analysis: crops for the home market; export crops, with two subgroups; sugar cane; and meat. The available information gives the following picture:

- i) Unusual growth (7.84% a year) in sugar cane production as a result of the incentives provided in the PROALCOHOL programme.
- ii) Moderate (2.5%) and irregular growth in exportable crops, with an increase in 1980, declines in the next two years, and a further increase between 1983 and 1985 owing to the recovery (both of output and of the area sown) of soybeans.
- iii) Large increase (9.28%) in the production of chickens for domestic consumption and for export.
- iv) Large drop in the production of basic foods,

which had already begun in the 1970s. The largest declines were in cassava and potatoes.

There was a small cumulative annual increase of 0.91% in the area cultivated, considerably lower than the historical rate of 3.46% a year recorded in 1940-1980. It is important to point out that sugar cane was virtually the only reason for the expansion of the area by 2 100 000 ha, of which about 63% was in São Paulo. It must be remembered that this crop was the object of one of the biggest programmes ever carried out in Brazil and it enjoyed major subsidies both in its cultivation and in its processing. The area growing basic food crops increased only in 1982; in the other years it was below the 1977 level. In contrast, in 1980 export crops increased by 14.1% over 1977, but they then declined in the following years.

The yields of export crops improved, especially in the southern and central-southern regions, while basic food crops remained unchanged, with the lowest levels found in the north-east and the best results produced by maize and irrigated rice in the south, together with potatoes and tomatoes. The increases in sugar cane were attributable to the very favourable policy pursued for this crop.

According to the available data on inputs, the use of fertilizers fell by 46% between 1980 and 1983. The manufacture of tractors fell by 61% in the same period. Both these inputs then recovered in 1984, but without returning to the levels of 1979-1980.

The tight monetary policy introduced at the end of 1980 meant a considerable loss of financ-

ing for agriculture. Resources for lending to producers fell by 59% between 1979 and 1984, and this situation was only partly corrected in 1985. At the same time interest rate subsidies also declined considerably. It is thought that credit restrictions were one of the reasons for agriculture's poor performance during the period.

The worst results in export crops were for coffee, which suffered a sharp drop in its real prices as well as a worsening of its terms of trade between 1977 and 1982.

A summary is given below of the main factors which impeded the normal development of agriculture, by group of crops.

1. *Food crops*

- i) The recession and the low per capita incomes caused a decline in relative producer prices.
- ii) The recession deepened, and imports fell owing to the balance of payments crisis; this forced prices up. An additional factor was the poor harvests in 1983.

2. *Exportable crops*

- i) The adverse factors included the drop in international prices in 1979-1982, the decline in trade flows, the higher interest rates, the revaluation of the dollar, and the surplus supply.
- ii) The favourable factors included the improved yields, the 1983 and subsequent maxidevaluations, and the recovery of international prices.

IV

Agriculture in 1985 and 1986

The economic recovery, first moderate in 1984 and then stronger during 1985, which coincided with the political changes of that year, was one of the most important factors in the recovery of agriculture, for it strengthened the domestic demand for foodstuffs. The improvement in

international prices during 1983-1984 came to a stop in 1985 and was reversed in 1986. It must be stressed that although the weather was particularly propitious in 1985, the per capita production of basic foods was nevertheless 14.6% lower than in 1977 and 6% below the 1980 level. The

food supply was smaller in 1977 and 1980 by 10.5% and 9.9% respectively.

While the economy grew thanks to exports and their multiplier effects and the fuller use of installed capacity (8% in 1985 and between 8% and 9% in 1986), inflation broke out again and reached levels between 217% and 235% in 1985 and 305% in 1986. This was due in part to the drought in late 1985 and early 1986. The monetary reform introduced in 1986 proved an effective counter to inflation.

Faced with this situation, the Government implemented its National Development Plan 1986-1989, the main goals of which were growth and equity; agriculture was assigned a key role, especially with respect to the production of basic foods. Other objectives were the improvement of employment and wages and the balance of payments. It was against this background that the monetary reform was introduced in February 1986, stipulating the freezing of prices, the elimination of indexing from contracts, and compulsory saving to finance growth.

At the same time as the recovery of domestic demand, which stimulated supply, there was a new drop in international prices, followed by the 1983-1984 recovery. The production of basic foods remained a bottleneck despite showing

some improvement, and food imports had to be increased to cover the deficit. This was possible thanks to the favourable balance of payments.

The Government gave priority to the production of basic foods and took steps to i) stabilize producer prices and incomes; ii) increase the yields of basic crops and improve the training of human resources; iii) expand the area under cultivation; iv) upgrade the infrastructure; v) implement the agrarian reform; and vi) increase the resources for lending and insurance.

The following specific measures were also introduced: i) guaranteed prices for the five basic products for three years; ii) increased lending (by a real 30%) for investment and operating and marketing costs; iii) public investment in storage, drying, transport and irrigation; iv) establishment of buffer stocks; and v) less State intervention in the marketing of tradeable goods.

The aim of this policy was to reduce the variations in producer prices in order to stimulate investment and thus to increase supply, especially of foodstuffs. The method was to assign agriculture responsibility for contributing to the restoration of domestic balance by producing a sufficient food supply, and of external balance by increasing the sector's exports.

V

Main restrictions and challenges for the future

The first point is the transfer of resources abroad in payment of the debt. In 1984 2.4% of GDP went abroad, in 1985 5.2% (equivalent to US\$11 375 million), and in 1986 4.6%. The resources transferred in 1985 were seven times greater than those allocated to the Government's social programmes.

The Federal Government's *Plan de Metas* (Targets Plan) provides for public investment to be financed by mandatory loans to the Government. There are doubts as to the validity of the estimates of the savings requirement.

Furthermore, the trade surplus can be ploughed back to finance food imports to supple-

ment the domestic supply and meet the requirements of growth. Part of this surplus should also be used for payment of interest on the debt.

At another level there are the structural factors, of which the following deserve mention:

- i) Poverty. In 1982 61.5% of the workforce earned less than two minimum wages. In 1985 20% of the population lived in a state of extreme poverty.
- ii) Employment. Employment in agriculture fell between 1975 and 1980 at a cumulative annual rate of 1%. There was also a considerable increase in temporary work.
- iii) The fragmented nature of agriculture, which

causes great technological inequality between the production of basic foods and production for export.

Given this situation, the great challenge to

Brazil's agriculture is to increase the production of low-cost food, which implies the introduction of more technology, for the benefit of both producers and consumers.