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Notes and explanation of symbols

The following symbols are used in tables in the *Review:*
Three dots (...) indicate that data are not available or are not separately reported.
A dash (—) indicates that the amount is nil or negligible.
A blank space in a table means that the item in question is not applicable.
A minus sign (-) indicates a deficit or decrease, unless otherwise specified.
A point (.) is used to indicate decimals.
A slash (/) indicates a crop year or fiscal year, e.g., 1970/1971.
Use of a hyphen (-) between years, e.g., 1971-1973, indicates reference to the complete number of calendar years involved, including the beginning and end years.
Reference to "tons" mean metric tons, and to "dollars", United States dollars, unless otherwise stated.
Unless otherwise stated, references to annual rates of growth or variation signify compound annual rates.
Individual figures and percentages in tables do not necessarily add up to corresponding totals, because of rounding.

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CONTENTS

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Crisis, adjustment policies and agriculture

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This article deals with the effects on agriculture of the economic policy associated with the crisis and the economic adjustment. The author starts by recounting the most notable features of the macroeconomic policies which in relative terms marginalized agriculture from the most vigorous stimuluses of growth and of the specific policies designed to offset these effects. Before the crisis the combination of these policies had shaped a complex and costly pattern of agricultural development, the results of which were successful for a while with respect to the growth of agriculture in many countries, but failed with respect to equality and alleviation of rural poverty.

The analysis then focuses on the changes in macroeconomic policies made as part of the adjustment, with a view to establishing whether these policies worked for or against national agricultures, taking into account their effects not only on relative prices but also on producers and the structure of farming policies. It is stressed that the nucleus of the link between macroeconomic policy and agriculture is the adjustment of the real effective exchange rate, which together with complementary changes in monetary, fiscal and wages policy has affected in various ways the price ratios of farm goods (internationally tradeable or not), the external competitiveness of agriculture, its production structures, and the remuneration of the farm labour force.

The author emphasizes that the most visible adverse effect of the adjustment on agriculture, in the short term and with obvious negative projections for the medium and long terms, arises from the cutback in public expenditure. The big drop in State investment in agriculture, in conjunction with the meagre reinvestment by farmers, is having a serious effect on the rate of capital formation, the use of productive resources, and the sector's growth potential.

Lastly he stresses the diversity and complexity of the factors which must be taken into consideration for a complete picture of the range of repercussions of the crisis, especially when the analysis seeks to clarify questions connected with the losses suffered by peasant agriculture and rural social development, which according to some information have been greater than those suffered by the agribusiness economy.

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I

Economic policy and agriculture in the 1970s

1. *Macroeconomic policies and agriculture*

Since the Second World War many of the countries of Latin America and the Caribbean have undergone a profound and extensive process of economic and social transformation as a result of the predominance of a modernization model centred on the formation of urban-industrial societies. The main lines of the model provided by the developed countries were followed for this purpose, although different courses were taken in the attainment of the objective.

The economic strategies designed to achieve development through protected industrialization (known as domestic-market oriented) and interventionist policies entailed the adoption of macroeconomic policies focused basically on the attainment of the pustulated goals of rapid industrial growth. Here special importance accrued to the macroeconomic variables which protected and made possible the expansion of the various branches manufacturing durable and non-durable consumer goods, intermediate inputs and capital goods.

The intensification of the industrialization strategy throughout the 1970s implied an allocation of resources clearly in favour of manufacturing and mainly to the detriment of the interests of the farm sector; as a result the macroeconomic policies adopted for this purpose were diversified and improved into a complex set of economic policy tools determining the intersectoral allocation of resources and the relative profitability of the production sectors.

In addition to making the import of manufactures more difficult, the State transferred to industry resources drawn directly and indirectly from the rest of the economy —mainly from agriculture— in order to facilitate the accumulation of capital in that sector. It also transformed the physical and educational infrastructures, adapting them to the needs of industrialization, and in many cases it used public revenue to install basic industrial infrastructure. It was an important condition of these strategies that food prices should be kept low, owing to their importance for the determination of the basic wages in the economy and for the evolution of consumption and employment.

In order to stimulate and strengthen industrialization —gradually or rapidly, depending on the case— more powerful macroeconomic policies were brought into play. This involved discrimination against the production of internationally tradeable goods: non-industrial exports and imports substitutes. This bias had adverse effects on agriculture, for a large proportion of its output is tradeable. In order to correct and offset these effects, specific policy measures were devised and applied in favour of unprotected farm production.

The sector's development was thus linked to industrialization, owing both to the importance that the countryside might acquire as a market for the expansion of manufacturing and to the fact that agriculture is a generator of wage goods. In order to guarantee this key function in urban and industrial growth, most of the countries gave strong support to modernization, understood as a means of ensuring that the sector is more receptive to the technical progress required for the reduction of costs, the expansion and diversification of exports and the increased production of foodstuffs and the raw materials needed by industry.

The studies carried out by the Joint ECLAC/FAO Agriculture Division in several countries of the region[1] demonstrate the influence which macroeconomic policies then had on the development of the sector's economy and farm policies, and at the same time they show the great heterogeneity of national situations and experience in this respect, which makes generalization difficult. Some perceptions of regional application are nevertheless presented, on the basis of the common elements and factors which can be identified and of the interrelationships and links between macroeconomic policy and agriculture.

[1]See below the extracts from the studies on Argentina, Brazil, Colombia, Costa Rica, Chile, Ecuador, Mexico and Peru presented to the ECLAC/FAO Round Table on Crisis, Adjustment Policies and Agriculture, held at Santiago, Chile, from 26 to 29 May 1987.

In the past decade and up to the beginning of the 1980s real exchange rates were constantly revalued, hurting agriculture and benefitting the production of manufactures. The exchange-rate policy did not stimulate the expansion and diversification of farm exports (which grew at 2.8% a year) or the substitution of farm imports; on the contrary, these imports grew steadily (at 10.2% a year), thus increasing the region's food dependency.

The adjustments which were then made to the real exchange rate had a heavy impact on the production structure of the national economies by altering the relative prices of internationally tradeable goods and goods tradeable within national frontiers.

Before the crisis and the adjustment the countries used a wide variety of trade-policy mechanisms. The tariffs were used as the main method of controlling their purchases from abroad, supplemented by taxes and other para-tariff mechanisms. Tariffs, taxes, quotas and other means were also employed to limit certain exports. Various trade-policy mechanisms were also used to promote sales abroad.

As a general rule, these trade policies included reduced protection for agriculture and in particular for the food-production subsector, in comparison with the protection afforded to other production sectors, especially industry. Accordingly, the tariffs affected farm profitability considerably less than in the case of manufactures.

This reduced protection for agriculture was consistent with the decisions taken by the State to maintain low food prices for political and social reasons. This benefit to consumers improved their real incomes and thus facilitated the anti-inflation effort, but foodstuffs producers suffered.

Farm exports generally received lower net subsidies to offset the tariffs than did industrial exports; this worsened the relative position of agriculture. The taxes and restrictions on farm exports were due both to the intention to hold food prices down and to fiscal factors.

Before the crisis credit policies and interest rates openly favoured agriculture in the majority of the countries of the region. The volumes of official lending to agriculture increased considerably, and the credit was granted at preferential interest rates. This led to profound financial dependency and overborrowing by a large proportion of the big and medium-sized farmers; in contrast, peasant agriculture scarcely benefitted from the credit policy. Between 1975 and 1981 the expansion of official credit in constant terms ranged from 50 to 100%, depending on the country.

In the second half of the 1970s the centralized expenditure of the institutions and enterprises which formed the public farming apparatus remained relatively stable as a proportion of total public expenditure. It even increased slightly in some countries, such as Ecuador, Mexico, Paraguay, Uruguay and Bolivia.

State investment in agriculture certainly contributed to its economic growth; the purpose was to encourage, direct and facilitate private investment, and State investment had a pronounced and vigorous effect on the performance and composition of production. Roughly 10% of Latin America's farm production in the past three decades was due to incentives of various kinds generated by public agricultural investment. This was concentrated coincidentally and on a sustained basis in irrigation works, land improvement, upgrading of storage facilities and marketing, and the purchase of the machinery and equipment needed by the research and technical assistance services. It was also incorporated in the State programmes for promotion of production, training, research, extension, formation of co-operatives, agrarian reform and rural settlement and development.

2. *Specific policies in favour of agriculture*

The increasing integration of agriculture in the national and international economies and the consequent tightening of intersectoral ties meant that in the past decade the external sector and the macroeconomic framework accentuated their decisive role in the structure, intensity and periodicity of the measures and tools of economic policy used specifically for agriculture, and therefore that they both had a great influence on the sector's economic results, on the welfare of its production agents, and on the distribution of farm income.

In the 1970s big changes occurred in relative dometic prices, owing both to movements in the international prices of the goods which the region exported and to the planning and management of general economic policy. The contradictory effects of the movements in farm prices are well known. When they remained low the real income of consumers increased and that of producers declined; in several countries and in specific periods this led to the stagnation of agriculture and the persistence or aggravation of rural poverty. The increase in farm prices had a decisive influence on the rate of increase of production, the formation of capital, and technological change in agriculture; but in the long term this increase tended to decline, owing both to the pressures brought to bear in this direction by the increasing output and to the stagnation or diminution of the real income of poor urban dwellers and landless farm workers. In view of the importance and the many implications of the movements in farm prices, in particular those of food, the governments evised and carried out various kinds of institutional intervention designed to control or offset their undesired political effects, ensure industrial growth and benefit consumers.

The persistent distortions in farm prices influenced the slow but steady introduction of measures and tools of economic policy in favour of certain farm products, such as tariff preferences, subsidized loans, supply of capital goods and technical equipment and inputs at reduced prices, direct subsidies, tax benefits, and transfers of income by means of public agricultural investment and technical support programmes for production, and the provision of social services in rural areas. These policy measures and tools proved in practice to be means of improving the profitability of farming activities affected by the low level of prices; this increased the real income of big and medium-sized producers but it offered little or no compensation to peasant farmers for the extraction of their economic surplus.

3. *The economistic emphasis of farm policies*

In the 1970s most of the countries of the region applied or tried to apply integral treatment to the farming sector, with a view to solving the problem of land ownership and the consequent social and political pressures, and to devising and introducing policy incentives and concrete programmes of production support to encourage the adoption of technology "packages" by agricultural production units. This modernization was extremely differentiated in terms of the capacity of the various socio-productive agents to incorporate themselves in it and take advantage of its benefits. The incentives provided by the State, by the domestic demand for foodstuffs, and by the possibilities of exports and imports substitution were bringing about changes in the structure of agricultural production in the countries in accordance with the levels of profitability of the different products and with the characteristics of the different types of production unit. These changes were reflected in different growth rates for the farm goods produced, and in changes in the composition of production and land use.

It is important to underline the action of the State in promoting changes in the structure of agricultural production and in supporting advances in the technological model adopted by the big and medium-sized production units —the owners of which took on the role of dynamic agents in the countryside— producing mainly for export and for imports substitution (especially sugar cane for alcohol production in Brazil) and to meet the expanding urban demand.

Chile stands out as a special case in respect of the role played by the State in favour of agriculture before the crisis, for State intervention in agriculture was reduced or eliminated after 1973 on the ground that the sector did not need any special policy measures and that the State should not intervene in its operations at all or to only a minimum extent.

Generally speaking, the specific policies in favour of agriculture in the region had the main objective of accelerating the annual growth rate of the production of food and other farm goods, and the results were fairly satisfactory. The structure of these policies and the tools used in them made sustained production increases possible and the domestic supply of farm goods more flexible. Regional growth rates in the sector's output in excess of 3%, as an annual average over many years, indicate the real effectiveness of the public policies for agricultural growth and the capacity of economic agricultural institutions and agents to take advantage of the opportunities that the markets offered.

A whole series of changes and advances took place owing to the stimulus of official policies and programmes which sought to develop scientific research, vocational training, the production of technological inputs and their dissemination, the transfer and adoption of technology, the formation of capital, the improvement of the physical infrastructure, the adaptation of markets, the establishment of agro-industries, and the expansion and diversification of farm exports.

The main factor in the growth of agricultural output since the 1970s has been the formation of capital, expressed in different kinds of property investment and the adoption of technological systems based on "packages" with various mixes of machinery and equipment, agrochemical products, biological inputs and irrigation, destined mainly for medium-sized and large economic units. The management of modern farming enterprises has become steadily more complex and the network of links with industry, the financial system, the State and public agricultural institutions, and with the big domestic and foreign economic agents in general has expanded. To the differences resulting from the distribution of land have been added differences in the accumulation of capital and in the use of technological innovations, and the changes in the nature and intensity of the use of labour.

In the light of the economic results obtained from the application of the policies and programmes designed to change the structure of farming, the national economic authorities argued that the main structural transformations in the countryside had already been achieved, and that the modernization of agriculture, in addition to its obvious and indisputable economic successes, had produced more profound changes than had agrarian reform. They therefore tried to ensure in the pre-crisis management of agricultural development that the efficient use of land should take precedence over the peasants' demands for land, as an essential condition for enabling the sector to respond appropriately to the functions assigned to it by the rest of the economic system and to ensure concrete progress with respect to food security. The widespread concern in the 1970s with social change in the countryside was replaced by a determination to boost and guarantee the economic growth of agriculture.

These circumstances and pressures helped to ensure that the nucleus of most of the recent strategies for agricultural development consisted coincidentally of measures and tools of economic policy which direct and stimulate the production process. This nucleus of agricultural policy has been backed up by transfers of income (through public investment and direct subsidies), transfers of technology (through production support programmes), and improvement and extension of social benefits in rural areas.

The production results of the rural development programmes were generally positive, and the proposed targets for improvement of the physical infrastructure were largely attained, but the social achievements were very limited and did not compensate for the negative effects of the imbalances of specialization which characterized the modernization of production based on the agribusiness economy. As a result the structural heterogeneity of agriculture and the unbalanced distribution of income were accentuated in many countries, so that rural poverty remained unchanged or even increased. The State was unable to ensure that broad rural social sectors incorporated themselves properly in the process of technological change or as suppliers of food to the big urban markets.

Agribusiness continued to coexist with peasant farming, each with different amounts of land, capital and technology, with different types of economic unit and levels of output, productivity and income, and with different kinds of production goal and links with the other sectors of the economy and the goods, factor and financial markets. The economic and social consequences of this dichotomy have been exacerbated by the steady increase in the number of landless workers and the growing heterogeneity of production in terms of resources, technology, productivity, employment, income and formation of human capital.

The crisis and the adjustment process brought out the structural defects and aggravated the adverse effects of a prevailing model of agricultural development which was not centred on utilization of national resources to combat rural poverty and satisfy basic food needs. On the contrary, this model gave preference to the formation of a structure of agricultural production designed to respond as efficiently as possible to the effective demand generated both by a very unequal national distribution of assets and income and by the real opportunities for exports and development of agro-industry.

II

The crisis, the adjustment process and their effects on agriculture

1. *The economic crisis*

From 1981 the majority of the countries of Latin America and the Caribbean underwent the most widespread, acute, profound and multifaceted economic crisis of the last half century. Its consequences were more severe, prolonged and diversified in some countries than in others. It is probable that the 1980s will be a decade of lost development for many of the region's economies and that in a fair number of them the per capita income will be somewhat lower in 1990 than in 1980.

The crisis affected the big economies of the region as well as the small and medium-sized ones: the oil-exporting countries and those totally dependent on imports for their fuel supply; the relatively more developed economies and the poorer ones with less diversified production structures; countries which introduced interventionist strategies and policies focused on the domestic market and countries which pursued strategies of open development based on the free play of market forces.

The growth rate of the regional domestic product fell sharply in 1981; in 1982 it declined in absolute terms —something that had not happened in the previous 40 years— and it fell even further in 1983. The downward trend was halted in 1984, but the growth in economic activity was small; the rate worsened again in 1985, but 1986 saw a return to the 1984 rate of increase; it seems that 1987 will have been less favourable than 1986.

The exceptional nature of the crisis was also apparent in the simultaneous and persistent deterioration in the main economic indicators. Output fell, affecting the formation of capital; the employment situation worsened and the real wages of the labour force declined. At the same time inflationary processes were accentuated and became widespread, and the problems of the external sector were exacerbated.

ECLAC has shown in its studies and reports that the gestation and evolution of the crisis was affected by many different internal factors which were both structural and temporary and not only economic in nature but also political and social; nevertheless the influence of two external factors was particularly decisive.

In fact the main factors which triggered the crisis, after several years of steady weakening of external demand, were the sharp fall in the net inflow of capital in 1982 and the enormous increase in the net payments of profits and interest abroad which occurred at the same time. This double effect reached exceptional proportions, given that the net inflow of loans and investments, which had increased markedly and steadily throughout almost the whole of the previous decade and which reached an all-time high of more than US$37 000 million in 1981, fell sharply from 1982 onwards. At the same time net remittances of interest and profits rose. As a result of these changes and although trade in goods showed a large surplus, the current account deficit of the balance of payments remained above US$40 000 million in 1982. The vertical drop in the flow of loans and foreign investments and the sizeable flight of capital meant that more than half of the negative balance of the current account had to be financed from international reserves, which declined considerably.

2. *The adjustment process*

The countries of the region were thus faced with a serious imbalance in their current accounts which could not be financed by a net inflow of loans and investments, and they were compelled to initiate an adjustment process. To this end many of them with differing intensity and methods and at different times, introduced two groups of macroeconomic policy designed to achieve economic and financial adjustment. Essentially these groups included measures to increase the relative prices of internationally tradeable goods by means of exchange-rate and foreign-trade policies and to control the aggregate demand by means of monetary, fiscal and wages policies. These measures were backed up by a reduction in real expenditure —mainly in the investments made by the State— and by other policies designed to cut back imports and increase imports substitution.

As a rule the adjustment policies came within the framework of the credit agreements established with the International Monetary Fund. These agreements included monetary and fiscal restrictions and required the governments to reduce their deficits by increasing taxation, raising the tariffs of public sector enterprises, and reducing current expenditure. It was usually accepted that during the adjustment the exchange rate would rise, real wages fall, and positive interest rates be mantained in real terms.

The rigour and persistence with which the agreed policies were carried out in practice differed from country to country, as did the degree to which the countries attained their basic goals. The region as a whole reduced its imbalance remarkably quickly.

However, the manner and time periods in which this progress was achieved entailed a high cost in the contraction of economic activity and employment. Almost the whole burden of the correction of the large initial external imbalance fell on imports, the brutal reduction of which, in close conjunction with the restriction of demand, made the adjustment a recessionary one.

Moreover, the expansion of exports was impeded by the large and sustained fall in the international prices of most of the main commodities exported by the region and by the decline in the volume of world trade resulting from the prolonged recession in the industrialized countries, and by the increased protectionism in many of them.

The service of the foreign debt has meant a net transfer of financial resources out of the region, which amounted on average to US$30 000 million in 1983-1985 and US$22 000 million in 1986, and may fall to under US$12 000 million in 1987. This fall is due to the fact that more countries are limiting these net transfers abroad in order to have the foreign exchange to pay for the imports which they need to sustain an essential minimum of economic activity.

In summary, the process of economic and financial adjustment generated remarkable changes in the relationships between the various macroeconomic variables. Especially in those related to the external sector. These changes have induced genuine structural transformations in basic areas of the functioning of the national economies. Agriculture has been involved in these transformations, in ways and with consequences which will now be examined.

3. *The effects of the crisis and the adjustment on agriculture*

a) *Macroeconomic policies and their impact on agriculture*

Since agriculture forms an important part of a vast and complex network of economic interrelationships, the changes introduced in other areas of the network, in macroeconomic policies in particular, had differing effects, depending on the importance and the functions of each of these policies, both on the sector's economic performance and on the structure and nature of the specific policy measures and mechanisms.

As was stated in the previous section, pre-crisis economic management was typically biased against the production of tradeable goods, and this had harmful effects, indirectly or directly, on the profitability of agricultural economic units and therefore on the economic vitality of the sector. In order to mitigate or correct these effects (which were sometimes openly recognized), a complex set of policy measures was devised and introduced specifically for agriculture, achieving the particular purpose of correcting, with various degrees of effectiveness, the most undesirable distortions and consequences of the macroeconomic policies.

There thus emerged a practical combination of macroeconomic policies biased against agriculture which denied the sector in relative terms the most vigorous stimuluses of growth and the specific policies designed to correct this very problem. The facts show that in Latin America as a whole, and with respect to the growth of the region's agriculture, the corrective or compensatory policies virtually nullified the direct and indirect adverse effects of macroeconomic management. The region's farm product grew at almost 3.5% per year in the 1970s, a rate not very far below its estimated potential growth rate of around 4.5% a year.

It must be stressed that the combination of biased and compensatory policies produced an expensive pattern of agricultural development, which was by its very nature unsustainable in the long term and which in its financing had some impact on the national external overindebtedness, for it had a high administrative cost. This pattern also discouraged the substitution of farm imports, and this was exacerbated by the exports subsidies introduced by the developed countries.

What follows is a preliminary attempt —given the short period which has so far passed— to assess whether the changes in macroeconomic policies introduced and implemented as part of the adjustment were favourable or unfavourable for the region's agriculture. As already indicated, these changes were essentially a response to the need to reduce the trade and fiscal deficits, which became a basic goal of the adjustment. For this reason a fairly common pattern of recessionary adjustment predominated in the region, with differences of degree and emphasis in exchange-rate, trade, monetary, fiscal and incomes policies; this pattern generated economic policy decisions designed to raise the relative prices of tradeable goods and reduce the level of real expenditure.

Exchange-rate policy has been the most powerful macroeconomic tool used in the adjustment process. The countries made sizeable nominal devaluations in order to increase the real exchange rate. The rate increases were introduced in stages until a fairly widespread situation was reached in 1987 with a rate higher than in the pre-crisis period.

However, the nominal increases in the exchange rate were not always sufficient to offset the effects of inflation, which was the reason why the exchange rate had been slipping. This is what happened in Mexico and Brazil up to the beginning of 1983 and in Argentina up to the end of 1981. In the other countries studied the exchange rate continued to slip until 1982-1983, except in Colombia where the process continued until 1984-1985. In Argentina, Costa Rica and Mexico specific steps were taken to establish new exchange-rate systems and discourage exchange-rate speculation.

Adjustments to exchange-rate parity made it possible to achieve, to varying extents, the goal of benefitting export goods and stimulating imports substitution. There is evidence that the adjustments in the real exchange rate had a major impact on the formation of the prices of the tradeable goods of several countries. They also increased the cost of the imported intermediate goods and inputs used by the production sectors; this negative effect caused more harm to the high-technology production of non-tradeables which uses a large proportion of such goods and inputs. The nominal devaluations had an impact on inflation —as was evident in Mexico and Brazil— and this was the reason for the intensification of the efforts to stabilize the economies.

The adjustment programmes generally assigned to the real exchange rate the role of principal regulator of foreign trade. Accordingly, the tools of *trade policy* were used to back up the effects of the exchange-rate movements, in particular those related to exports; trade regulations and bureaucratic practices that discriminated against foreign sales were eliminated, at least in part, while at the same time reductions were made in the tariff and other regulations which restricted imports.

This certainly did not mean that the countries decided to forego the use of tariff and para-tariff measures to regulate their foreign-trade flows but rather that these tools were used in a less discriminatory and more selective manner than in the past. The changes in exchange-rate and trade policies led to a considerable drop in the volume of imports and an increase in the physical volume of exports.

Two national situations were exceptions to the general rule. Before the crisis of the 1980s Chile had likewise reduced its tariffs to very low levels, as well as cutting many other taxes and removing the restrictions on its foreign trade. It also fixed the exchange rate for a long period; this led to a considerable revaluation of the national currency, with serious consequences for importers and exporters. Later, once the crisis had set in, it introduced specific tariff surcharges to protect certain goods which were subject to severe external competition. In Peru, except for a short period, trade policy had little relevance in the adjustment process.

The exchange-rate and trade policies constituted the nucleus of the link between macroeconomic policy and agriculture; the changes made in both areas considerably reduced the bias against internationally tradeable goods and therefore against agriculture. In other words, by favouring exports and imports substitution the adjustment proved beneficial to agriculture as well.

The effect which the devaluation of the exchange rate was expected to have on the structure of the relative prices of tradeable and non-tradeable farm products was achieved partially in the short term and in a few products and countries because the devaluations coincided with the large and sustained decline in the international prices of the main farm products exported by the region.[2] To this deterioration was added the resurgence of inflation, which in several cases nullified a large part or all of the potential effect of the devaluation on relative farm prices.

The efforts to stabilize the national economies were generally very vulnerable to the real or potential inflationary pressures stemming from food prices. There is abundant information which shows that when inflation increases, food prices rise faster than the prices of the other items in the family shopping basket.

[2] In the period 1980-1986 the international prices of sugar, cocoa, soybeans, cotton and coffee (coffee recovered in 1986) fell steadily from their 1980 levels. Wheat prices fell from 1985 and banana prices from 1986.

The countries which adopted open development strategies before the crisis altered the structure and level of their tariffs and freed domestic prices. They thus subjected their farmers to strong international competition, intensified by the relative devaluation of the dollar, which caused changes in the composition of what was produced and established a very close link between the movement of domestic food prices and the movement of international farm prices. However, between 1983 and 1987 these countries introduced protectionist measures —specific tariff surcharges, price bands— for certain of their farm products which were more vulnerable to the effects of foreign competition.

In the group of countries which opted for strategies focused on the domestic market and interventionist policies the adjustment process had a fairly severe impact on agriculture. The devaluations of the real exchange rate increased the cost in the national currency of imported intermediate goods —an increase which accounted for a large part of the rise in their production costs. Other elements in this rise were the increased cost of money and the elimination or reduction of production subsidies and grants.

Farming strategies and policies had been traditionally designed to promote the profitability of soundly irrigated, mechanized, fertilized and protected production. Merely as an indication of the importance of the imported component in farm output, mention must be made of the results estimated from comparative studies on some countries of the region, which show that in the 1970s land and labour contributed about 15% of the annual growth of the farm product, agrochemical inputs almost 40%, and technological change the rest.

The increase in the cost of the imported component in farm production, on the one hand, and the higher prices of imported foods, on the other, argued for an adjustment of producer prices and thus for a restoration of profit levels. In turn, the sharp fall in real farm wages reduced the relative weight of remuneration of the work force in production costs, thereby neutralizing, partly or totally depending on the country, the impact on profits of the increased cost of the imported component.

The adjustment generated a general tendency for the freeing of *prices*, which entailed the reduction or elimination of the prices administered by the State. The mechanisms for control of farm prices, which were designed to establish an upper limit for the consumer and an adequate profit for the producer (traditionally a difficult and delicate operation), were removed and the participation of the private sector in the marketing of farm products was thus strengthened.

Monetary policy was fairly relaxed in the pre-crisis period but turned restrictive during the adjustment, becoming one of the principal factors in macroeconomic management to reduce the aggregate demand. Lending was reduced in most of the countries, and in others interest-rate subsidies were also removed. In Colombia and Ecuador open-market operations were carried out in order to attract financial resources for lending. In Peru, in addition to the reduction of internal credit, public enterprises were encouraged to borrow abroad to obtain financing. These monetary and credit measures caused an increase in the cost of money and therefore in production costs as well. This latter factor, in conjunction with the tightness of credit, forced down the general level of economic activity, with adverse consequences for employment and incomes.

Initially the adjustment produced a fairly widespread fall in the amounts of official lending to agriculture and led in some countries to the disappearance or considerable reduction of preferential interest rates. In both cases these measures entailed the reduction or elimination of major subsidies which agriculture had been receiving before the crisis.

Official lending to agriculture was cut back appreciably in many countries from 1983, a reduction which brought about a sudden shift from extreme dependence on this form of financing on the part of big and medium-sized farmers, who had to resort to self-financing from sale of part of their assets —mainly livestock— and face up to the financial consequences of their heavier borrowing in the past. From 1984 in some countries and from 1985 in others the volume of farm credit began to increase again but without returning to the levels of the early 1970s.

The indebtedness of agriculture increased considerably when interest rates reached an exceptionally high level. When the subsidies designed to offset the effects of the macroeconomic management of the adjustment were reduced or removed, farming enterprises came to depend basically on price movements and macroeconomic decisions, to which they were compelled to pay constant attention.

In Brazil, Colombia, El Salvador, Ecuador and Peru, countries which continued to apply preferential interest rates to agriculture, the negative real rates accentuated this situation, moving from an annual average for this group of countries of -25% in 1977-1982 to -45% in 1983-1985 (figure).

In contrast, in the countries where agriculture paid virtually the real interest rates as the rest of the economy, the cost of credit rose, and production costs rose with it. The reduction of international interest rates in 1985-1986 lowered financial costs in general and contributed to a relative recovery of farm profits, but the recent sharp rises in these rates have neutralized this transitory improvement.

In the past decade the *fiscal deficit* remained fairly stable in most of the countries, with a general tendency to decline slightly, except in some countries in which it was definitely falling. In the adjustment process, owing mainly to the increased interest payments on the foreign and domestic debt, the fiscal deficit initially increased; but the contraction of public expenditure, accompanied by changes in its composition, reduction and elimination of subsidies, increased fiscal revenue (achieved in some countries by means of greater tax pressure and adjustment of public tariffs), and the subsequent fall in the nominal interest rate helped to produce a deficit which was lower on average in 1987 than before the crisis.

From 1973 Chile made a considerable reduction in the size of its public sector. Ecuador and Mexico, oil-producing countries which increased their fiscal revenue, temporarily raised public expenditure on agriculture. In Colombia the big public projects were reformulated and taxes were raised. Public investment fell in Mexico and Argentina.

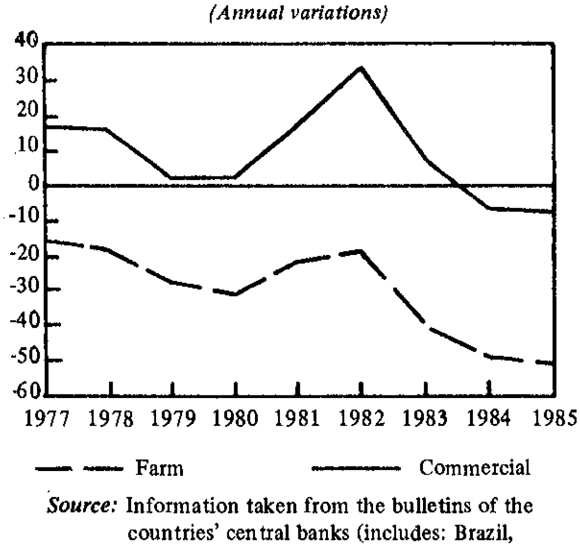
Given the weight of the public sector in the economies of the countries of the region, these fiscal measures had an adverse effect on the overall process of productive investment, the general level of economic activity and the social components in public expenditure.

The available information, although only partial, indicates that from 1983 there was a major cutback in public spending on agriculture, especially investments and infrastructure, on production-support services, and on social benefits in rural areas. Thus was accentuated the trend in this direction which had begun to establish itself in some countries of the region in the early 1980s. The public institutions responsible for the promotion and dissemination of improved farming techniques, which had been set up and had been maturing throughout the past 25 years, had major assets and staffs of scientists working on agricultural research and extension. In the present circumstances the lack of continuity in their work is the main threat to these institutions and it stems from reduced and unstable annual budgets. There has been discontinuity in the research work and loss of momentum and even backsliding in the programmes, which reflects the lack of a proper appreciation on the part of the governments of the actual and potential value of the national scientific and technological base for agricultural development.

Figure

REAL FARM AND COMMERCIAL INTEREST RATES IN COUNTRIES OF THE REGION WITH INTEREST RATES DIFFERENTIATED BY SECTORS

(Annual variations)



Source: Information taken from the bulletins of the countries' central banks (includes: Brazil, Colombia, El Salvador, Ecuador and Peru).

The budget cuts have restricted and even broken up the rural development programmes and have thereby seriously weakened social policy for rural areas.

The *wages policy* adopted in the adjustment process was linked to the objective of cutting back aggregate demand. Real wages fell, mainly as a result of the declines in revenue and domestic expenditure, which were in turn due to the deterioration in the terms of trade, the higher interest rates, the reduction or elimination of external financing, and ineffective adjustment policies. During the second adjustment programme in Brazil (1983) wages were cut by decree; in Argentina they were frozen; Chile took various steps to reduce wages; and in Mexico they declined as a result of increases lower than the inflation rate.

The data on the variations in national wages are a good indicator of what happened to farm wages, for farm wages follow movements in national wage levels very closely. According to the quantitative information available, national wage levels have declined in real terms from their levels at the beginning of the 1970s.

Other information indicates the generalized nature of the drop in real farm wages between 1980 and 1985. This drop has meant an average loss of 15% in their purchasing power, and this has exacerbated rural poverty. Construction and public sector earnings seems to have undergone a slightly less sharp decline (table 1).

Farming enterprises have sought by reducing their wages bill to offset the increase in the other components of production costs, to keep their profit levels relatively stable and to preserve their production vitality. They have thus favoured temporary farm work over permanent employment. The high rates of farm and rural underemployment have in turn contributed to the drop in real farm wages.

Table 1

LATIN AMERICA: WAGE MOVEMENTS, 1980-1985[a]

Wages	1980-1985	1980-1983	1983-1985
Manufacturing industry	-12.2	-5.5	-6.0
Urban minimums	-16.3	-9.3	-7.7
Construction	-17.8	-6.7	-11.9
Public sector	-17.1	-13.8	-3.8
Farm	-15.2	-10.2	-5.6

Source: Prepared by the Joint ECLAC/FAO Agriculture Division on the basis of PREALC, data from each country.

[a] Variations between extreme years in the simple averages in 12 countries for industrial wages, 19 for minimum wages, 14 for construction wages, 9 for public wages, and 16 for farm wages.

b) *The impact on farm production performance*

In the 1970s the region's farming sector grew at 3.5% a year, as against 5.9% for the economy as a whole and 6.3% for manufactures. These different growth rates reflect the gradual decline in importance of the region's agriculture in the gross domestic product of Latin America and the Caribbean in relation to the contributions of industry and services, which is what normally happens as the development process advances. This relative decline does not conceal the fact that regional agriculture increased its absolute economic size and improved its gradual integration in overall development through more complex intersectoral and international links.

The historical trends of overall and sectoral growth changed between 1980 and 1986 because the region's industry was the sector most affected by the crisis and the adjustment process: its growth was 0.4% a year, while agriculture continued to expand, although at a slower rate. The regional farm product increased by 1.7% a year, while the economy as a whole achieved barely 1%. In 1986 the farm product fell —by 2.2% over 1985— but the causes of this decline included the familiar effects of bad weather in many countries of the region. In the same period the region's per capita product had growth rates of -1.9% in manufactures, -0.6% in agriculture, and -1.3% in the system as a whole. As a result, agriculture slightly increased its share in the total regional GDP between 1983 and 1985, but in 1986 it returned to its pre-crisis level (table 2).

The better relative performance of agriculture was associated with two circumstances. Since a high percentage of farm products are internationally tradeable, agriculture benefitted from the shifts in exchange-rate and trade policies and increased the physical volume of its exports. (Farming's export volume increased 23% between 1980 and 1985.) Moreover, the sector was less affected than the rest of the economy by the contraction of domestic demand; the *average* income elasticities of foodstuffs are usually low —between 0.3 and 0.4%— and therefore the decline in average domestic spending (which was around 13% between 1979-1981 and 1982-1985) did not have a severe effect on the sector's output.

Table 3 shows the development of the region's farm output between 1980 and 1986. Tradeable crops —particularly imports substitutes— were the ones which grew most strongly in this period; the most dynamic crops were sugar cane and sugar beet, followed by grains and oil crops. Products intended mainly for domestic consumption increased more slowly; legumes, roots and tubers increased faster than in the last decade, while vegetables and fruit had a slower rate of increase. The production of stimulant beverages was varied. Livestock production grew more slowly, particularly in the case of beef, milk and eggs.

The output of oil crops, stimulant beverages, fibres, sugar cane and legumes declined in 1986, but livestock showed a slight increase. As pointed out above, bad weather was the reason for much of the 1986 fall in output, which was generally disappointing.

The growth rate of the region's farm output was in step with that of the area of land cultivated (1.9% a year between 1980 and 1986), which in turn coincided with the rate of expansion of the cultivated area in the 1970s. Analysis of the changes in the cultivated area and yields indicates that between 1980 and 1985 the productivity of the land in respect of grains, coffee

Table 2

LATIN AMERICA: TOTAL FARMING AND MANUFACTURING GROSS DOMESTIC PRODUCT

(Annual rates of variation and percentages)

Period	Value, total GDP			Value, per capita GDP			Percentage share in total GDP	
	Total	Farming	Manufacturing	Total	Farming	Manufacturing	Farm GDP	Manufacturing GDP
1971	8.4	0.3	7.6	5.5	-2.3	4.8	13.3	23.2
1972	6.7	0.8	9.0	4.0	-1.8	6.2	12.6	23.7
1973	8.8	9.1	9.9	6.1	6.3	7.1	12.6	24.0
1974	7.0	5.2	6.5	4.3	2.5	3.8	12.4	23.9
1975	0.9	3.7	2.1	-1.6	1.2	-0.4	12.8	24.1
1976	5.7	2.2	7.0	3.1	-0.3	4.3	12.4	24.4
1977	5.1	6.1	3.8	2.5	3.5	1.2	12.5	24.1
1978	4.3	2.9	4.5	2.1	0.7	2.3	12.3	24.2
1979	6.4	2.4	7.5	3.9	-	5.0	11.8	24.4
1980	5.7	2.7	5.7	3.2	0.2	3.1	11.5	24.4
1981	-	4.5	-5.9	-2.4	2.0	-8.1	11.8	23.4
1982	-1.5	0.4	-2.7	-3.8	-2.0	-5.0	11.9	23.1
1983	-2.4	0.8	-2.7	-4.7	-1.6	-5.0	12.4	22.9
1984	3.6	3.3	5.1	1.2	0.9	2.7	12.4	23.3
1985	2.6	3.9	2.7	0.3	1.5	0.3	12.6	23.3
1986	3.7	-2.2	6.4	1.4	-4.4	4.1	11.9	23.9
1970-1980	5.9	3.5	6.3	3.3	1.0	3.7		
1980-1986	1.0	1.7	0.4	-1.3	-0.6	-1.9		

Source: Prepared by the Joint ECLAC/FAO Agriculture Division from the national accounts data of ECLAC's Statistics and Quantitative Analysis Division.

Table 3

LATIN AMERICA:[a] EVOLUTION OF FARM OUTPUT, 1970-1986

	1979-1981 Index = 100							Growth rates		
	1980	1981	1982	1983	1984	1985	1986	1971-1980	1980-1986	1985-1986
Crops[b]	98	105	106	105	112	117	113	3.1	2.4	-3.4
Grains	97	112	115	108	116	119	117	2.9	3.2	-1.7
Roots and tubers	97	103	102	91	97	99	104	-0.6	1.2	4.7
Sugar cane	100	101	112	120	125	130	130	4.6	4.5	-0.1
Legumes	89	115	120	91	112	109	105	-1.4	2.8	-3.7
Oils	106	103	98	105	117	133	117	10.1	1.7	-11.7
Vegetables	102	96	105	104	114	114	115	3.6	2.0	1.1
Fruit	101	102	106	105	113	107	114	3.2	1.9	6.5
Fibres	101	95	84	80	104	113	89	-0.3	-2.0	-21.3
Stimulants	88	116	94	110	99	115	94	1.0	1.1	-18.8
Livestock[b]	100	104	104	104	103	107	110	3.9	1.6	2.8
Beef	99	104	104	104	102	105	108	4.1	1.5	2.9
Milk	101	103	105	105	106	111	113	3.2	1.8	1.8
Eggs	101	103	107	106	116	122	126	6.3	3.7	3.4
Foods[c]	100	104	107	106	110	113	114	3.7	2.2	0.7
Non-foods[c]	93	107	92	100	99	110	91	0.8	-0.3	-17.5
Gross value of farm output[c]	99	104	105	105	109	113	111	3.3	1.9	-1.7

Source: Prepared by the Joint ECLAC/FAO Agriculture Division from FAO data.
[a]Includes countries within ECLAC's geographical region.
[b]Includes all available output for whatever use.
[c]Includes all available output for whatever use, except seeds and feeds.

and sugar cane grew at a faster rate than the average for the 1970s; oil crops continued to show a large increase, although smaller than in that decade; roots and tubers remained at standstill, and maize showed a big drop.

The total regional supply of farm products[3] fell in 1982 and even further in 1983, but it recovered in 1984 and more so in 1985. Furthermore, the structure of the supply of farm products changed as a result of the slower growth of exports in the 1970s as compared with imports —a trend which was reversed between 1982 and 1985 when export volumes rose and import volumes fell against a background of slow regional growth in output. Factors influencing this smaller supply were the cutback in imports by about 50%, the 30% decline in output, and the 20% increase in export volumes.

The importance of farm exports in the total value exported by the region is well known. They accounted for 47% of the total in 1970 and around 35% in 1980, but this share fell to 30% in 1985 despite a larger volume of farm exports. The region has traditionally been a net exporter of farm products, but as imports grew faster in the 1960s[4] agriculture's net foreign trade balance had been declining, although this trend did change from 1981. In 1984-1985 the positive balance was in the order of US$6 500 million at 1970 prices and US$22 100 million at current prices.

The pre-crisis imports trend was determined by several factors, notably the overvaluation of the real exchange rate, the tariff preferences granted for food imports, changes in

[3]The result of adding GDP and imports and subtracting exports.

[4]They accounted for 8% of the domestic supply of farm products in 1970, 10% in 1978 and almost 13% in 1980, before falling back to 10% in 1985.

the patterns of food consumption associated with urbanization and metropolization, exports subsidies in the developed countries and the very favourable terms of financing on which these purchases were negotiated; all these causes worked together to produce the steady decline in the net foreign trade balance of the region's agriculture. Food imports accounted for about three quarters of the region's total imports of farm products. To take another example, in 1978 it took only 32% of the region's farm exports to equal in value the total of farm imports; this ratio rose to 47% in 1981 and fell to 33% in 1985.[5]

The positive farm trade balance increased during the adjustment period in only a few countries, such as Argentina, Brazil and Paraguay, and to a lesser extent in Costa Rica and Honduras. In another large group of countries this balance fell and it rose in deficit countries such as Bolivia and Haiti, except in Mexico and Venezuela which experienced this situation but reduced their deficits. Only Chile and Peru of the deficit countries managed to move from deficit to surplus; in the case of Chile in particular this was due both to the drastic cutback in imports and to the increase in farm exports.

In regional terms one third of the surplus of the few countries which improved their foriegn trade in farm products between 1982 and 1985 was sufficient to equal the decline in the positive balances or the increasing deficits of the other countries. Accordingly, the region as a whole could show a relative improvement of about US$4 000 million in its trade balance for farm products in the period in question.

Oil crops, wheat, maize, coffee and tobacco were the main export products to increase in volume between 1980 and 1985; these products came from only a few countries of the region. In contrast, the physical volume of exports of bananas, cocoa, sugar and cotton fell, and this hurt a large group of countries heavily dependent on these exports.

[5]A distinction must be drawn between the two main items in farm imports —foodstuffs and intermediate goods for agriculture— in view of their different purposes. Strictly from the standpoint of the needs of the farm production process itself, the sector used one out of every US$10 earned by its exports; from the perspective of its function of feeding the countries' peoples, agriculture's contribution to the national supplies of foreign exchange is only one out of every two dollars of exports.

The reduction in imports resulting from the adjustment affected mainly maize and wheat; imports of sugar, meat and dairy products also declined, with consequences for the domestic food supply. The imports of oils of most of the countries of the region did not fall between 1980 and 1985; the widespread increase in the import demand for oils accounted for 25% of the rise in the exports of these products achieved by Brazil and Argentina.

The adjustment process and the drop of around 20% in the unit price of international farm trade meant a reduction of almost US$4 500 million in the region's farm imports between 1982 and 1985. Almost the whole of the excess imports which had displaced competing national products was absorbed, so that these imports increased their share in meeting the effective demand. On the other hand, the reduction in the import volumes of intermediate goods for agriculture and their higher cost in national currencies affected the rate of use of productive resources and the effective expansion of farm production capacity.

The decline in nominal international prices between 1980 and 1986 meant that the average level of the region's unit prices for exports and imports in the period was similar to the 1977 level. This decline was influenced by the revaluation of the dollar at the beginning of this decade and the sustained expansion of world food production resulting from the overproduction in the developed countries, the increase in the self-sufficiency index of Asian countries which were formerly net importers of food, and the overproduction of grains in some African countries. To this was added the saturation of some world markets, the growth of protectionism and export subsidies in developed countries, and the conflicts between farmers of North America and the European Economic Community which led to changes in some of their price policies.

The increase in the volume of farm exports was due to the fact that the output available for export was generally bigger than the amount actually exported, as well as to the adjustments of the real exchange rate, the reduction and elimination of taxes on farm exports, the investments and the technological changes made in agriculture at the end of the last decade, and the recent fall in the value of the dollar. As some of these determinants of the growth of exportable products weakened or ceased to operate, the physical volumes of exports were more openly affected by movements in international prices, and this apparently began to happen from 1986.

The available quantitative and qualitative information leads to the conclusion that the region's agriculture was damaged by the adjustment to a comparatively lesser extent than other sectors of the national economies. However, it must be pointed out that four or five years is not a sufficiently long period for an effective assessment of what has happened in agriculture as a result of the adjustment and, in particular, of the capacity of the various production agents in farming to respond —as measured by changes in the production structure— to the changes in the macroeconomic variables and in the specific policies for the sector.

The fact that the sector's output continued to grow during the adjustment process, albeit at a slower rate, indicates an *anticyclical performance by agriculture.* There are a number of hypotheses which help to explain this phenomenon, including in particular the shifts in relative prices in favour of tradeable products which might have begun to influence the production growth rate; the fundamental necessity of food supply, which meant that the demand for foodstuffs declined less than the overall aggregate demand; the adoption and recent introduction of policy measures to offset certain expected effects of the macroeconomic policies; the increase in a number of products favoured by selective credits —in some cases subsidized— which amounted to exceptions to the restrictive macroeconomic policies; the weakness of the links between agriculture and the other economic sectors, which prevented the production cutback in those sectors from having a severe impact on agriculture; the biological nature of agriculture and a degree of inertia in the production performance that might reasonably have been expected at the beginning of the adjustment.

The disruption and uncertainty in the international and national economies in recent years and favourable or unfavourable weather conditions and other natural phenomena sow ambiguity and doubt in an analysis of regional scope. There is therefore justification for including some examples of concrete national production performances which illustrate the effects of the adjustment with greater clarity.

Before the crisis the development of soybean production (Brazil and Argentina) had depended basically on technical innovations in the production process, so that its long-term course can hardly have been affected by the policy measures adopted for purposes of the adjustment. Similarly, the development of rice production in Peru, Colombia and Ecuador depended to a large extent on the improved technologies introduced, which mitigated the potential effects of the adjustment on this crop.

The rapid long-term development of poultry farming, which was a common factor in the region, was determined mainly by technological innovations and the dynamic trend of domestic demand, which had a locomotive effect on the production of raw materials for poultry feed; the contraction of aggregate demand and the fall in wages and personal income during the recessionary adjustment clearly altered this course. Producers of grains and oils in Argentina were subjected to measures to reduce the increases in their income resulting from changes in the real exchange rate and improvement of physical output, with a view to holding the profitability of these operations at fairly stable levels.

The development of traditional basic crops for domestic consumption —tubers in Peru, Brazil, Colombia and Ecuador, maize for human consumption in Mexico, Peru and Ecuador, and beans in Brazil, Mexico and Colombia— which were produced to a large extent by peasant farmers and had also suffered a long downward trend in consumption, continued to be affected by these factors, with apparently little impact from the recession. Technological change has been marginal in these crops.

The expansion of livestock in Ecuador, which had been heavily influenced by the rolling-back of the agricultural frontier and the incorporation of new land, was apparently not affected to any great extent by the adjustment policies. However, in the long term these policies may have considerable adverse effects on present patterns of livestock production in many countries of the region.

The recent development of fruit-growing in Chile is a result of the successful confluence of a number of factors such as the efficient and systematic formulation and implementation of a special promotion programme, the continuation of an exports-oriented exchange-rate policy, a constantly expanding external market and many exogenous economies generated by the technological innovations incorporated by producers, marketers and exporters. The same thing happened in the case of forestry production.

c) *The effects on agricultural production agents*

The macroeconomic management associated with the adjustment has affected agricultural production agents in different ways; it altered the economic environment in which the agribusiness economy was accustomed to operate, and at the same time agribusiness was compelled to grapple with the more costly servicing of its own massive debt. Some indicators show that the drop in output in this important section of the farming economy was the reason for the slow growth rate of the sector's regional output, especially in 1982 and 1983. In these years the adverse effects of the bad weather in several countries made an obvious contribution to the decline in the output of the region's agriculture.

The agribusiness economy oriented towards the domestic market suffered uncertainty and reduced profits, mainly as a result of the higher cost of inputs and other imported means of production and of the increased cost of money, which was not always offset by price increases and cuts in real farm wages. The strength of production activities was on the one hand affected by the overall drop in aggregate demand and, on the other hand, stimulated by the possibilities of imports substitution resulting from the decline in foreign purchases of farm products.

The agribusiness economy focused basically on exporting was favoured by devaluations, access to improved technological options, declines in real wages, and progress in marketing logistics. These favourable factors were offset by the large and sustained fall in international prices and by other external market restrictions (notably protectionism), by the increased cost of the imported component and of money, and by the cutback in the volume of credit.

Medium-sized farmers, and more so small farmers, who were closer to the peasant economy, also cut their output, but to a lesser extent than the big businesses, for they generally have less recourse to official lending and their output is linked to the expanding demand of the urban consumption of processed foods and diversified exports and to the substitution of imports. This business sector, the importance of which in national production is variable but generally considerable, was certainly one reason why the decline was smaller in the region's agricultural production than in other production sectors of the national economies.

Peasant agriculture suffered greater damage than the agribusiness economy owing to an accumulation of factors that worked against it: the cutback in subsidized lending; the decline in public agricultural and rural investment and other kinds of public spending connected with rural development programmes; the temporary drop in the domestic demand for some of its main production items; the lower remuneration of waged labour, which made up a large part of the family income; the decline in seasonal work owing to the production cutback in the agribusiness sector, and the higher cost of imported technical inputs commonly used in some peasant operations.

The economic characteristics and rationality of peasant farming itself ensured that it would continue to produce and supply basic foods, virtually in accordance with its long-term trends. This is why the bulk of national production of basic consumer foodstuffs has not declined very much, except in countries where the agribusiness economy accounts for a large proportion of the production of some of these foods.

d) *The effects on the structure of farming policies*

The structure of farming policies has been altered in most of the countries of the region. As stated earlier, a fairly standard farming policy prevailed up to the beginning of the 1980s, made up of a "package" of economic and financial policy incentives which directed, regulated and stimulated the growth of the sector's output and productivity. This "package" was backed up by transfers of income by means of public investment in agriculture, programmes of technical support for production, and social benefits in rural areas. The summary versions of the country papers which are included in this *Review* give an idea of the differing degrees to which the recessionary adjustment has disturbed —or even dislocated— the functioning of the elements in this pattern which had gradually been established to compensate for or correct the bias against agriculture involved in the development strategies and macroeconomic management policies devised and implemented in the pre-crisis period to give preferential support to protected industry.

The lesser protection afforded to agriculture had to be reconciled with policy measures designed to keep food prices down by reason of their importance in urban-industrial development. The general prices policy was itself used as a vigorous mechanism for guaranteeing the supply of economic resources from agriculture to the rest of the economy. This goal was promoted by the continual revaluation of the real exchange rate, which had a powerful impact on the divergent growth rates of non-farm and farm productivity. In other words, the general economic policy was a powerful determinant of the differing profit levels of industry and agriculture, with the latter usually lower.

But since at the same time it was necessary for agricultural production for export and for home consumption to increase, the low level of farm profits was offset by specific economic incentives which acted directly or indirectly on a broad range of products or groups of products. This marked the emergence of the familiar measures to reduce production costs, and cuts were made to differing extents and by different means in the cost of imported and locally produced intermediate goods and in the cost of the capital needed to expand its formation in the countryside and to cover the operating costs of crop and livestock production. Tax exemptions were introduced and direct subsidies and grants were often used, stimulating increased production of certain crops. At the same time government intervention in production was gradually being intensified in food production, processing and distribution. The public agricultural apparatus was expanded, diversified and specialized to ensure the efficiency of government control and regulation and the provision of technical support and rural social services.

The changes experienced by the majority of the national economies in basic areas of their operation as a result of the crisis and the adjustment were accompanied by major shifts in the development of their agriculture. When the earlier cushion of compensatory or corrective measures was reduced or removed, agriculture came to depend increasingly on the individual and collective impact of the macroeconomic measures associated with the adjustment.

The changes made with respect to trade and tariffs, monetary policy, credit and interest rates, prices, taxation and public expenditure implied alterations in the structure, intensity and selectivity of the subsidies granted to agriculture to increase its profitability. The summary versions of the country papers mentioned earlier show how in several cases all these subsidies were eliminated, in others considerably reduced, and in only a very few countries merely slightly altered. It is not the purpose of this article to present a composite picture of the national situations that emerged. The aim is only to indicate the direction and strength of factors which generally had the effect of increasing production costs. The decline in real farm wages helped to reduce or neutralize this cost increase but at the same time it made living conditions in rural areas worse. Both the social tensions generated in the countryside by the drop in the income of the farm labour force and the overindebtedness of farm businessmen argue for a concomitant adjustment of farm prices.

The devaluations of the real effective exchange rate have helped to readjust the relative prices of most externally tradeable products. Domestic food prices have also been freed, to varying degrees, from control and regulation; at the same time, support prices have been established or re-established for the products considered strategic or basic for popular consumption, albeit by the setting of price bands or a single price.

The governments have little room for manoeuvre within the loan agreements with the IMF with respect to reducing farm production costs by means of the policy and institutional intervention usually employed for this purpose. In the present circumstances, on the other hand, it is hoped that agriculture will be able from its own resources and despite its debt to make better use of its production potential, increase its output and improve the international competitiveness of its exports and import substitutes. This hope is based on the fact that in the long term farm output has grown fairly strongly and shown a great capacity to adapt to the changing and generally unfavourable conditions of the domestic and foreign markets, to accomodate itself to the familiar restrictions and shortcomings in its capital formation, and to overcome the lack of sectorally balanced macroeconomic policies. A relative change is also expected in the composition of the factors of production, in the sense that the technologies will be less demanding of capital and more intensive use will be made of the labour force —a change that will bring some advantages for medium-sized and small farms.

The fairly widespread elimination of sources of preferential financing for agriculture and the continuation of high real interest rates in several countries have meant that the production process depends to a greater extent on the self-financing of farming enterprises. The changes made in this respect will modify the production structure, especially for exportable and import-substitution crops *vis-a-vis* domestic consumption crops, and between crops and livestock, and more land will be available for renting.

Many countries have reduced or eliminated the indirect subsidies afforded to farm production by the adjustment of the prices of imported machinery and agrochemical inputs, fuel, lubricants, and rural electricity supply; this has been a factor in the increase of production costs. Situations have thus arisen which have accentuated the inherent risks of farming and the uncertainty about the profitability of various crops and livestock products.

It has already been pointed out that the restriction of public spending has had serious adverse effects on State programmes to promote production, training, research, extension, formation of co-operatives, agrarian reform, and rural settlement and development. These programmes have been watered down or trimmed back, and in some cases they have been subjected to thorough review in order to improve their effectiveness and prune their administration.

The performance of State bodies concerned with the marketing of farm products has been affected by two superimposed situations which boosted each other's effects: the fiscal burden which substantially reduced the operational and financial resources of these bodies and the increasing questioning to which they have been subjected with respect to their operational efficiency and their effectiveness in attaining the established goals, which were often mutually contradictory or bore no reasonable relationship to the resources available.

As a result, a large proportion of the State marketing bodies have undergone major changes which in extreme cases have led to their winding up. It must be remebered that these bodies, with all their great diversity of structure, have played an important role in the supply of basic grains and, to a lesser extent, meat, dairy products, sugar and soybeans. In Mexico and Peru it is apparently still the intention to strengthen them.

Among the repercussions of the adjustment on the institutional framework established for the development of agriculture and the marketing of its products, attention must be drawn to the elimination of monopolies in the marketing of the main foodstuffs and the gradual or abrupt reduction of consumer subsidies. Projects have emerged in several countries for the establishment of farm-product exchanges with the intention of reducing the degree of State intervention in the marketing of food products and enabling the private sector to supplement or take over, depending on the country, the activities of State agricultural marketing bodies.

III
Final comments

The available quantitative indicators justify the conclusion that during the crisis and the recessionary adjustment the region's agriculture was damaged comparatively less than other sectors of the national economies. The decline in its output was strongly influenced by the large and sustained drop in the international prices of the main farm products exported by the region and the bad weather which affected several countries in 1982, 1983 and 1986.

Even in these circumstances the region's agriculture made a considerable contribution to the improvement of the balance of payments. The net balance of Latin America's external farm trade was almost US$24 000 million between 1982 and 1985, while the net balance of the region's total foreign trade was about US$29 000 million in the same period; in other words, the farm surplus accounted for 82% of the total regional surplus resulting from the recessionary adjustment. This large contribution was due both to a vigorous cutback in farm imports —about US$16 000 million— and to the sustained increase in the volume of farm exports, which unfortunately did not bring the countries of the region foreign currency earnings proportionate to the increased production and export effort made in those years.

The agriculture sector helped to prevent aggravation of national inflation rates, for its output continued to rise, although at a slower rate; this rate was fairly close to the rate of increase of total aggregate demand, which also fell during the adjustment.

The decline in farm imports encouraged the effective and competitive substitution of imports of food and certain intermediate goods for farm production. Although it is not yet possible to make a clear assessment of the magnitude of the farm imports substitution effort made by the region as a whole, it is nevertheless obvious that the trend towards increased external food dependence was halted. There are signs that in the medium and long terms imports substitution may come to exercise a strong influence on the transformation of the structure of agricultural production.

The disruptive and vacillating nature and the defects of the policies adopted during the adjustment process generally damaged the national farming economies. Similarly, the inability or refusal of the State to continue to sustain the bulk of the economic incentives established earlier specifically for agriculture brought added uncertainty to farming and impaired its profitability.

The instability of farm profits or the disappearance of a good part of them placed in a very difficult situation those big and medium-sized enterprises which had overborrowed. They also contributed to the decline in the sector's real wages and accentuated the trend for change in the nature of farm work, which is reflected in the gradual replacement of permanent workers with temporary ones.

The crisis and the adjustment process have caused a drop in the real incomes of small producers and landless farm workers. This situation has been accentuated by some retention of labour in the countryside as a result of the interruption —certainly a temporary one— of the age-old migration from the country to the town. In some countries agriculture has even become a refuge for redundant urban population seriously affected by the fall in its income. The rural labour markets have been altered by the large increase in the number of workers seeking jobs.

The adjustment of the real exchange rate has been the instrument of macroeconomic policy with greatest potential positive impact on agriculture's economic performance. The devaluations will have compensated producers fully or in part for the drop in prices in the international farm markets. The deterioration of the terms of trade considerably impaired the modifying effect on the relative prices of tradeable and non-tradeable farm goods that adjustment of the real exchange rate might have produced. Relatively few farm products were sold abroad at fairly stable prices and without market restrictions.

The positive effect of the exchange-rate and trade policies on tradeable farm production was offset by the higher cost of farm imports in the national currencies resulting from monetary policy designed to cut back total aggregate demand —the amount of official lending to agriculture was reduced and the interest rate was raised— and from the restriction of real spending, which included a large reduction of the State budget deficit and caused massive cuts in government expenditure in support of agricultural growth and rural social development. These cuts have had adverse effects on investment and technological change in agriculture and on the condition of the rural poor.

The various macroeconomic adjustments and their individual and combined effects have generally produced changes in the structure, intensity and selectivity of the direct and indirect subsidies and other resource transfers formerly included in the specific agricultural policies designed to improve farm profits and alleviate rural poverty. The serious weakening —in some cases the actual break-up— of the earlier fairly common pattern of agricultural policy has disrupted, to differing degrees depending on the country, the economic and financial environment in which national agriculture was developing, as well as the management of the public agricultural apparatus and its status as an agent for intervention in the development of the sector's economy and in the level of welfare of production agents in agriculture.

In these circumstances farm profits, which until a short time ago depended on the amount of the subsidies designed to reduce production costs and stimulate increased productivity, have come to depend heavily on the unadjusted prices of physical inputs, the effective cost of money, lower wages for the work force, and other factors which determine price levels, which are certainly what induce economic agents to carry on their production activities.

The macroeconomic management policies associated with the adjustment have now been in place for some years, and more years will certainly pass before there is any loosening of the restrictions resulting from the foreign debt. It is still too early to say whether the crisis and the adjustment have had the virtue of introducing more profound and permanent changes in the public management of agriculture —as a result of the combination of macroeconomic and sectoral decisions— which will produce more balanced sectoral conditions for the development of this activity, so that it will no longer be necessary to offset the harmful effects of distorted price systems. In those circumstances the real exchange rate, the overall structure of prices and taxes, the level of real wages, and effective improvements in productivity and competitiveness would determine the sector's profitability and have a profound influence on the modification of the present production structure. A corollary of all this would be the elimination or substantial alteration of one of the basic functions assigned to agriculture; that of furnishing part of its economic surplus to facilitate accumulation in other sectors of activity, especially in industry.

That alternative, the real possibilities and economic and social implications of which have not yet been adequately explored, would mean that the crisis and adjustment had generated —implicitly, for there have been no concrete government statements on the matter— transformations affecting the very essence of agricultural growth, which would have different bases of support and operation in the future.

If instead the changes which have occurred and are still occurring prove to be fairly transitory and the long-prevailing pattern of agricultural growth is re-established to some extent, strong pressures will emerge for a return to subsidized treatment for agriculture to offset the adverse effects of global development strategies and national economic policies.

The present macroeconomic picture in the region is characterized by poor economic growth, a very large foreign debt, resurgent inflation, disruption and uncertainty at the world and national levels, and weakening of the foreign demand for the region's export goods, with a consequent worsening of its terms of trade, which are now more unfavourable than at any time since 1930.

These elements of the crisis will apparently not change much in the medium term and they will therefore shape the region's economic prospects, which in turn will frame and determine the future development of the countries' agriculture. The policies devised for macroeconomic purposes will assuredly assign to agriculture the main task of continuing to contribute to an important extent to the generation and supply of foreign exchange and to the domestic supply of foodstuffs and other farm products needed by agro-industry. The performance of these functions will depend mainly on the decisions taken with respect to the real exchange rate, prices policy, taxation, incomes and wages, and real expenditure. All these policy decisions will individually and jointly affect the vitality of production for export, for imports substitution, and for home consumption.

In this last respect the sharp contraction of domestic demand for farm products in recent years must not be forgotten. This demand grew at a rate of over 4% a year in 1970-1980 but the rate fell to less than 1.5% a year between 1980 and 1986. It is well established that any future expansion of the domestic demand for food —the main component in the domestic demand for farm products, which virtually determines their growth rate— will depend in simple terms on the rates of increase of the population, the per capita income, and the income elasticity of farm products. Since in the immediate future the runaway growth of the region's population will decline and the annual growth of the regional per capita income will certainly be lower than in the 1970s, it may be supposed that the domestic food demand will increase until the end of the century at a rate below 3% a year.

World trade in farm products is also passing through a crisis caused by the interaction of the farming policies adopted by the industrialized countries —which have had a marked effect on the level and movement of world farm prices and on the volume and structure of world trade— and by the sharp contraction of the international demand for farm goods in the early 1980s associated with the world economic recession. All these circumstances have meant that the region has had to cope with adverse external structural conditions aggravated by temporary situations which rendered them even more unfavourable. The fact that the farm exports prospects of the countries of the region are generally unpromising in respect of prices and volumes (which will certainly encourage the countries to miss no relevant opportunity, however marginal it may seem) lends weight to the potential role of the domestic market as a stimulus of increased farm output in the immediate future in its national, subregional and regional aspects. This does not remove the need repeatedly to stress the interdependence between the economic growth of the region's agriculture and international farm trade in supporting and strengthening the development process.

The foreseeable moderate expansion of the aggregate demand for farm products will in turn offer smaller incentives for growth of the region's agriculture —a disappointing prospect aggravated by the lack of attraction which the curtailed public investment in agriculture has recently been exercising for private investment. It will therefore be essential to confront with imagination and vigour these restrictions, which will be difficult to overcome, if the aim is effectively to improve the productivity and competitiveness of agriculture.

It is hardly necessary to stress that the decisive factors which represent serious obstacles to agricultural growth and rural social development in the future will have to be given due weight in the design and application of macroeconomic and sectoral policies if the wish is to ensure that agriculture makes an important contribution to the development of the economy and society in Latin America. To give priority to agriculture by reason of its function of supporting overall development will mean allocating and transferring to the sector the necessary resources for it to expand, improve and transform its present production capacity and structure (which are the result of the distorting and corrective policies maintained throughout a fairly long period) and thus to alter the traditional habit of arguing that agriculture must support itself by its own resources and productive forces if it is consistently to increase its economic vitality and secure positive changes in its social structures.

It is essential that in agriculture-based societies such as most Latin American societies priority must be given from the macroeconomic standpoint to investments focused on the most relevant and dynamic links between agriculture and industry and services, within the framework of a unifying, systematic and conservationist concept of farming policy whch reaches beyond the conventional limits of agriculture as an economic sector. Such a policy will have to take explicitly into account the effects which the changing forms of social organization of production and the technological situation in industry are having on the transformation of the production structure of agriculture. This will eliminate the familiar tendency to believe that the relationship between agriculture and industry is one of excessive opposition or conflict and should be replaced by a different, complementary, relationship which will facilitate the attainment of macroeconomic balance and remove the stubborn distortions affecting sectoral prices.

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Agricultural development and macroeconomic balance in Latin America: an overview of some basic policy issues

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In this article the author analyses the evolution of the Latin American agricultural sector from a long-term viewpoint, centering on the relation between the evolution of various macroeconomic policies and that of agriculture in the region. Among these policies, he highlights the importance of domestic relative prices and the significant impact of policies relating to the form of insertion of the region in the international economy in the areas of trade, finance and production.

From the early 1950s onwards, both types of policies discouraged the production of traditional exports, the growth of non-traditional exports, and efficient import substitution, yet even so it was possible to reduce the gap between potential and effective production.

In the 1970s, agriculture grew faster because the depressive effects of macroeconomic policy on relative prices were offset by subsidies. The rise in commodities and the greater access to external finance led to a big expansion in domestic absorption in much of Latin America.

This development style generated unsustainable macroeconomic imbalances in the 1980s, the resolution of which has been inefficient because of imperfections in the international capital market and domestic institutional and structural shortcomings. These attempts at rectification, however, have modified domestic relative prices, giving rise to a positive response by regional agriculture. The type of adjustment used, however, does not ensure dynamic efficiency, while there is also a need for various institutional and policy reforms both as regards domestic relative prices and the allocation of public and private resources.

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Introduction

The economic growth performance of Latin America has been weakened over most of the course of its history by the distortion of domestic relative prices. Prior to the crisis of 1929 the unbridled exploitation of extraordinary, rent-based comparative advantage generated substantial secular income growth but biased the domestic relative price system against the production of tradeables, exportables as well as importables. And in the several decades preceding the Great Depression the per capita output of tradeables in fact stagnated or declined in the wealthiest countries of the region, notwithstanding the pursuit of relatively free trade policies. The shocks emanating from, and the initial process of adjustment to, the Great Depression largely neutralized this distortion of domestic relative prices. However, over the course of this period and especially from the early 1950s onward, the stance of macroeconomic policy gradually became biased against production of tradeable goods and services other than importable industrial products. Indeed, the persistent application of expansionary fiscal and monetary policies and accumulation of external debt during both the troughs and peaks of the international economic cycle, as well as the recourse to import tariffs and quotas, price controls, multiple exchange rate régimes, explicit export taxes and restrictions on the disposition of foreign exchange, turned domestic relative prices against the production of traditional exports and likewise discouraged the development of non-traditional exports and efficient import substitution, while constraining domestic saving, reducing the efficiency of domestic investment and diverting domestic saving into external financial assets.

This macro policy stance nevertheless proved successful in bringing effective production closer to potential production, thus narrowing the massive output gap provoked by the Great Depression, and in initially harmonizing external and internal balance. However, in the years following the Korean War-related commodity price boom the growth performance of tradeables (especially in agriculture) faltered, the resource gap widened and overall output growth slipped. In contrast, during the 1970s both agricultural and overall economic growth approached or surpassed potential, as the depressive effects of the prevailing macro policy stance on the relative prices and profitability of tradeables other than importable manufactured goods were largely offset by subsidizing production costs of these goods and/or by direct subsidies to producers of non-traditional exports. At the same time, a new commodity price boom improved the profitability of primary exports and together with unrestricted access to external finance fuelled an unparalleled expansion of domestic absorption throughout much of Latin America.

While the above-mentioned combination of biased macroeconomic policies and compensatory sectoral subsidies plus unlimited access to the international capital market was accompanied by unprecedented economic growth, this development style eventually generated unsustainable macroeconomic imbalances, the resolution of which contributed to the severity of the 1980s economic crisis. The recent adjustment to the repercussions of the international economic crisis and of the exhaustion of incongruous domestic policies has indeed been highly inefficient, owing to international capital market imperfections as well as to domestic institutional and structural shortcomings. However, the crisis-induced rectification of key domestic relative price relationships has abated one of the major obstacles to the long-run development of the Latin American economies, as the short-run output response of regional agriculture suggests. Yet, the post-Great Depression experience shows that an automatic adjustment process, regardless of how protracted or intense, does not ensure dynamic efficiency. In the 1980s growth-oriented structural change additionally calls for major institutional and policy reforms that sustain the normalization of the domestic relative price system and reallocate public and private resources.

I

Abundance of economic rents and the distortion of domestic relative prices

Prior to the Great Depression the development of rent-producing activities in the region brought about levels of income that everywhere probably far outstripped those obtaining prior to the exploitation of comparative advantage through international trade and that in some countries compared favourably with those of middle-income European countries.[1] However, the rent-based economy that came to predominate in Latin America proved incapable of sustaining growth at potential over the long run and in some instances eventually stagnated for decades: the abundance of rents, together with the automatic adjustment mechanisms of the gold standard led to a singular degree of specialization in the production of exportable goods in which the region possessed extraordinary comparative advantage but the rate of growth of income from rent-producing activities trended downward over time.

Indeed, the unbridled exploitation of rent-based extraordinary comparative advantage raised indefinitely the domestic prices of non-traded goods and services relative to the nominal exchange rate, the maintenance of which in terms of gold was the heart of the gold standard, thus indefinitely lowering (deteriorating) the real exchange rate *vis-a-vis* the value that would have prevailed in the absence of abundant rents.[2] This brought about a real exchange rate, or domestic relative price system, whose secular trend value virtually precluded the production of tradeables other than rent-based activities that

[1]Comparative international data on per capita income appear in Balassa *et al.* (1986, table 1.2).

possessed extraordinary comparative advantage, notwithstanding the minor incidence of tariff-associated and other trade-barrier-related relative price distortions throughout most of Latin America until the advent of the Great Depression.

The abundance of rents exercised an impact equivalent, in effect, to a prohibitive across-the-board tax on the production of tradeables, exportables as well as importables.[3] On the other hand, the rent-determined real exchange rate indefinitely shifted domestic expenditure in favour of tradeables in comparison to the pattern that would have obtained if the domestic relative price of tradeables had approached a long-run equilibrium value.[4] In addition to the distortion of relative output prices that the unbridled exploitation of prevailing extraordinary comparative advantage produced, relative factor prices became prone to distortion in the presence of excess rents. According as the economy-wide wage rate thus rose above the opportunity cost of labour, the abundance of rents also indirectly discouraged the employment of labour.[5]

Capital market imperfections —as well as the automatic adjustment mechanisms of the gold standard— reinforced the complete specialization of the rent-based economy in the production of tradeables in which extraordinary comparative advantage obtained at any given moment. While profitability in tradeables production may indeed be limited to existing rent-based activities possessing extraordinary comparative advantage at prevailing relative output and input prices, the return to other activities could become profitable, and hence competitive, in the future even if relative output prices were to remain unchanged. In effect, production that initially implies losses could subsequently admit of profits according as the scale of output and learning-by-doing enhance productivity —the familiar infant industry argument. However, a dearth of financial intermediation would thwart national economic agents from undertaking such activities if they lacked sufficient savings to cover start-up costs and working capital and to sustain the transitory losses (Bassu, 1984). As Little (1982) and others have pointed out, the infant industry argument need not apply only, or especially, to manufacturing. Indeed, in retrospect it may be most useful in explaining, for example, how a country like Argentina, which became one of the principal suppliers of wheat on the world market in the early twentieth century, purchased wheat abroad until the 1870s, when a substantial tariff was levied on wheat imports (ECLAC, 1951).

In the "pure" rent-abundant economy, the resulting structure of production in the market segment thus was limited to a sector producing non-tradeables and a handful of exclusively rent-based exportables, the lion's share of the value of the output of which originated in a few —in same cases only one— rent-based activity. Output of importables was nil. The sector producing non-tradeables produced goods that were potentially importable, i.e., traded internationally, according as natural barriers afforded by transportation costs protected such activities from international competition. Activities producing potentially tradeable goods could naturally survive or emerge in a subsistence sector, likewise according as transportation costs neutralized the potential gains from trade.[6] In contrast, the

[2]Secular long-term capital imports also contributed to the secular excess supply of foreign exchange, directly, as well as indirectly (i.e., by increasing the production of rent-producing activities). Like abundant rents, secular long-term capital imports directly and indefinitely lowered the domestic relative price of tradeables compared to the value that would otherwise have obtained. And it was precisely this effect that converted such capital flows into a real transfer of goods and non-factor services and discouraged the domestic production of tradeables.

[3]By way of contrast, a tariff is of course equivalent to a tax on the production of exportables (Lerner, 1936). In a rent-based economy a tariff might be a second best policy to offset the deleterious repercussions of relative price distortions: over the course of the secular trend the tariff would neutralize the depressive effect of rents on the relative prices of importables while its effect on the relative price of exportables would be redundant (the abundance of rents precludes the production of exportables regardless of tariffs). Once rents are dissipated, however, the depressive effect of the tariff on the relative price of exportables would manifest.

[4]The long-run equilibrium domestic relative price system, or the real effective exchange rate, is the one that is consistent with long-run external and internal balance.

[5]For an analysis of this type of rent-related distortion, the effect of which became more generally notorious in the wake of the post-World War II demographic revolution, see Lewis (1964), Seers (1964), ECLAC (1981) and Bruton (1984).

[6]In many countries the subsistence sector continued to employ a significant part of the labour force until after World War II, but in some —e.g., Argentina, Costa Rica and Uruguay— the subsistence sector virtually disappeared in the nineteenth century.

resulting structure of demand was shifted in favour of tradeables. Finally, rent-related distortion of relative factor prices redistributed rents from the owners of natural resources to the labour force, but biased the economy-wide production function in favour of capital.

As international prices of rent-producing activities, as well as other determinants of the total capacity to import, fluctuated around the secular trend, cyclical foreign exchange surpluses and shortages were resolved by the gold-based automatic adjustment process that eliminated the attendant macroeconomic disequilibria (e.g., between the flow supply of and demand for money) by varying the level of domestic expenditure relative to national income; by inducing fluctuations in the nominal and hence relative price of non-traded goods and services and thus switching expenditure from tradeables to non-traded goods and services (or vice versa), and by eliciting compensatory capital flows, provided, *inter alia*, that domestic economic policy were neutral.[7] Increases in the real exchange rate, or rises in the domestic relative prices of tradeables brought about by declines in the absolute prices of non-traded goods and services in response to adverse transitory external shocks, did not suffice to stimulate the production of tradeables other than the activities with extraordinary, rent-based comparative advantage, because the incentives to do so were in turn more than erased during the cyclical upswings, when the process of adjustment to favourable transitory external shocks inflated the domestic relative price of non-traded goods and services *vis-a-vis* its trend value. Thus, gold standard adjustment via the price-specie-flow mechanism (i.e., fixed nominal exchange rate, endogenous money supply and flexible prices of non-traded goods and services) to cyclical external shocks was not only consistent with a secular abundance of rents and the peculiar structure of production it spawned, but was also efficient (i.e., occurred without unnecessary welfare losses) over the course of the cycle, provided that markets and governments behaved as required.

II

Economic policy and the distortion of domestic relative prices

With the advent of the Great Depression, however,the abundance of rents evaporated, as international trade and commodity prices collapsed and capital flows to the periphery vanished. The magnitude and duration of the ensuing shift of domestic relative prices in favour of tradeables was unprecedented, and largely eliminated the rent-related bias against importables and exportables. But over the course of the 1930s and 1940s economic activity recovered from the Great Depression and World War II almost exclusively as a result of the sustained development of a sector producing importables (mainly manufactured products but also including agricultural commodities), while exports languished at levels considerably below those achieved before 1930. In effect, the prolonged breakdown of the multilateral international trading system and the division of the world into trading blocs behind steep tariff walls and quantitative restrictions severely limited the scope of the development of non-traditional exports as well as the recovery of traditional ones. In addition, domestic economic policy gradually reintroduced distortions in the domestic relative price system that discouraged the production of exportables, while fostering the output of importables, especially manufactured ones.

Although the massive deterioration of the terms of trade and abrupt reversal of resource

[7]For further details on the operation of the gold standard see, for example, the papers collected in Bordo and Schwartz (1984).

transfers, together with the demise of the gold standard, paved the way for the transformation of the structure of production, the implementation of counter-cyclical fiscal and monetary policies implied a freely fluctuating exchange rate: a policy that not only left the entire system unanchored and hence exposed to open-ended instability, but also ran contrary to traditional policy rules. Whether by design or coincidence, the extensive recourse to import quotas and multiple exchange rate régimes, following the renunciation of the gold standard and major real devaluations, helped to reconcile expansionary fiscal and monetary policies with a return to a semblance of exchange rate stability, according as the scope for employing the resources left idle in the train of the Great Depression remained significant.

The combination of major rises in the real exchange rate and the pursuit of restrictive trade policies *cum* counter-cyclical fiscal and monetary policies was accompanied by an economic recovery that materialized sooner and was more vigorous in Latin America than in most of the industrialized countries.[8] However, as the international economy recovered and then embarked on an era of unprecedented growth in the post-World War II years, import substitution policies were steadily intensified throughout most of Latin America, first in response to the Korean War-related international commodity price boom, to offset the depressive effects of the new abundance of foreign exchange receipts on the domestic relative prices and production of manufactured importables, and subsequently to counteract the disequilibrating impact of the protracted downturn in international commodity prices and the stagnation of export quantum on external balance. As a result, however, domestic relative prices became increasingly more biased against the production of exportables and, as in the pre-Great Depression era, the only products in which the region could compete internationally were ones in which it possessed rent-based comparative advantage. Even the output of these product lines tended to stagnate as a consequence of the policy-induced distortion of domestic relative prices.

The use of import tariffs and quantitative restrictions, originally as stop-gap balance of payments measures and eventually as part and parcel of a strategy specifically aimed at industrialization through import substitution, altered domestic relative prices throughout the economy. Restrictive trade measures (such as tariffs) that fostered industrialization raised the nominal domestic price of the protected manufactures and hence the domestic relative price of manufactured importables in terms of all other goods and services.

The extent of the increase in the absolute and relative profitability of producing manufactured goods hinged on the domestic value added in manufacturing production and the average tariff on the imported components employed in the production of exportables (which was usually low or nil) and in non-traded goods and services, as well as the incidence of nominal tariffs on the price of final manufactured imports and the demand for foreign exchange. By the same token, tariffs on manufactured products reduced the relative prices and profitability of all unprotected goods and services. Protection of manufactured importables especially depressed the relative prices and profitability of exports and agricultural imports because, in addition to the direct effects exercised on relative prices and costs, tariffs curbed the demand for imports, forcing the nominal exchange rate to fall below the value that would have obtained in the absence of tariffs over time. While the equivalency of import tariffs and export taxes has long been recognized, a tariff limited to manufactured imports is also equivalent to a tax on unprotected (e.g., agricultural) importables. On the other hand, as a result of this dynamic repercussion of protection, the relative prices and profitability of non-traded goods and services may on the whole improve (although they of course would deteriorate *vis-a-vis* those of the protected goods). However, the dynamic impact of tariffs is not sustainable, since it discourages the production of unprotected importables and exportables and hence is incompatible with sustained external balance, unless the supply of external finance is infinite. Finally, import quotas exercised analogous effects on domestic relative prices but produced windfall gains for the private sector rather than revenue for the government.

[8]The comparative historical record is discussed, for example, in Díaz Alejandro (1982) and Corbo (1986).

The persistent implementation of procyclical fiscal and monetary policies during international upswings, as well as of expansionary policies during the downswings, led to a progressive increase in public sector demand for financing and the creation of excess liquidity in relation to private sector demand for domestic financial assets. To impede or limit spillover effects in the markets for goods, services, fixed assets and foreign exchange, external finance, restrictions on current and capital account transactions and selective price controls were resorted to. The utilization of external finance to cover public sector deficit spending reduced the extent of creation of excess liquidity and/or crowding out of private investment that otherwise would have existed. It also absorbed the effects of the excess demand for goods and services on the domestic price level and the overall balance of payments, but did not eliminate the underlying excess liquidity. Selective price controls were also utilized to dampen inflationary pressures, while restrictions on current and capital account transactions helped to check the repercussions of expansionary fiscal and monetary policies on the balance of payments. However, the persistent excess supply of money eventually propelled output beyond its potential, inflating the domestic price level *vis-a-vis* international prices.[9] On the other hand, the inflationary impact of the excess liquidity on the nominal exchange rate was absorbed as long as external finance was available. According as the official nominal exchange rate was thus sustained at its existing level, the real exchange rate deteriorated, raising the prices of non-traded goods and services relative to those of tradeables. At the same time, the profitability of producing tradeables was squeezed by the rise in domestic production costs.[10] The use of current and capital account controls also increased the inflationary impact of excess liquidity on the prices of non-traded goods and services and led to the emergence of a parallel or black market exchange rate, likewise depressing the relative price of tradeables at the official exchange rate.[11] Recourse to selective price controls for items that bulk large in the formation of measured consumer price level variations further diminished the profitability of domestic food production.

During the 1970s the ramification of the prevailing macro policy stance on the profitability and production of tradeables other than manufactured importables were largely offset by sector-specific measures (principally underpriced credit) that subsidized production costs of tradeable agricultural goods and non-traditional manufactured exports. In addition, direct subsidies were made available for non-traditional exports. Agriculture also benefitted from the escalation of international commodity prices in the early and mid-1970s. As a result of these compensatory policies and the improvement of international relative prices, during the 1970s value added in Latin American agriculture (in constant prices) increased 3.5% per annum, or a rate close to the potential one, notwithstanding the bias of macroeconomic policy against tradeables and especially foodproduction. At the same time, the radical expansion of commercial bank lending to the region not only financed the balance of payments impact of the oil price shocks but also fuelled an unprecedented expansion of domestic absorption in oil-exporting and oil-importing countries alike. Positive international shocks accelerated economic growth via their salutary effect on the production of non-traded goods and services, but reinforced the bias of the prevailing macroeconomic policy stance against the production of agricultural importables and non-traditional exports.

While the combination of biased macroeconomic policies and compensatory sectoral subsidies with unlimited access to international capital markets thus was accompanied by unprecedented economic growth, it eventually generated pervasive imbalances, including stagnation of exports and non-manufactured impor-

[9] The inflationary effects of excess liquidity on the domestic price level are susceptible of being absorbed through the expansion of the resource gap up to the point where actual equals potential output. Beyond that point the wage rate, and hence the price of non-tradeables, will rise.

[10] According as the relative prices of non-traded goods and services escalate, the excess demand for goods and services will be channeled to tradeables, while factors of production will be reallocated to the production of non-tradeables, further increasing the resource gap and the demand for external finance.

[11] Such a multiple exchange rate régime also implies a tax on the production of exportables and a subsidy for imports.

tables, overproduction of non-traded goods and services, uncommonly large resource gaps, unexampled excess external debt and rampant domestic price instability, all of which contributed to the unusual severity of the contemporary economic crisis.

These disequilibria reflected a build-up of the costs incurred from inefficient resource allocation; from payment of subsidies on inputs; from administration of the policy interventions; from the diversion of productive resources to rent-seeking activities (e.g., to obtain subsidies); from the increased volatility of domestic relative prices produced by the escalation of inflation, and from the measures fashioned to mitigate distributional effects of the ruling development style (e.g., payments to labour —including unproductive employment— left redundant as a result of the depression of the rental price of capital relative to the wage rate of labour as well as of the disproportionate expansion of relatively more capital-intensive activities). Finally, on the demand side the excess accumulation of external debt and the costs it entails stemmed from overvaluation of the currency as well as from the drive to finance part of the costs of the prevailing development style from ostensibly non-inflationary sources.

III

Crisis and adjustment in the 1980s

In the early 1980s a radical change in the prevailing combination of macro and sectoral policies occurred throughout most of Latin America. The macro policy bias against tradeables was sharply reduced and sectoral subsidies slashed. This turnaround in policy was essentially an outcome of the dynamics of an involuntary adjustment process rather than the result of domestic policy initiatives. However, an automatic adjustment process is not necessarily efficient. Indeed, the region not only endured a reduction in domestic absorption out of all proportion to the balance of payments impact of permanent external and domestic policy shocks but also suffered enormous unnecessary welfare losses, principally due to an untoward dearth of external finance but also in consequence of domestic institutional and structural imperfections and the absence of commensurate domestic policy initiatives (Ground, 1986). Nevertheless, the crisis-induced change in economic policy opened the way for the emergence of a less costly and more sustainable development style.

According as the supply of external finance is cut off and the holdings of international reserves exhausted, the gap between domestic absorption and national income —or, what amounts to the same thing, the balance of payments current account deficit— disappears. This process is inevitable and automatic and unfolds as a result of the increase in the domestic relative price of exportables and importables —i.e., in the real effective exchange rate— that the dearth of external finance leads to, independently of whether policy-makers alter the official exchange rate and the nominal value of public sector expenditure and regardless of whether the private sector adjusts its nominal spending. The rise in the relative domestic price of tradeables drives domestic investment and national savings into balance through two channels: by switching domestic expenditure from tradeables to non-traded goods and services and by reducing the overall level of real domestic expenditure via the impact of the rise of the domestic price level on nominal incomes. It will also slash real domestic expenditure via the monetary channel if an excess demand for money emerges.[12]

[12]To the extent that the increase in the relative price of tradeables leads to a rise in the price level, the increase in the real effective exchange rate will reduce the real value of non-readjustable financial assets such as the money stock. If the demand for money is a demand for real monetary balances, when the price level goes up there will be an excess demand for money, given the existing stock of money, unless the public expects this increase to persist, i.e., to turn into inflation (in which case the demand for

The process of adjustment to a dearth of external finance necessarily leads to the reduction, if not elimination, of the bias against the production of tradeables, regardless of domestic policy.[13] Furthermore, in the course of curtailing real public sector expenditure the automatic adjustment process simultaneously rolls back the real value of the compensatory subsidies channelled to agriculture, unless these expenditures are specifically targeted for an increase. However, the parallel reduction of the bias against tradeables naturally weakens the rationale, and shrinks the extent of the need, for compensatory subsidies and hence dovetails with the overall restriction in resource availability. The transformation of the domestic policy stance witnessed throughout most of Latin America in recent years could thus be explained exclusively in terms of the dynamics of the automatic adjustment process. In practice, however, the change was a product of voluntary as well as involuntary adjustment. Indeed, whereas the elimination of external finance automatically and inevitably eliminates a commercial account deficit, it will lead to the generation of a commercial account surplus if and only if domestic borrowers continue to effect factor service payments abroad. But to the extent that adjustment is voluntary, the relative domestic price of tradeables will naturally be higher and domestic absorption lower than would otherwise be the case. If the domestic authorities are unwilling to make foreign exchange available for interest payments on the external debt and private domestic agents are unable or unwilling to purchase foreign exchange on the parallel or black market to finance factor service payments abroad, a commercial account surplus will not be produced. It is in this sense that the adjustment process in Latin America as a whole has involved voluntary (the generation of a commercial account surplus and transfer of resources abroad) as well as involuntary (the elimination of the commercial account deficit) components, without reference to whether some countries opted to adjust before they lost access to the international capital market or exhausted their holdings of external assets —which in fact was the case (whether alone or with the encouragement and support of the International Monetary Fund).

The sharp reduction in real government expenditure and in the real allocation of credit to sectors producing tradeables witnessed throughout most of the region during the course of the crisis likewise may result from either an automatic or voluntary adjustment process. Indeed, it would be the inevitable result of either process unless compensatory fiscal and monetary measures were implemented. In effect, the rise in the price level provoked by the shift in domestic relative prices spontaneously translates into a pervasive, across-the-board decline in the various categories of public expenditure as well as in the real value of financial assets. However, such an outcome is neither necessary nor desirable. On the contrary, efficient adjustment to the balance of payments impact of shocks would require either an increase in public sector expenditure and bank credit in sectors producing tradeables and/or an increase in the efficiency of such outlays. With the absolute need for some government expenditures and credit allocations (such as those designed to compensate for macro biases) eliminated, and the relative efficiency of others (i.e., those channelled to sectors producing non-traded goods and services) reduced, there is scope to increase development expenditures on the production of tradeables, in spite of the overall reduction in resource availability and increased outlays for interest payments. But efficient adjustment would require active policy intervention to reconcile the expansion of the production of tradeables with the reduced availability of resources. This efficiency requirement suffices to explain why an automatic adjustment process is inefficient. However, active public expenditure and monetary policies likewise would be needed to avoid unnecessary welfare losses, regardless of whether relative price adjustments were automatic or voluntary. In any

money would drop). An excess demand for money can be eliminated by a decrease in expenditure, a decrease in income, an increase in the interest rate, an increase in expected inflation, or an increase in the money supply. If the policy response is passive and the public is free of inflationary expectations the rise in the relative price of tradeables will also operate through the monetary channel, regardless of whether international capital flows are inelastic or not. Otherwise, the current account deficit will disappear as a result of substitution and income effects alone.

[13]To the extent that tariffs and price controls remain in place or have been intensified, the exchange rate will be lower than it otherwise would be, notwithstanding its escalation in the wake of the cutoff of foreign finance.

case, real world economies are beset by deep-seated imperfections that also impede efficient adjustment unless commensurate international and domestic policy interventions materialize.[14]

Given that government spending and bank credit allocated to foment the production of tradeables have, in fact, dropped precipitously in the course of the crisis, it is not surprising that growth of Latin American agriculture declined to 2.5% per annum in 1980-1985 from 3.5% in 1970-1980, *vis-a-vis* a potential rate of about 4%, notwithstanding the substantial increase in the domestic relative price of exportables and importables in most of the region. If anything, these results should lay to rest any lingering doubts about the price responsiveness of Latin American agriculture. Indeed, the marked reduction in the ratios of public expenditure and bank credit to value added in agriculture suggests that considerable fractions of these resource expenditures were superfluous and provides an indication of the extent of the inefficiency of the previous development style. In contrast, the large reduction of expenditures on agricultural research and extension, the decline of public sector capital formation and the deterioration of agricultural infrastructure in the wake of radical cutbacks in non-wage outlays other than subsidies holds forth the spectre of a sharp drop in agricultural growth. Having obtained the once-and-for-all output gain from the reallocation of factors of production in agriculture and between agriculture and the rest of the economy, induced by the increase in the domestic relative price of tradeables, continued expansion of production of tradeables will require the support of stepped-up development spending and credit allocations.

Efficient adjustment may also require an active macro policy to eliminate, reduce or stabilize inflation. In effect, it has been found that relative prices become more volatile as inflation escalates. While this phenomenon would not impede the automatic adjustment process, it would raise the cost of adjustment by weakening the responsiveness of the production of tradeables to relative price changes. No matter how volatile relative prices may be, import quantum would plunge to the level consistent with the compression of the capacity to import by the drying-up of capital inflows, but the production of exportables and importables may well evince a response that is weaker than otherwise would obtain if inflation were less intense, less volatile or nil. However, stabilization policies also entail costs, unless the public's expectations and behaviour can somehow be brought into line with the authorities' policy goals —an achievement which is virtually impossible if the economy is simultaneously adjusting, since prices like the exchange rate, which exercise a determining influence on the public's expectations, will be increasing rather than remaining stable or declining (Ramos, 1987). The existence of inertial-type inflation also calls for a gradual adjustment process rather than an automatic one for efficiency's sake, and hence, the support of external finance.

The efficiency of the automatic adjustment process is also eroded when international capital market imperfections provoke worldwide asymmetrical adjustments; when there is, in effect, "one periphery" —a phenomenon which is one of the outstanding features of the present crisis, as it was of the Great Depression. The pervasive reduction of import quanta and expansion of export quanta attendant upon the dearth of external finance depress international commodity prices, inflicting a welfare loss on the periphery additional to those stemming from the contraction of the resource gap and declines in output. Indeed, a vicious cycle may emerge, in which the income loss from the deterioration of the terms of trade spirals, as adjustment begets adjustment. In this regard the current crisis has proved even more costly than the Great Depression, since many countries have financed interest

[14]At the domestic level, two classes of imperfections may be identified. The first encompasses those which are intrinsic to the very existence of time and uncertainty. The rigidities and lags they spawn thwart instantaneous reallocations of productive resources in the direction and magnitude required to maintain them fully employed even if the economy is free of the other class of imperfections, i.e., the structural (e.g., oversized non-traded goods and services sector) and institutional (e.g., decentralized and unconsolidated public sector budgetary process) deficiencies that develop in the train of domestic economic policy incongruences. Efficient adjustment would thus require compensatory external financing of the balance of payments impact of shocks even if the economy were free of structural and institutional imperfections and domestic policies were consistent with full employment. However, international capital market imperfections impede an allocation of external finance consistent with efficient adjustment, while the resources mobilized by the international financial community are insufficient to offset those imperfections.

payments on their external debt with commercial account surpluses, whereas in the 1930s scarcely any country underwent voluntary adjustment.

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The rural sector in the socio-economic context of Brazil

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In this article the author analyses the evolution of Brazil's rural sector in recent decades and some of its socio-economic effects both in the countryside and in the towns. Although only Brazil is considered here, the processes discussed and their repercussions are found to differing degrees in many other countries of Latin America.

Brazil has a great potential which is not fully used, and it achieved a high and sustained rate of economic growth between the 1950s and the 1970s.

However, during the last quarter of a century it has failed to resolve certain fundamental issues which have been steadily gaining in importance. As a result, there now exists a number of enormous interrelated problems in political, economic and social life. To confront these problems and diminish their intensity is the challenge for Brazilian society now and in the future which will test its capacity to consolidate the country's return to democracy.

The so-called modernization of agriculture in the recent past had many consequences: it concentrated the ownership of land, limited the capacity of the rural population to absorb production, reduced the per capita output of basic foods, and forced an extraordinary rural exodus which led to a massive increase in the redundant population of the towns. The problem of poverty and marginalization has not been solved in the countryside, and these same problems have grown worse in the towns. One of their end results is the worrying increase in violence throughout the country.

In these circumstances, and within a genuinely democratic and therefore non-repressive framework, far-reaching agrarian reform that seeks to do more than merely redistribute the land —something never achieved in Brazil— is perhaps the necessary and available option which will change the sign of the negative socio-economic effects of the modernization referred to above.

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I
The modernization of the agricultural sector

1. *General goals and characteristics*

Like other countries, from the mid-1960s Brazil adopted an agricultural model based on the principles of the so-called "green revolution". According to one interpretation,[1] with which we agree, the aim of this model, backed up by the use of technology "packages" with a high content of chemical and biological inputs, improved seeds and mechanization, was to boost farm production and productivity and adapt the products to the needs of agro-industry, achieving food self-sufficiency and generating an increasing surplus of exportable farm products. The basic argument was that the adoption of this model could speed up the economy with positive effects in all sectors, and break down the technological and socio-economic barrier between Brazil and the developed countries. Accordingly, although it was a model for the farming sector, it ought to have invigorating economic and social locomotive effects throughout the economy.

The application of the model in the modernization of the countryside was to be integrated with the national and international industrial complex and it could count at home on the support both of the rural oligarchy, which was worried about the growing strength of social movements in the countryside, and of the most modern sectors of urban capital, which wanted to extend their activities. But the model did not envisage altering the land distribution profile, despite the existence of the Land Statute since 1964. Of course, the basic goal of the Land Statute was "to promote the just distribution of property, with equal opportunity for all", fulfilling with its adoption "the international commitments assumed by the country in the Charter of Punta del Este".

[1]G. Martine, "Efeitos esperados e imprevistos da modernização agrícola no Brasil", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987.

Since the rural oligarchy is one of the bases of domestic support for the model and since therefore it does not envisage changing the structure of land distribution, it is known as conservative modernization. The consolidation of this process, guaranteed by a combination of forces sufficient to suppress any opposition to its implementation, is the reason why it has been impossible to give effect to the Land Statute in Brazil in the past 21 years.

The modernization of part of the farming sector was concentrated mainly in the south-eastern and southern regions and, within these regions, on big and medium-sized farmers, who came to specialize in production for export. The tools of agricultural policy used by the State to put the model into practice were: rural credit, support prices, rural insurance, subsidy policies, both credit and fiscal, and a series of special programmes which benefitted certain rural activities and areas. However, there seems no doubt that rural credit was the most powerful tool for driving forward the process of conservative modernization in Brazil. It is therefore necessary to make some specific comments on this tool.

2. *Rural credit*

Rural credit underwent remarkable growth from 1966 to 1980. In 1969 its total amount represented about 45% of the farm product, increasing to 54 and 68.5% in 1971 and 1973 respectively. In 1975 it reached 102%, exceeding that year's farm product. Although we must acknowledge the relative lack of precision involved in a comparison of the amounts of credit and product in the same year, the comparison is still valid as an illustration of the enormous volume of rural credit. The farming sector's product increased six times between 1969 and 1975, while loans to the sector increased by a factor of 14 (table 1).

Although after 1975 credit came to represent a smaller proportion of agriculture's gross domestic product, the lowest level was still 70% in 1977, which was excessively high in comparison with the levels in other Latin American countries. In any event, while the farming sector's gross domestic product increased by a factor of 63 between 1970 and 1980, rural credit increased by 93 times. From 1979, with the second oil price rise, the higher interest rates in the international market, the deterioration in the terms of trade and the acceleration of inflation, a tight monetary policy was introduced which led to stricter control of the budget, which in turn entailed a cut in the total amount of rural credit in constant values between 1979 and 1984. In this period (Homem de Melo, 1986) the total volume of lending fell in relation to 1979, and although there was an increase in 1985, that year's figure was only a little over half (53%) the 1979 level.

As for interest rates, in 1979 for example (Martine and Beskow, 1987) there was a negative real rate of 33.4% in financing contracts, with a total volume of lending to the farming sector equal to about 29% of the sector's domestic product at factor costs. In the period after 1980 interest rates were close to the inflation rate, standing in 1984 and 1985 at 3% above the total value of the monetary correction in those years. The rural credit subsidy was withdrawn in July 1987, and financing contracts were updated by the index of National Treasury Notes (OTN). The interest rates for rural credit were set at 7 and 9% a year above the OTN rates.

Table 1

BRAZIL: FARMING SECTOR GDP AND RURAL CREDIT

(Thousands of millions of cruzeiros)

Year	Farming sector GDP (A)	Amount of rural credit (B)[a]	$\frac{B}{A} \cdot 100$
1969	14.3	6.5	45.4
1970	17.1	9.2	53.8
1971	23.9	12.8	53.5
1972	30.6	18.7	61.1
1973	44.3	30.3	68.4
1974	65.7	48.3	73.5
1975	87.8	90.0	102.5
1976	137.7	130.2	94.5
1977	236.9	165.9	70.0
1978	320.7	233.9	72.9
1979	529.6	448.7	84.7
1980	1 085.3	859.2	79.2

Source: Luis Carlos Guedes Pinto, *Notas sobre a política agrícola brasileira*. São Paulo, 1978; and Dercio García Munhoz, *Economía agrícola - Agricultura, uma defesa dos subsidios*, Petrópolis, 1982.

[a] Loans made by the National Rural Credit System.

In addition to noting the spectacular growth of rural credit between the mid-1960s and 1979, it is important to consider its concentration by region and by type of property.

In 1980 there was a larger number of producers assisted with loans, in relation to the total number of producers, in the southern, central-west and south-eastern regions. These three regions exceeded the national average, while the northern and north-eastern regions were below the average. Almost one in two of producers in the southern region received loans; in the central-western and south-eastern regions almost one in three; in the north-east one in four; and in the north a little over one in five (table 2).

Table 2

NUMBER OF RURAL PRODUCERS WHO RECEIVED LOANS FROM THE BANK OF BRAZIL, BY REGION, 1980

(Thousands of producers and percentages)

Region	Total producers (A)	Total producers assisted (B)	$\frac{B}{A} \cdot 100$
North	306.6	70.1	22.9
North-east	1 976.0	511.3	25.9
South-east	1 000.9	322.5	32.2
South	952.0	426.2	44.8
Central-west	266.0	87.3	32.8
Brazil	4 501.4	1 417.4	31.5

Source: Dercio García Munhoz: *Economía agrícola - Agricultura, uma defesa dos subsidios*, Petrópolis, 1982.

Other calculations of the regional concentration of credit (Pinto, 1979) indicate that in 1975, the year in which the volume of rural credit exceeded agriculture's gross domestic product, 38.3% of the loans went to the southern region; 37.5% to the south-east; 12.5% to the north-east; 10.2% to the central-west; and 1.5% to the north. This means that in those years the central-south (south-eastern and southern regions) received an amount equal to three quarters of the total rural credit, to the detriment of the north-eastern region, which is the least developed. Thus, the regional concentration of rural credit was also a factor in the intensification of regional disparities in the countryside.

Table 3 shows the concentration of lending by type of property, according to size. In 1970-1980, while there was an increase in the number of properties of all sizes with access to credit except for those larger than 10 000 ha, the volume of lending tended to be concentrated on big and medium-sized properties (between 100 and 9 999 ha). These properties, which represented a little over 10% of all farms, received in 1980 roughly 63% of loans. In contrast, small and very small properties (between 0 and 99 ha), which represented in that year about 90% of all farms, received barely 34.5% of total loans. With respect to their access to credit, it is important to reaffirm the assertion (Martine and Beskow, 1987) that, notwithstanding the large number of these properties, only 22% stated that they had been able to obtain some kind of loan in 1980.

Table 3

BRAZIL: SHARE OF TYPES OF FARM PROPERTY (BY SIZE), IN TOTAL FARM PROPERTY, IN LENDING AND IN THE VALUE OF THE LOANS MADE, 1970-1980

(Percentages)

Size (ha)	Property			Property with loans			Value of loans		
	1970	1975	1980	1970	1975	1980	1970	1975	1980
0-10	51.2	52.1	50.6	5.0	4.8	10.3	5.5	3.2	4.4
10-99	39.3	38.0	39.0	17.2	23.2	32.2	33.1	28.7	30.0
100-999	8.4	8.9	9.5	23.2	31.1	35.0	41.8	44.6	42.5
1 000-9 999	0.7	0.8	0.9	25.3	36.5	33.5	15.6	19.7	20.3
10 000 and over	-	-	-	23.1	33.9	21.7	4.0	3.8	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: G. Martine and P.R. Beskow, "O modelo, os instrumentos e as transformações na estrutura de produção agrícola", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987.

3. *Modern inputs and tractors*

It was stated at the beginning of this section that the conservative modernization was concentrated in the south-eastern and southern regions and, within these regions, on big and medium-sized farmers. This was so because rural credit, the main policy tool used to drive forward the modernization process, was concentrated in these regions and on these types of producer, with emphasis on export products or important industrial raw materials. This specialization also led to the concentration of lending by products. For example, coffee, soybeans, sugar cane and wheat received a volume of credit larger than their share in the value of production.

Accordingly, as a result of the volume of credit available, its concentration and the advantageous terms on which it was obtained —factors which encourage the purchase of more modern means of production— there was also a considerable increase in the use of inputs (improved seeds, fertilizers, herbicides, etc.), tractors and machinery and farm tools. The expansion of the demand for these items was stimulated by the increased availability of credit and its advantageous terms and, moreover, its use tended to reproduce the same concentration of credit, both regionally and by type of producer and by product. It is important to note, in order to prevent any misunderstanding, that this increased use of means of production is an effect and not a cause of the modernization process. To explain the processes of modernization merely in terms of increases in demand and in the use of means of production is to limit the analysis to effects without considering causes.

To take the example of what happened in the case of tractors, the mechanization indicator (ha/tractor) for 1985 gave figures on 52 and 57 for the southern and south-eastern regions respectively; 86 for the central-west; and 332 and 377 for the north and the north-east. The national average for the same indicator in 1985 was 80, as against 205 approximately in 1970. The total number of tractors rose by about 95% between 1970 and 1975; 69% between 1975 and 1980; and about 20% between 1980 and 1985. The stock of tractors almost quadrupled during the whole period (1970-1985).

4. *General comments*

The conservative modernization of agriculture which has taken place in Brazil in the past 20 years, especially in the 1970s, was concentrated regionally, by type of producer and by product. It is therefore an exclusive and unfinished process. Its main characteristic is that it has transformed the social relations of production on the modernized farm properties, consolidating there the capitalist mode of production, which uses modern technology to produce goods destined basically for export or for agro-industry. But this process exacerbated the existing socio-economic disparity in Brazil's agriculture. This fact and the inequality of the process become clear when it is remembered that in 1980 72% of all farm properties had not a single plough or even a traction animal. Despite the fourfold increase in the stock of tractors between 1970 and 1985, in 1980 only 7% of the properties had any kind of tractor.

Nevertheless, it cannot be denied that conservative modernization —in accordance with some of its original goals— has contributed to the increased output and yield of certain farm products, to the generation of exportable surpluses, and to the consolidation of the integration of agriculture and industry.

The output and yield of certain agro-industrial raw materials have grown considerably in the past 25 years; this is true of sugar cane, wheat, soybeans and maize. Some of these products have also helped to generate large surpluses in the trade balance. But, as will be discussed below, neither the per capita production or the yield increased in basic foods, nor was the goal of food self-sufficiency attained.

With respect to the integration of agriculture and industry, also one of the main goals of conservative modernization, it was achieved on the part of agriculture through the remarkable increase in the internal and external supply of agro-industry raw materials, and through the large increase in the internal and external demand for basic inputs and farm machinery and tools. In the case of urban capital —trade, industrial and financial— the integration was strengthened, *inter alia*, by the purchase of large additional areas of land, much of it for speculative purposes, which remained mostly idle. This enhanced the integration between farming capital and national and international trade and industrial and financial capital, facilitating at the same time the consolidation of the agro-industrial complex and its grip on agriculture.

But this kind of agricultural-industrial integration is different from the traditional one in which agriculture *as a whole*, on modernization, produces basically foodstuffs for the urban sectors and raw materials for industry and requires, again basically, consumer durables and non-durables, inputs and farming machinery.

In the partial and unfinished modernization in Brazil the modernized agricultural properties do not produce mostly foodstuffs, while those farms which are concerned mainly with such crops do not require so many consumer goods, inputs and machinery. This integration was not homogeneous in the two sectors and it was characterized by a division of labour which manifested itself, in the case of non-modernized small and medium-sized properties, in an abundant supply of foodstuffs and very little demand for industrial products; and in the case of modernized big and medium-sized properties, in the supply of agro-industrial raw materials for the foreign and domestic markets and a heavy demand for industrial goods produced in the country and abroad.

II

Some socio-economic problems

In the period 1950-1980 the Brazilian economy achieved sustained growth of the total gross domestic product at an average annual rate of 6.8%, which meant 3.9% per capita growth. Industry expanded by 7.9% and agriculture by 4.7% a year. Given that the period was three decades long, this was a very high rate of economic growth which is unlikely to have been exceeded by more than a very few countries of the world.

A very unfavourable period for the country began in 1979. The second big increase in oil prices occurred, producing a very sharp rise in interest rates in the international market and a considerable worsening of the terms of trade. As a result the gross domestic product fell 3.4% in 1981, 2.5% in 1982, and 3.2% in 1983. The per capita gross domestic product fell 10% in those three years; in the industry sector (Sao Paulo) output dropped 16%, employment 22%, and wages 36%.

In the next three years, from 1984 to 1986, the economy grew by 4.5, 8.3 and 8.2% respectively. In 1986 the per capita gross domestic product achieved a level only about 6% higher than in 1980, despite the recovery of the growth rate from 1984. In mid-1986 industrial employment in São Paulo was at a level roughly 4% below the high level of July 1980.

The recovery of the growth rate from 1984 has been accompanied so far by three important and interrelated problems: the inflation rate, the domestic debt, and the foreign debt. These three problems, among others, are a source of constant concern, and there is a constant search for better methods and tools for dealing with them.

There are also other problems more directly connected with the rural sector, and today Brazilian society must grapple with them as well; these problems were generated in recent decades and they have grown more acute, for their causes have not been tackled and they have grown steadily worse despite the high rate of economic growth.

The conservative modernization of part of the farming sector, which was concentrated in the southern and south-eastern regions and on big and medium-sized properties (analysed in summary form in the previous section), contributed to the attainment of some economic goals; but it also helped to generate or aggravate problems in other areas of the economy and it exacerbated social problems in particular. The economic and social difficulties are totally interrelated, and the individual analyses which follow are intended only to facilitate the explication. These problems also have major political effects not considered in this article.

1. *The concentration of landholding*

The concentration of landholding in Brazil is high by international standards and shows a long-term trend to intensify even further. The Gini index of the distribution of land between farming properties was 0.832 in 1940; 0.843 in 1950; 0.842 in 1960; 0.844 in 1970; 0.850 in 1975; 0.853 in 1980; and 0.854 in 1985. Thus during the last 45 years this index has always stood above 0.83 and it has risen from 0.832 to 0.854.[2] In regional terms, in 1985 the index was 0.795 for the northern region; 0.865 for the north-east; 0.766 for the south-east; 0.744 for the south; and 0.836 for the central-west. Although the concentration of landholding is high in all the regions, it is even higher in the north-east, followed by the central-west. The south is the region of least concentration.

Despite the variations there is a long-term trend for properties smaller than 10 ha to increase their share in number and in total area; those between 10 and 100 ha in size have declined in number and increased in area; those from 100 to 1 000 ha in size have declined in number and their share of the area has remained fairly constant; and those of 1 000 ha and bigger have seen their share fall in both number and area. The main point is that in 1985, for example, properties under 10 ha in size represented a little over half of the total number and a little under 3% of the total area. Moreover, properties of 1 000 ha and more accounted for less than 1% of the total number but occupied almost 44% of the total area (table 4). These figures demonstrate the heavy concentration of landholding in Brazil.

[2]The Gini index is a measure of the degree of concentration of a distribution which ranges from zero to one. Its value would be zero in the case of perfect equality, i.e., if all the properties had the same area; it would come close to one if a single property occupied almost all the area and there was a great number of properties with virtually no area at all. A figure above 0.8 indicates a high concentration. R. Hoffmann, "A concentração da posse da terra no Brasil", in *Revista Civilização Brasileira*, No. 7, Rio de Janeiro, 1979; C. Mueller, Ensaio especial, "Censos Agropecuarios", in *Agroanalysis*, No. 6, Instituto Brasileiro de Economía, Fundação Getulio Vargas, Rio de Janeiro, 1987.

Figure 1 gives a clearer picture of the long-term trends and it confirms to some extent the figures from the Gini index mentioned above. Three main trends can be identified, corresponding to three periods. The first, from 1940 to 1950, is towards concentration of landholding; the second, from 1950 to 1970, is a period of slight relative deconcentration; and the third, from 1980 to 1985, shows a fairly sustained increase in concentration, especially around 1980. Having noted these trends in the concentration of landholding, especially in the 1970s, we must stress that the process of conservative modernization, which took place mainly in that period, has helped to accentuate this concentration, for it unleashed extensive land speculation both for production and for holding in other cases as a reserve asset.

Data from INCRA's[3] Register of Rural Property indicate the same short-term trend towards concentration in the most intense period of conservative modernization. In fact (Martine and Beskow, 1987) the proportion of properties up to 10 and between 10 and 100 ha in size fell in 1972-1978. It is estimated (Alkcelrud, 1987) that in the 1970s in the central-southern States alone half a million small owners lost their land. It is currently calculated that in the regions of small owners some 100 000 families lose their land every year, which means roughly 500 000 persons. Furthermore, properties over 10 000 ha in size, which represented 0.1% of the total number, increased their share of the total area from 19 to 25% between 1972 and 1978. The same data also indicate an increase in the area of idle land due to purchases for speculation or as reserve assets.

Moreover, a longer-term analysis estimates that between 1967 and 1984 properties with more than 1 000 ha increased their share of the total area from 47 to 58%, while properties of less than 100 ha showed a decline from about 19 to 14%.

The problem of the concentration of landholding and the consequent inequality in the countryside can be appreciated in general terms from the following figures. The country has a potential of 500 million ha of land usable for

[3]National Institute of Settlement and Agrarian Reform.

Table 4

BRAZIL: DISTRIBUTION OF LAND BY SIZE OF PROPERTY, 1940-1985

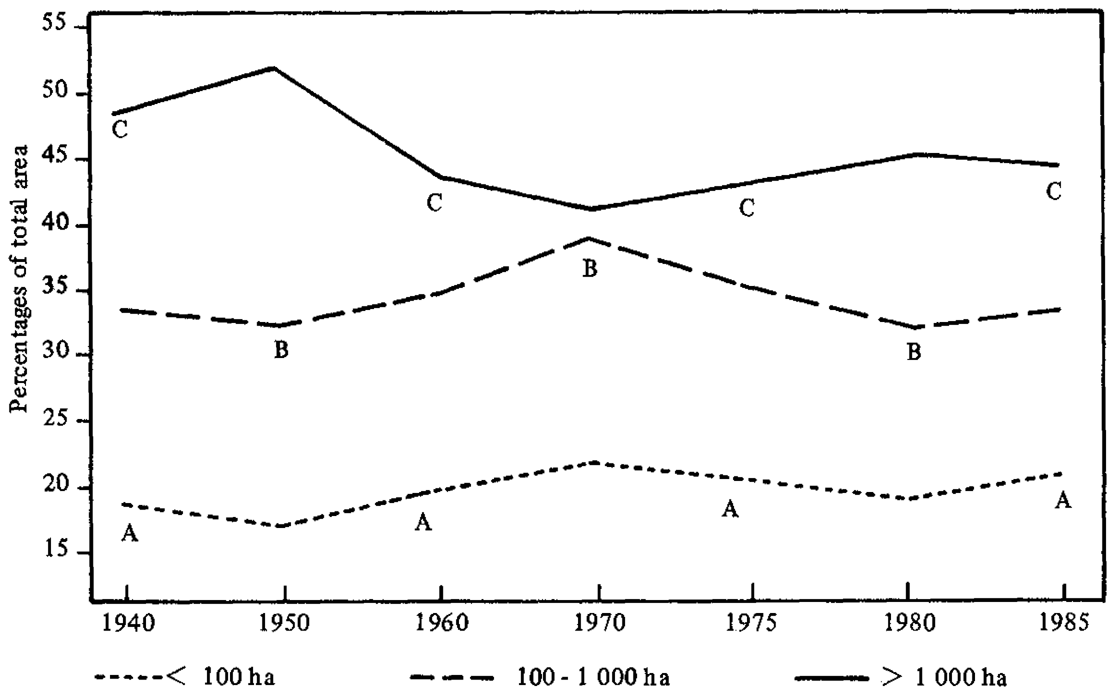
(Percentages)

Year	Under 10 ha		10 to 100		100 to 1 000		1 000 and over	
	Number	Area	Number	Area	Number	Area	Number	Area
1940	34.3	1.5	51.3	16.7	12.8	33.5	1.5	48.3
1950	34.4	1.3	51.0	15.3	12.9	32.5	1.6	50.9
1960	44.8	2.3	44.7	19.0	9.4	34.4	1.2	44.2
1970	51.3	3.1	39.4	20.4	8.4	37.0	0.9	39.6
1975	52.2	2.8	38.1	18.6	9.0	35.8	0.8	42.9
1980	50.4	2.5	39.1	17.7	9.5	34.8	0.9	45.1
1985	53.0	2.7	37.2	18.5	8.9	35.0	0.9	43.8

Source: G. Martine and P. Beskow, "O modelo, os instrumentos e as transformações na estrutura de produção agrícola", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987; C. Mueller, Ensaio especial, "Censos Agropecuarios", in *Agroanalysis*, No. 6, Instituto Brasileiro de Economía, Fundação Getulio Vargas, Rio de Janeiro, June 1987.

Figure 1

BRAZIL: SHARE OF PROPERTIES IN THE TOTAL AREA, BY SIZE, 1940-1985



Source: G. Martine and P. Beskow, "O modelo, os instrumentos e as transformações na estrutura de produção agrícola", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987; C. Mueller, Ensaio especial, "Censos Agropecuarios", in *Agroanalysis*, N° 6, Instituto Brasileiro de Economía, Fundação Getulio Vargas, Rio de Janeiro, June 1987.

agricultural production, but only 80 million ha are under crops, including large areas lying fallow owing to a defective system of rotation. The properties classified as large farms (*latifundios*) according to the criteria of the Land Statute occupy an area of 417 million ha (83.4% of the usable total), of which some 170 million ha (34% of the usable area) are maintained as usable but uncultivated land according to the owners' statements, and 125 million ha (25% of the usable area) are poorly farmed. As a result almost 60% of the country's total usable area which is occupied by large farms is either not cultivated (about 41%) or poorly cultivated (about 30%). There are also 12 million rural workers without land or with insufficient land, of which 8.7 million rural wage earners do not make a minimum wage equal to less than US$50 a month (September 1987).

2. *Food production and standard of nutrition*

In the 1950s and 1960s there was a relatively balanced increase in food and export products, with fairly stable food prices. In the 1970s, owing to the conservative modernization which caused part of agriculture to specialize to some extent in export products and industrial raw materials, the per capita output of basic foods declined, except for onions and tomatoes. This decline was very sharp in the case of cassava and beans, and for potatoes as well. Rice remained relatively unchanged in both decades, with a per capita growth rate of zero. In contrast, the per capita production of wheat increased, and there was a spectacular rise in soybean production. Wheat is traditionally imported and soybeans are produced mainly for export.

Between 1980 and 1985 the areas used for production of rice, wheat, potatoes and cassava declined by about 24, 14.5, 13 and 7.5% respectively, and the areas under beans and maize recorded almost the same growth as earlier. This indicates a continuation of the downward trend of the past decade in the per capita output of cassava, beans and potatoes, on top of the fall in rice and wheat production. Soybeans and maize were the only basic foods to record increased per capita output. Both these products are also used as a raw material in agro-industry and part of the output also goes for animal feed. Only 10 to 15% of maize production is available for human consumption in the country.

The foregoing analysis and the figures in table 5 underline the downward trend in the total per capita supply of basic foods of vegetable origin, particularly those such as beans and rice traditionally consumed by lower-income groups. The combination of these two foods is of great nutritional value in the diet and is a cheap source of calories, proteins, iron and vitamins. Cassava is also an important element in the diet of lower-income groups, mainly in the north-east.

The yields of these three basic products —beans, rice and cassava— for consumption by lower-income groups also declined from 1960 to 1984. In this period, however, there was

Table 5

BRAZIL: PER CAPITA PRODUCTION OF SOME BASIC FOODS, 1960-1984[a]

(Kg/inhabitant/year)

Period	Rice	Beans	Cassava	Maize	Wheat	Soybeans
1960-1964	74.8	24.5	279.8	149.8	8.1	3.9
1964-1968	79.9	27.4	314.6	141.0	8.0	6.7
1968-1972	72.6	25.7	323.0	150.4	15.6	18.6
1972-1976	76.1	22.0	259.0	155.0	21.2	72.6
1976-1980	76.4	18.4	220.6	153.8	24.0	103.4
1980-1984	70.4	18.0	182.2	163.3	17.3	115.7

Source: G. Martine and R.C. García, "A modernização agrícola e a panela do povo", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987.

[a] Weighted averages.

increased output of other foods of vegetable origin —maize, wheat, soybeans and sugar cane— destined largely for agro-industry. The most important thing about this "basic food crisis" is that the decline in per capita production and yields occurred despite the expansion of the area cultivated at a higher rate than the population growth rate. Once again we see, now in the case of food production, the perverse nature of the process of conservative modernization promoted in the country.

When we consider the evolution of the contribution by properties, grouped by size, to the production of basic foods (table 6) the first important point to note about the most basic foods in the diet of lower-income groups (rice, beans and cassava) is that the contribution of farms of up to 10 ha to rice and beans production fell, while their contribution to cassava increased. In the case of properties with 10 to 99 ha, their share in the production of rice and cassava declined but their share in beans increased. When these two groups of property are combined —so that very small, small and some medium-sized farms are included— their production share falls for all three products; however, their contribution to beans and cassava production was very high, at about 79 and 87% respectively, in 1980; it was also high (68%) in the case of maize. It can be concluded that the typical products of smaller properties are cassava, beans and maize, although wheat and soybeans account for almost 50% of the production of properties with less than 100 ha.

Rice on the other hand is produced mainly on medium-sized, big and very big properties —from 100 to 1 000 ha and from 1 000 to under 10 000— with these two groups accounting for about 60% of the output. They were responsible for slightly over 50% of the total production of wheat and soybeans as well. Thus rice, wheat and soybeans are in relative terms the typical products of the medium-sized and big properties in the 100 to 1 000 ha group. The production of each of these six basic food products is almost insignificant on the very big estates (over 10 000 ha) but their increased share in rice and soybean production in 1970-1980 should be noted.

The explanation of the decline in the per capita production, yields, and shares of the smaller properties in the production of basic foods of vegetable origin (mainly rice, beans, maize and cassava) is to be found in the government incentives for "dynamic" export or agro-industrial crops granted to medium-sized and big properties from the mid-1960s as part of the conservative modernization described in the previous section.

With respect to foods of animal origin, stocks of cattle increased faster than the population growth rate in the 1970s. Between 1980 and 1985, however, their growth was considerably below the population growth and as there was no significant increase in productivity, it can be concluded that the per capita domestic supply of beef and milk fell in the first five years of this decade; stocks of pigs increased between 1970 and 1975 and fell somewhat between 1975 and 1985, with a consequent decline in the per capita domestic supply of pork; stocks of poultry, after a spectacular rise between 1970 and 1980, saw their growth rate decline between 1980 and 1985 to only 4%, which also indicates a drop in the per capita domestic supply. The decline in the total per capita supply of food, of both vegetable and animal origin, since the beginning of the conservative modernization of part of agriculture has resulted in a systematic rise in food prices faster than the inflation rate.

The decline in the area used for certain basic food crops and in their yields, described above, contrasts with the surging growth in the area used, the yield obtained and the per capita production in the case of sugar cane. In the period 1975-1980, when the Government launched the PROALCOHOL programme, the main purpose of which was energy substitution, the area under sugar cane increased by 32% and the yield by 50%; the area increased even further, by almost 50%, between 1980 and 1985 and the yield also showed a further 50% increase over the 1980 level. Thus between 1975 and 1985 the area used for sugar cane doubled and the yields increased 140%. Sugar cane production, the per capita growth of which was about 57% between 1977 and 1983, receives a heavy subsidy under the PROALCOHOL programme which according to some interpretations is not justified in either economic or social terms, owing to the displacement of food production caused by the cultivation of sugar cane in areas intended for food crops.

Table 6

BRAZIL: SHARE OF PROPERTIES IN THE PRODUCTION OF SOME BASIC FOODS, BY SIZE, 1970-1980

(Percentage of the quantity produced)

Size of property (ha)	Rice			Beans			Cassava			Maize			Wheat			Soybeans		
	1970	1975	1980	1970	1975	1980	1970	1975	1980	1975	1980	1985	1970	1975	1980	1970	1975	1980
0 to 10	19.5	19.3	13.3	32.9	34.0	26.9	34.5	42.0	37.9	19.9	18.5	14.8	5.6	2.3	2.1	14.5	6.8	4.0
10 to 99	35.3	30.1	23.8	50.4	48.8	51.7	53.6	47.2	49.6	55.5	53.4	53.4	43.9	41.2	44.8	55.2	48.6	42.2
Under 100	54.8	49.4	37.1	83.3	82.8	78.6	88.1	89.2	87.5	75.4	71.9	68.2	49.5	44.4	46.9	69.7	55.4	46.2
100 to 1 000	33.9	35.2	38.3	14.8	15.1	18.7	10.7	9.9	11.1	20.4	23.2	25.7	42.6	47.4	45.4	25.6	36.9	40.9
1 000 to 9 999	10.7	14.3	21.4	1.9	2.0	2.6	1.2	0.9	1.3	4.0	4.7	5.7	7.8	9.0	7.3	4.6	7.5	11.8
10 000 and over	0.6	1.1	3.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.1	0.1	0.3	0.1	0.2	1.1
Total production (millions of tons)	5.27	7.54	-	1.51	1.59	1.65	14.58	11.67	11.03	12.77	14.34	15.56	1.90	1.56	2.53	1.88	8.72	12.59

Source: G. Martine and R.C. García, "A modernização agrícola e a panela do povo", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987.

Table 7

BRAZIL: IMPORTS OF CERTAIN FOODS, 1970-1985

(Thousands of tons)

Year	Wheat	Rice	Dried legumes[a]	Maize	Beef	Powdered milk
1970	1 994	-	12	2	1	22.0
1971	1 739	2	11	1	6	15.0
1972	1 811	9	12	2	1	12.0
1973	2 960	11	34	4	1	14.0
1974	2 406	1	10	3	52	21.0
1975	2 109	63	15	2	24	14.0
1976	3 435	17	77	2	23	18.0
1977	2 758	-	70	1	31	60.0
1978	4 335	29	25	1 262	113	12.0
1979	3 658	711	30	1 526	111	10.0
1980	4 358	239	61	1 594	65	62.0
1981	4 363	143	19	9 020	60	8.0
1982	4 225	137	22	-	21	7.5
1983	4 182	315	21	213	23	19.0
1984	4 869	-	73	254	34	30.0
1985	4 048	340	31	262	48	31.0

Source: Prepared by the Joint ECLAC/FAO Agriculture Division from FAO data.
[a]Includes only beans between 1970 and 1974. In 1975 beans account for about 80% of total imports in this category.

At a recent meeting of the National Monetary Council (CMN) at the end of September 1987, at which new economic measures were adopted, there was much comment about the refinancing of the debts of sugar and alcohol producers owing to their serious repercussions on the increased public deficit. A line of credit equivalent to US$280 million was opened to refinance 75% of the debts of these producers and *usineiros* with State and private banks.

In order to supplement the domestic supply to meet the demand, the country was forced to import foodstuffs. Apart from importing without any real need to do so —which can sometimes happen owing to problems of various origins— and indeed the apparent paradox of a country with Brazil's potential having to import food, these purchases reached quite considerable levels in some periods. Notable in this respect is the sustained long-term increase in wheat imports, which were consistently above four million tons between 1980 and 1985 (table 7); imports of rice, beans, maize, beef and powdered milk remained at the same levels, although with considerable variations from year to year. In 1985 the trade balance (exports less imports) in basic foods showed a deficit for wheat, maize, rice and powdered milk; there were surpluses for the other foodstuffs.

The production incentives for "dynamic" non-food crops and sugar cane and the displacement of food crops brought about a reduction in the area used for basic food production and in the yields and per capita supply, with depressive effects on the domestic supply and expansionary effects on food prices. Hence the need to import these foods to supplement the domestic supply; hence too the trade deficit in some of these products. With respect to the domestic food supply, a fairly high population growth rate coincided with the long-standing process of income concentration, with a large segment of the population receiving very low incomes. In the circumstances it is impossible to be optimistic about the outcome of the food and nutrition problem affecting Brazilian society.

The most extensive and profound piece of national research on nutrition, carried out in 1975, indicates that in that year two-thirds of the population were undernourished (Martine and García, 1987). What is worse, the indices of the per capita supply of calories and proteins have been declining since that date. According to other results published in the country in 1984, the food intake of 70% of the total population was below the minimum established in the World Health Organization's standards (PMDB symposium, Curitiba, November 1984). It must be noted, although with sadness, that 70% of the population of Brazil means almost 100 million undernourished people.

3. *The rural exodus and urbanization*

Just like other developing economies, in recent decades Brazil has undergone rapid urbanization as a result of a high and fairly sustained rate of population growth and, above all, a heavy flow of migrants from the countryside to the towns. This process of urbanization has transformed the country from a predominantly rural to a predominantly urban one. However, the rural sector has retained its relative importance despite the drop in its contribution to the total product, the total population, and exports. This is because, apart from other factors, according to the 1980 population census there were 22 million workers employed in agriculture, whereas processing industry employed seven million, i.e., less than a third. Brazil's annual population growth rate was 2.78 and 2.35% respectively in the 1960s and 1970s. According to the FIBGE,[4] there was a little over 2.6 million births in 1985 (an average of 7 250 a day) despite abortions by some four million women, equal to 10% of total world abortions in one year according to the World Health Organization. Abortion leads to the death every year of an astounding total of 400 000 women in the country. The 2.6 million children born in a year is equivalent to almost the total population of Uruguay and a little more than the total population of Costa Rica.

The relative imbalance between the high rate of reproduction of the labour force and the fewer job opportunities in the countryside, with increased numbers of temporary workers and greater dependency on unstable types of work, in conjunction with the attraction exercised by the towns, have led to increasing migration from the countryside to the towns on a gigantic scale. In the 1940s the rural exodus was about three million persons; it rose to seven million in the 1950s; in the 1960s it reached 12.8 million; and in the 1970s it achieved the record figure of almost 16 million. Although there are no exact figures (Martine, 1987), to give an idea of the magnitude in relation to other countries of the region, this is equivalent to the transfer to Brazil's towns in the last four decades of half the population of Mexico; or in the last two decades a number of persons in the order of the total population of Argentina or Colombia.

It is possible (Mueller, 1987) that the rural exodus of the 1950s was more intense in the north-east and also, from the interregional standpoint, from the north-east to the central-south (south-eastern and southern regions). But in the 1960s (Martine, 1987) the net migration from the countryside was more intense in absolute and relative numbers in the south-east than in the north-east. In the 1970s the south-east was joined by the southern and central-western regions, exceeding the north-east in relative numbers (table 8).

According to the National Agrarian Reform Plan, the economic integration of the large surplus of people in the labour market without aggravating the difficult urban situation would

Table 8

BRAZIL: NET MIGRATION FROM RURAL AREAS, 1960-1970 AND 1970-1980

(Thousands of inhabitants)

Regions and whole country	Net migration 1960-1970	1970-1980
North	-447	-1
North-east	-4 373	-4 990
South-east	-6 801	-5 038
South	-1 079	-4 395
Central-west	-135	-1 199
Brazil	**-12 835**	**-15 611**

Source: G. Martine, "Exodo rural, concentração urbana e fronteira agrícola", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987.

[4]Fundação Instituto Brasileiro de Geografía e Estadística.

Table 9

BRAZIL: POPULATION DISTRIBUTION BY PLACE OF RESIDENCE, 1940-1980

(Percentages)

Location	1940	1950	1960	1970	1980
Rural	68.8	63.8	55.0	44.1	32.4
Up to 10 thousand inhabitants	12.6	12.2	12.4	9.6	10.0
10-20 thousand inhabitants	2.6	2.9	3.9	5.3	4.0
20-50 thousand inhabitants	2.2	3.2	4.5	5.4	6.5
50-100 thousand inhabitants	2.0	2.5	2.7	3.5	4.6
100-500 thousand inhabitants	4.1	4.3	5.4	6.1	11.0
500 thousand and more inhabitants	7.7	11.1	16.2	26.1	31.5
Total	100.0	100.0	100.0	100.0	100.0

Source: G. Martine, "Exodo rural, concentração urbana e fronteira agrícola", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetes, Sao Paulo, 1987.

require the generation of almost 400 000 jobs a year in the urban centres, in addition to the jobs needed for their existing population. Unless the rate of rural-urban migration falls, Brazil could have a total of 11 million unemployed by 1990, even with a growth rate of 5% a year.

As a result of the crisis, unemployment and underemployment increased in the towns between 1981 and 1985, and industry and civil construction (the traditional employers of unskilled labour from the countryside) saw their growth rate fall from about 10% in 1981 to an average of 1.4% from 1982 on. In the circumstances it is possible that rural-urban migration may have declined. With respect to underemployment, for example, a recent work (Tokman, 1986) indicates that the share of the informal sector in non-farm employment in Brazil increased from 24.1% in 1980 to 30.1% in 1985.

The failure to retain population in the countryside was due, among other factors, to the conservative modernization of part of the farming sector concentrated in the south-eastern and southern regions. Accordingly, the expulsion from the countryside was more intense in areas where mechanized modernization penetrated more intensely: at first in the south-eastern region during the 1960s, then in the 1970s in the south-east and, in relative terms, the south and the central-west.

The north-eastern region, where the absolute flow of rural-urban migrants was also intense, saw amongst other developments an increase in livestock production and in crop substitution, driven forward by the powerful impulse of fiscal incentives; owing to the high level of poverty in the countryside, the region experienced understandable migration to the towns in search of better living conditions.

The northern region and part of the central-west, typical of the agricultural frontier, saw the private appropriation of considerable additional areas of land, some of which were acquired by transnational corporations. In many cases the acquisition of land in this way was fraudulent (*grilagem*) and for speculative purposes; this entailed, on the one hand, the displacement of the peasants and, on the other, areas of idle land. The main point in this case is that the process, fraudulent or not, has brought the expansion of the frontier to a halt, displacing the peasants and pushing many of them towards the towns or back to their places of origin. Above all, it is tending to prevent the use of the frontier as an escape valve to reduce the pressure on the towns by means of rural-rural migration. This means therefore that it is becoming increasingly more difficult for rural dwellers to find any option but the town.

The great scale of the rural exodus in recent decades has caused a sizeable increase in the number of towns. In 1940 Brazil had 51 towns with over 20 000 inhabitants; this number had risen to 85 by 1950, to 155 by 1960, to 257 by

1970, and to 419 by 1980. According to Ladislaw Dowbor,[5] of the 26 million homes recorded in the 1980 population census, the occupants of 40% stated that they had been living there for less than two years. This indicates an astounding level of mobility. Another process parallel with the proliferation of small and medium-sized towns was the concentration of the population in increasingly large towns (table 9).

This concentration is making the administration of the towns more difficult and is tending to aggravate a number of urban problems and other problems affecting the rural sector. In the urban areas, owing mainly to the increased requirements of physical infrastructure, which has to be built in increasingly more distant zones and therefore at higher costs, the State must acquire ever larger resources to equip the new urban areas with basic services such as drinking water, energy, schools, transport, etc. Where transport is concerned, for example, the people living in the 10 main cities —a population of almost 40 million— have increasing problems and are spending increasing amounts for this purpose. In São Paulo and Rio de Janeiro it is usually necessary to use two modes of transport to get from home to work and another two on the return trip. Apart from the time expended on these four daily rides and the fatigue they induce, it is estimated that the cost of transport for an ordinary worker amounts to almost 30% of his monthly earnings.

The problems of this concentration in big towns that affect the rural sector include the expansion of the big towns themselves, which usually swallow up in their advance the so-called green belts, which are highly valued by the rural sector but are worth less than urban land. In these areas, traditionally used for production of basic foods, mainly fruit and vegetables, output has been disrupted and displaced to more distant areas, with higher costs, by the advancing urbanization.

Another major effect on agriculture is the complexity which the growth of the towns brings to the food transport and distribution chains, which are becoming increasingly difficult to manage and are tending to push consumer food prices up. Since the anti-inflation policies are designed to control consumer good prices in order to keep them as inelastic as possible at this level, the higher costs of transport and distribution are passed on to the producers in many cases, while producer price rises by the same amount as the increased costs are prevented or obstructed.

The great mass of people that the rural sector could not retain found that the towns were unable to generate steady jobs at the speed at which the new inhabitants were arriving from the countryside. Thus many migrants remained underemployed, marginalized and with inadequate living standards. The rural exodus has nevertheless not solved the problem of rural poverty. Accordingly, while the links integrating town with countryside were growing stronger, the economic and social problems of both locations were growing worse. As a result of this perverse socio-economic interrelationship many poor producers driven from the countryside have become perhaps even poorer consumers in the towns.

4. *Other socio-economic problems*

In addition to the three kinds of problem discussed above, there are other no less important issues which have also become more acute during recent decades and which, in conjunction with those other problems, constitute the great challenge which society and the State of Brazil must take up now and in the future.

These other issues, very briefly, are connected with the model of agricultural growth adopted in the recent past and its relationship with the rest of society. Two of these issues relate directly to this model: the price of land and the effect on people's health and the environment. The third issue, which may become increasingly troublesome in the future, is the failure to penetrate the international market for farm products. Lastly, there is the violence in the countryside and the towns, an issue also connected with the model introduced in the rural sector by virtue of one of its consequences: the dire situation with respect to jobs and wages and the great concentration of income, which have exacerbated rural poverty and marginalization.

[5] L. Dowbor, "O PNRA e as transformações da agricultura", in *Reforma agraria da nova república - Contradições e alternativas*, Editora Cortez, Sao Paulo, 1987.

Analysis of the modernization of agriculture throws into relief the primordial role of farm credit in this process. In the past in Brazil it was necessary to be a landowner to gain access to rural credit. In view of the very advantageous terms on which the subsidized loans were made, it was natural, in order to take advantage of these terms, that there should be increased pressure on the land market, with consequences for the price of land. Furthermore, in the period leading up to the most intensive modernization (1969-1971) the stock market underwent a considerable expansion as a result of the availability of resources (Martine and Beskow, 1987). However, owing to a very sharp fall in the securities market in 1971 these resources, in the form of financial surpluses, were diverted to "safer" uses in the real estate market, including the purchase of farming land.

The effect of these factors on the price of farming land is illustrated by the fact that from 1972 this price entered a sharply upward trend for all four possible land uses (table 10), coinciding with the onset of rapid growth in the supply of rural credit (table 1). Thus in just a few years, from 1971 to 1977, land prices rose by factors of 3.5, 3.6, 2.9 and 2.3 respectively for use for crops, fields, improved pasture and forests. In the 12 years from 1966 to 1977, the extreme years with respect to land prices for crops, for example, were 1968 as the low point and 1977 as the high. Between these extremes the price of land for crops increased by 4.1. In 1976 the volume of rural credit in relation to the sector's gross domestic product began its decline, as reflected in the fall in the price of land for each of the four uses from 1977. As this is a very close correspondence of trends, it cannot be ascribed to mere coincidence. The rise in the price of land for the four uses in 1981 may have been associated with investment in less risky assets and reserve assets, for this was the first year in which the gross domestic product declined to negative levels (-3.4%) and the inflation rate rose —to 120%.

Table 10

BRAZIL: INDEXES OF THE AVERAGE REAL SELLING PRICES OF LAND

(1966 = 100)

Year	Crops	Fields	Improved pasture	Forest
1967	99	94	92	92
1968	88	83	87	85
1969	89	90	80	89
1970	97	89	78	86
1971	102	101	89	91
1972	126	120	109	103
1973	222	223	168	148
1974	298	326	253	184
1975	339	384	286	211
1976	343	366	268	213
1977	362	367	258	212
1978	333	360	250	195
1979	315	358	240	185
1980	327	382	258	189
1981	365	417	280	206
1982	344	366	238	197
1983	271	285	185	152
1984[a]	293	294	199	146

Source: M.C. Cavalcanti de Albuquerque, "Estrutura fundiaria e reforma agraria no Brasil", *Revista de economía política*, vol. 7, No. 3, July/September 1987.

[a] First half.

It is thought that part of the rural credit was used directly or indirectly to buy land, mainly in the period when credit was most abundant and cheap. In conjunction with government works that improved the rural infrastructure, this must have resulted in heavier pressure on the land market, fueling the upward price trend. Moreover, the sharp increase in land values in a short period must certainly have encouraged the use of fraudulent means (*grilagem*) of land acquisition and therefore the violence in the countryside; this situation involved the expropriation and expulsion of small owners who were powerless to defend their rights. The peasants had to cope with much harder economic conditions owing to the relative decline in their capacity to buy land caused by the rise in its price. In broad terms these were the main socio-economic effects of higher land prices in the most intense period of modernization.

Another series of effects of the same process affected people's health and the environment. The expanded use of agrotoxins (insecticides, herbicides, etc.) without sufficient knowledge of their correct application, as happened in many cases in Brazil, was not without consequences.

According to data cited by a group of researchers[6] from studies made by the Biological

[6] E. Flores Ruegg, F. Rodríguez Puga, M.C. Martins de Souza, M.T. Ungaro, M.S. Ferreira, Y. Yokomizo and W. Almeida, "Impactos dos agrotoxicos sobre o ambiente e a saude", in G. Martine and R.C. García, *op. cit.*

Institute of São Paulo, there were 3 481 cases of poisoning by insecticides in 1967-1979, 208 of them fatal. An epidemiological monitoring programme directed by the State University of Campinas found that of 1 107 farm workers examined, 12% (133) were suffering from some kind of poisoning, due in 40% of the cases to phosphorated organic insecticides, and 36% of the patients had to be hospitalized owing to the seriousness of their symptoms. In Paraná State (southern region) 1 504 cases of poisoning were recorded between August 1982 and March 1983 (eight months), with 49 accidental deaths and 24 suicides. The researchers state that the lack of proteins in the diet of rural workers helps to increase the toxicity of chemical products and renders them more dangerous. These data are isolated examples, for regrettably Brazil does not have an efficient service to monitor and exercise some kind of control over the use of agrotoxins in the rural sector.

The rapacious nature of agricultural activities in the country in recent decades has had many and serious effects on the environment. There are studies and cases, which cannot be listed here, indicating effects on soil erosion in rural and urban areas, the clearing of large tracts of land, mainly in Amazonia, water pollution, and disruption of the hydrological cycle. The main point, according to Martine (1987) is that a modernization process which involves genetic and operational homogenization ends by eradicating large numbers of plant and animal species which previously existed in naturally heterogeneous conditions, many of them with a high productive and nutritional potential. It is estimated that every plant species that disappears takes with it 10 to 30 animal species, generating a trend which increasingly violates and disrupts the existing ecological balance.

As pointed out earlier, one of the goals of modernization was to generate surpluses of exportable farm products, and this has been achieved in part, to judge by the trade balances. But in view of the commitment to meet the foreign debt, the country will require enormous resources extracted from the interior, not only now but also in the future; and even supposing that the current crisis is overcome, the question arises: To what extent will it continue to be possible to generate sizeable surpluses in the trade balance by exporting farm goods?

One long-term analysis[7] maintains that between 1960 and 1983 the annual growth rate of the volume of exports of the main farm products was 2.4% for the whole of Latin America; but this rate was 5.6% for the United States; 8.8 and 9.4% for the countries of the European Economic Community and the European Free Trade Association (excluding Portugal) respectively; 4% for Canada and Asia; and 4.6% for Oceania. These countries or groups of countries have achieved much deeper penetration of the world market for farm products than the Latin American countries; with the protection of national agricultural subsidies many of them have been generating large surpluses on a sustained basis and during this century they have become net exporters of farm products.

Furthermore, owing to the effects of the current crisis and the manipulation of the markets, the present decade has so far seen a drop in the international prices of farm products, which has compelled Latin America to export an increasing volume of goods to maintain the same total value.

There has also been, according to the *World Development Report*,[8] an increase in tariffs in the developed countries as a means of protecting their agriculture. The report also notes a high coefficient of nominal protection for foodstuffs, beverages and raw materials, indicating producer support in the industrial countries, and a contrasting situation in the developing countries, where the impact of measures is to provide little in the way of producer support and much in the way of taxes.

Lastly, almost all the Latin American countries are taking steps to diversify their exports of farm goods, but they are all trying to penetrate the same markets with a similar group of products. This situation creates serious doubts about the possibility of Brazil's continuing with an agricultural model, the basic goal of which is to encourage the generation of exportable farm surpluses, even though the commitments with respect to the foreign debt impose a growing need to obtain foreign exchange in the international market.

[7]M. Figueroa and C. Talavera, "Desplazamiento y marginalización de América Latina en el comercio mundial agropecuario", PROCADES, teaching paper, series II, No. 56, Santiago, Chile, 1987.

[8]World Bank, 1986.

Given the possible limitation on continued deep penetration of world markets for farm goods, the focus of the problem will revert to the internal issue; thought might then be given to promoting the gradual reconversion of the big and medium-sized farms from the production of exports and agro-industrial raw materials to the production of basic foods, even with the present concentrated structure of land ownership. However, as it would be necessary to guarantee the profitability of these farms in the short and medium terms, food prices would tend to rise. Increased prices for basic foods —wage goods— maintained over a long period would force up costs throughout the economy and refuel inflation.

If the Government took steps to hold down the prices of basic foods produced in such circumstances, by means of subsidies for example, this could have a negative impact on the fiscal deficit, in which Brazil is at present trying to secure a sizeable reduction. This theory as to the possible limits to the reconversion to food production in the short and medium terms is an hypothesis which would have to be verified in a more detailed study. In any event, it is thought that reconversion would not be easy in the short term in the case of soybeans and sugar cane, owing to their profitability and the existing infrastructure for their production, marketing and industrial processing. But even if reconversion were possible, it would not solve the problem of poverty either in the countryside or in the towns. Nor would it satisfy the just demands for better living conditions which are perfectly valid in a transitional period in which an effort is being made to consolidate the country's return to democracy.

Violence has increased considerably in rural areas in recent decades and it has centered mainly on land disputes. Despite the heavy flow of migrants from the countryside to the towns described above, according to Reydon,[9] in 1971 INCRA recorded 109 disputes over land, but in 1984 the figure was 950.

According to CONTAC,[10] between 1970 and 1986 118 000 families of small producers, equivalent to about 700 000 persons, were involved in conflicts over land ownership. The figures indicate a worsening of this kind of conflict in the past two years. There are at present 30 camps of landless workers scattered throughout the country, with 4 000 families equivalent to roughly 24 000 persons. These data suggest the scale which land disputes and violence have assumed in the Brazilian countryside.

In the urban sector there were 640 stoppages over wage claims in 1985, double the number of the previous year, and in June 1987 there were 30 cases of looting by people affected by the drought in the north-east. In addition to the stoppages, nine supermarkets on the outskirts of São Paulo were attacked and looted in only three weeks in June and July this year; the same thing happened to four supermarkets in Rio de Janeiro in under a month. It is estimated that the number of assaults committed in the country averages a little over one every half hour.[11]

However, the most worrying thing at present is the escalation of violence from individual action to collective action in both rural and urban areas. In the rural sector it is a question of groups of displaced people who, for want of any peaceful option, are forced to commit violence in an effort to survive and are confronted by the reaction of organized armed groups. In the urban sector, where private security firms are proliferating, it is no longer just a case of common crime in an individual assault but rather of large groups of people also seeking to survive; or even of the collective violent reaction of entire marginal districts, as in the case of the *favelas* of Rocinha (200 000 inhabitants) in Rio de Janeiro in mid-August this year or Cerro Santa Marta (11 500 inhabitants) at the end of August. In Rio de Janeiro, for example, on whose centres of marginal population the censuses have included a specific enquiry, the number of *favelas* almost quadrupled between 1950 and 1980 (Guimaraes, 1982) from 58 to 192. The population of the country's *favelas* has increased by 50% in the past five years from eight to twelve million persons, while the total population increased by 13.5% in the same period. This indicates an intense process of "favelization".

[9]B. Reydon, "Sintese crítica do plano nacional de reforma agraria", Editora Cortez, in *Reforma agraria da nova república, op. cit.*

[10]National Confederation of Farm Workers.

[11]*Revista Veja* No. 979, June 1987, p. 41.

III
Conclusions

Brazil has a great potential which is still not fully used. Its gross domestic product of US$280 000 million makes its economy the eighth largest in the world. However, its per capita gross domestic product of a little over US$2 000 puts it in fortieth place out of 128 countries; if only the 101 developing countries are considered, Brazil occupies twenty-second place.

Brazil has grown faster than Latin America as a whole during the last 35 years. In 1950 its gross domestic product amounted to 28% of the region's total and it had risen to 36% by 1985. Its per capita gross domestic product, which was 80% of the regional average in 1960, was only slightly above that average in 1985. Still in relation to Latin America, the country has made much progress in scientific and technological development and occupies a leading position in the region, but it still has much room for improvement in these areas.

Its economic growth has been very high in recent decades but it is now faced by a series of economic and social problems. It is also passing through a very important and at the same time complex political stage which is testing its capacity to consolidate the return to democracy.

The crisis of the 1980s and the foreign debt have exacerbated the socio-economic problems while at the same time restricting access to means of coping with them. But they were not the cause of these problems even though they did make them worse. For many years now a part of Brazilian society has been contracting another kind of debt —a significant and growing internal social debt— distinct from the large public deficit which at present amounts to about US$1 600 million. In this internal social debt, the size of which is uncertain, the creditors are another large part of the population and, paradoxically, they do not have the financial means to establish reserve funds that would enable them, occasionally, to meet unpaid debts; and in this case the interest rates have not been repeatedly raised, for they have always been negative in real terms.

The modernization of part of agriculture, which has not solved the problem of concentration of land holding by modernizing its distribution and making access to it more widely available, has been conservative, partial and incomplete, with repercussions on the whole of society. This modernization was carried through very quickly instead of gradually, by means of powerful government incentives and with technology inappropriate for the existing complement of factors; and it made maximum use of the relatively scarce factor —capital— and minimum use of the abundant factor —labour. It therefore restricted the capacity to generate jobs in the countryside, disrupted part of the existing peasant economy in the modernized areas, reduced the per capita output of foods, and forced a remarkable process of rural-urban migration which produced a massive increment of the redundant population of the towns. In Brazil this process has had negative effects which caused it to be dubbed (George, 1987) the "modernization syndrome". Apart from other equally important consequences, it has not solved the problem of poverty and marginalization in the countryside and it has aggravated these same problems in the towns. A final and serious effect is the increase of violence throughout the country.

Brazil is now confronted by a number of challenges and its ability to cope with them in the future will depend in part on the performance of the National Constituent Assembly and above all on the organization and participation of representative social groups in defence of their interests. The main challenges which society and the State must take up in economic and social affairs include: tackling the distribution conflict; adopting a firm stance of fiscal austerity to reduce the domestic debt and the public deficit; maintaining a high rate of economic growth; stimulating saving and private investment; cutting the inflation rate; taking a clear, sovereign and negotiable position on the foreign debt; and democratizing the State apparatus by decentralizing its management and making it less bureaucratic. The main political challenges seem to be: consolidating the processes of democratization and effective separation of powers; modernization of the political system by increasing the social representativeness of the parties and the Government; and completion of the work of the Constituent Assembly by the establishment of adequate social legitimacy for the new Constitution.

A series of reforms in various sectors is being discussed with a view to tackling these economic and social challenges, reforms which are all integrated in an overall framework of restructuring of the development process. They include agrarian reform which, after the system of government and the term of office of the President, is perhaps the most important issue under discussion in society, the Constituent Assembly and important sections of the Government. All this indicates the complexity of the times which the country is living through and the enormous challenges which it will have to take up in the immediate future. These challenges must be seized with vigour and determination, jointly and immediately.

Brazil has never carried through an agrarian reform, and to do this without restricting it solely to the distribution of land, quite apart from being considered a priority task by the present Government, is perhaps the only necessary and available non-repressive means of calming the violence in the countryside; cutting back the rural exodus and the violence in the towns; improving living conditions and reducing poverty; satisfying the just claims of enormous numbers of landless peasants by giving them fair access to land; boosting food production and ensuring adequate supplies in the towns; expanding the domestic market and reducing international food dependency; and consolidating the legitimacy of the State apparatus and supporting the redemocratization process.

A relatively far-reaching agrarian reform that goes beyond the goal of land distribution might follow the lines set out in Decree 91 766 of 10 October 1985, which launched the National Agrarian Reform Plan (PNRA) in Brazil, although some people consider it conservative and very limited and others very ambitious. This plan envisages a set of programmes which have different purposes and orders of priority but which are complementary and interdependent. It sets out a basic programme for settlement of rural workers on expropriated land or land made available by other means, which is centered on the socio-economic organization of the beneficiaries for production, marketing and industrial processing and affords assistance in the shape of economic and social promotional activities. The supplementary programmes which are to be fully integrated in and implemented in accordance with the requirements of the basic programme, include actions in the area of real estate regulation, land settlement and taxation. The additional support programmes include rural land registry, studies and research, legal aid and development of human resources. The plan includes a general description of the programmes, operational guidelines, and measures for immediate action; it specifies the bodies involved in the execution of each programme and gives an estimate of the financial resources required and an indication of the sources of financing.

The presentation of the National Rural Development Policy by three ministers[12] to the President of the Republic in October 1985 states that "the agrarian reform is not an end in itself but a means of securing social justice and increasing output; it does not exist in isolation nor does it include all the measures needed for social peace; it is part of a whole and should be viewed as such. The problems of the countryside will not be solved merely by better distribution of property but this can make a decisive contribution to better balanced rural development". When he approved the National Agrarian Reform Plan the President said that "no modern nation has developed without first dealing with the agrarian problem. It is not possible —it has never been possible and it is no coincidence that it has never happened differently in the history of the world— to build a democracy without three essential elements: consensus, courage and modernization".

Since 1985 the new Government has been carrying out some of the measures envisaged in

[12]Agriculture, Agrarian Reform and Development, and Planning.

the National Agrarian Reform Plan launched in that year. Progress has been very slow despite the great effort made. There is a number of obstacles in various areas, and positions are becoming increasingly polarized for and against the agrarian reform; this is helping to exacerbate the violence. At present everything indicates that those who are opposed to the implementation of the reform peacefully and within the law forget that their opposition increases the risk of uncontrollable violence which might result in a serious social upheaval. The fundamental problem of the rural and urban sectors in today's Brazil is that, regrettably , in the present circumstances the possibility of aggravation of the violence cannot be excluded.

Notwithstanding this complex, difficult and worrying socio-economic situation, the political room for carrying our the agrarian reform in Brazil at present has been contracting since the launch of the PNRA in 1985. On 21 October 1987 the Government promulgated Decree Law 2363. This decree orders the winding-up of the National Institute for Settlement and Agrarian Reform (INCRA), the body responsible for implementing the PNRA; and it establishes the minimum limits for expropriation at 250 ha for the southern and south-eastern regions, 500 ha for the north-east, 1 000 ha for the central-west, and 1 500 ha for the north. It also removes the possibility of expropriation of properties of any size when their land is considered to be an "area in production", without defining this term. It is estimated that the measures set out in the decree will exclude from the agrarian reform 97% of the country's rural properties, i.e., an area equal to 315 million ha. In short, this decree law undermines the institutional base and severely limits the terms of implementation of the PNRA in the short and medium terms. It is therefore asserted that the plan implies the collapse of the agrarian reform in Brazil.[13]

If it does not prove possible to carry through the agrarian reform in a democratic framework at present —owing to the increased difficulties, the deterioration of the standard of living of large sections of the population, and the increase in rural and urban violence— it nevertheless seems that this reform will remain a requirement for the future, for it will not be easy to find an alternative to take its place which will be able to resolve the existing acute social contradictions without repression and in freedom. To postpone it means deferring to the future a worsening problem which will still have to be tackled, perhaps in different, more difficult and more complex circumstances.

On the other hand, carrying out the reform means taking up the challenge which has faced many other nations of the world in rationalizing the management of their natural and human resources, making a decisive contribution to a process of national pacification, and overcoming major social contradictions. In addition to achieving these socio-economic objectives, it will confer the right of citizenship on millions of people who now have only nationality. For Brazil it would mean superimposing modernity on the legacy of archaism and advancing into the future by the path of modernization in the conditions of relatively stable social balance which are necessary and sufficient for its development.

[13] "Decreto implode a reforma agraria", *Revista Exame*, No. 389, 11 November 1987, p. 11.

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CEPAL REVIEW No. 33

Agricultural planning in the countries of the Caribbean Community (CARICOM)

*Eduardo Valenzuela**

More than 33 States and territories make up the Caribbean basin today. For several centuries they were colonies of European powers —Spain, France, Netherlands, United Kingdom— and even today those countries, now joined by the United States of America, still make their dominant presence felt.

Although these peoples have that important common origin, the decisive factor is their awareness not only of similar manifestations of culture, tradition and custom but also of very similar forms of social organization and modes of production. The great common denominator is underdevelopment. The economies of most of the countries look to tourism as the lead sector, with all its dynamic but in many respects distorting effects.

However, the biggest and most densely populated countries —Cuba, Haiti, Puerto Rico and Dominican Republic— are exceptions to the rule. While these four countries have a total of about 30 million inhabitants, the other 29 States and Territories together have under 10 million, with examples of national mini-units of 6 700 inhabitants (Anguila), 8 600 (Turks and Caicos islands), 11 900 (British Virgin Islands), and 11 900 (Montserrat).

The Caribbean Community (CARICOM), established in 1973, represents one of the main attempts at integration; it consists of 13 independent English-speaking countries with a total population of 5.5 million.

This article is concerned with the institutional framework of agricultural planning in the countries of the Community. The priorities which emerge from examination of its characteristics are similar in some respects to the priorities which the Latin American countries are assigning to their national planning systems. These similarities are certainly not coincidental and they could form the basis for effective co-operation between the two regions.

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I

The Caribbean Community

Thirteen English-speaking Caribbean countries are at present members of the Caribbean Community (CARICOM). They are located in the Caribbean Basin, the area of the world with the greatest concentration of small developing countries. Their characteristics are heterogeneous, as are their cultures, histories, peoples, languages and institutions. The new economic and political developments of recent decades have been superimposed on a common economic, social and cultural history which lasted more than 300 years. Today this history represents a genuine heritage, without which the Caribbean Community would be no more than a declaration of intent with no shared destiny, nor a desire to subsist and survive as a different identity among the 33 countries and territories in the vast Caribbean region.

The 13 politically independent countries have hardly more than five million inhabitants; only one of them, Jamaica, has more than two million, and only one other, Trinidad and Tobago, more than one million. Of the other 11, several have barely 100 000 inhabitants and one of them, Montserrat, has only a little over 12 000 (table 1).

The entire natural, economic, sectoral, social and political environment of these countries today must be seen in this demographic context. Some of the countries —Antigua, Barbados and Guyana— established in 1967 the Caribbean Free Trade Association (CARIFTA); others then joined them, and in 1973 the four States independent at that time —Barbados, Guyana, Jamaica and Trinidad and Tobago— set up the Caribbean Community (CARICOM), also known as the Caribbean Common Market, which was subsequently joined by the other nine independent countries. The Caribbean Community came into being by signature of the Treaty of Chaguaramas at Trinidad (4 July 1973), the first paragraphs of which state that: "The Governments of the Contracting States, determined to consolidate and strengthen the links which have existed historically between their peoples, share the common determination to realize the hopes and

Table 1

CARICOM: STATISTICAL PROFILE, 1985

	Area (km^2)		Population (thousands of inhabitants)	Per capita GDP (dollars)
	Total	Agricultural		
Antigua and Barbuda	440	80	80	2 244
Bahamas	13 942	90	232	7 822
Barbados	431	330	253	4 894
Belize	22 960	520	166	1 110
Dominica	750	170	78	1 132
Grenada	345	140	100	961
Guyana	214 970	4 950	791	584
Jamaica	11 242	2 650	2 311	858
Montserrat	102	10	12	3 118
St. Christopher, Nevis and Anguila	269	140	46	1 469
Saint Lucia	616	170	137	1 245
St. Vincent and the Grenadines	388	170	109	933
Trinidad and Tobago	5 128	1 580	1 181	6 538
Total CARICOM	271 583	11 000	5 496	2 574

Source: Caribbean Development Bank, *Annual Report* 1986, 1987; and FAO, *Production Yearbook*, 1986, Rome, 1987.

aspirations of their peoples for full employment and improvement of their working and living conditions."

In addition to the other concerns of Community business, the States of the Caribbean Community have had to cope, individually, in the last quarter of a century with severe difficulties resulting from their new political independence. Since then the Caribbean Community has cherished the conviction that this independence must open the way to a new way of life, in which the great mass of the people would begin to enjoy better living standards, more and better job opportunities, more personal freedoms, and greater emotional and psychological strength derived from the development of a national, English-speaking and Caribbean identity. However, at present in the region as a whole, human and social progress is still extremely far from achieving the rates of improvement that the majority of the peoples would consider satisfactory.

The regional integration of the Caribbean Community represents above all a commitment on the part of the member States which stems from their common awareness that in each country and in the Community as a whole maximum use must be made of physical, human, scientific, technological, financial and organizational resources, both available and potential. Management of the resources requires clarity and agreement about the development priorities; it also requires high levels of output and the distribution of the fruits of economic growth in such a way that the basic needs of the people are effectively satisfied.

II

Planning and the agriculture sector

The situation and characteristics of the English-speaking countries of the Caribbean have been seriously affected by the gloomy international background of the present decade. The governments of the region are agreed that the small economies of the area, with their specific and difficult problems, such as the ecological and climatic environment, small markets, growing labour force pressing for fair opportunities, etc., will not be able to generate spontaneous forces to achieve substantial improvements from the present situation. Hence the awareness of the need to resort to the tool of planning, which the countries of Latin America are taking up after a lag of exactly a quarter of a century.

But in global and sectoral development planning the countries of the region will not necessarily have to travel the roads taken by the Latin American countries. On the contrary, the new historical development of the international community in recent years is affecting the present structures and determining in each situation future actions which, being carried out in different contexts, will be suitable in some cases and unsuitable in others.

The sectoral situation of agriculture and the effort which the English-speaking countries of the Caribbean are making to alleviate underdevelopment, poverty and malnutrition are helping the institutions of the public agricultural sector to hold renewed hopes in the potential results of agricultural planning. Today the needs and priorities of overall and agricultural development in these countries mean that the national planning systems must redefine their conceptual framework and at the same time make proper use of their action methodologies and tools.

The agriculture sector contributes to different extents to the formation of each country's total product. In many cases national economies respond much more dynamically to stimulus from other non-farming sectors of activity. Hydrocarbons and other minerals are very important in Trinidad and Tobago; the tertiary sectors, especially banking and international services, are of great importance in countries such as Bahamas, Barbados and Grenada.

But in several countries the tourism sector and its related activities are the main axes of growth. In all 13 countries of the region, except for Belize and Dominica, it is estimated that earnings from tourism are greater than the value added of the agriculture sector. The CARICOM countries can be grouped as follows in terms of the contribution of tourism to the total economy:

Group A	Antigua and Barbuda, Bahamas, St. Christopher, Nevis and Anguila.	Tourism roughly 50% of national activity.
Group B	Barbados, Grenada, Jamaica, Montserrat, Saint Lucia, St. Vincent and the Grenadines.	Tourism roughly 25% of national activity.
Group C	Belize, Dominica, Guyana, Trinidad and Tobago.	Tourism less than 10% of national activity

The importance of tourism in the economies of the region is not limited to the sector's status as a dynamic activity for exports, demand, infrastructure, jobs, etc., for it also has an obvious influence on agro-foodstuffs production, consumption habits and domestic food supply, as well as exercising heavy pressure on imports.

In addition to the activities and effects associated with tourism in the English-speaking Caribbean, attention must also be drawn to the powerful impact of flows of "remittances" from abroad. Large numbers of workers emigrate to the United States and Canada, from where many Caribbean emigrants periodically remit money and resources to their families, returning after some time in many cases with a major contribution to make in ideas, habits and foreign exchange. These contributions can be of great importance in countries with small economies. In a country like Montserrat for example, with barely 12 000 inhabitants, it is estimated that some three to four thousand persons, i.e., equivalent to 25% of the population, are Americans and Canadians who have come to the island to live and spend a large part of their pensions.

Although the formal economy absorbs part of the effects of these phenomena, there is no doubt that they are decisive factors, together with tourism, indirectly affecting all areas of national life and directly and decisively affecting the supply and demand structure of agro-foodstuffs.

The CARICOM countries can be grouped into three categories in terms of the share of agriculture in the overall economy:

a) Countries where farming accounts for over 20% of total GDP.	Dominica, Guyana, Belize.
b) Countries where farming accounts for between 10% and 20% of total GDP.	Grenada, St. Vincent and the Grenadines, Saint Lucia, St. Christopher and Nevis.
c) Countries where farming accounts for under 10% of total GDP.	Barbados, Jamaica, Antigua and Barbuda, Montserrat, Bahamas, Trinidad and Tobago.

In all these countries exports of traditional farm products constitute important segments of agriculture with respect not only to foreign-currency earnings but also to use of physical, technological and capital resources. Bananas, sugar, rice and cocoa are their main export crops and they occupy a large part of the arable land. The behaviour of the international market in these products (demand and prices) therefore has a direct effect on the respective national farming sectors.

The agricultural development of the countries of the community is characterized, to a different extent in each of them, by the simultaneous influence of problems of various kinds, of which the following are the most important:

i) Problems connected with the structure of land ownership and tenancy, with heavy concentration and a clear correlation with economic, social and political power;

ii) The existence and importance of a modern agricultural sector oriented towards external markets, especially in the production of sugar, bananas, rice and cocoa;

iii) The existence of a large number of small production units engaging mainly in traditional peasant farming, where priority is given to subsistence crops and production for local markets;

iv) The existence of large numbers of rural unemployed and underemployed, consisting of landless workers and peasant farmers with surplus manpower;

v) The persistence of low capital intensity per man employed, which results in low productivity and a slow rate of capital accumulation, and has a negative effect on personal incomes;

vi) The very unequal distribution of income and the poor access to factors and services, which result in a very poor quality of life for a large part of the population;

vii) Inadequate institutional support in rural areas, not only with respect to basic services such as education, health, housing, water, electricity, etc., but also with respect to institutional production services in such areas as extension, credit and marketing;

viii) The lack of adequate channels for community participation;

ix) The lack of plans and programmes for the use of productive resources, which results in low profitability and continual deterioration of natural resources through erosion, destruction of forests and water pollution;

x) Low levels of formal education and little determination to educate for development.

From among the main identified obstacles to the promotion and administration of agricultural development in the English-speaking countries of the Caribbean, the following areas have emerged as priority ones for sectoral planning:

— The need to improve the quality of basic information —statistical and qualitative— for the promotion and administration of the sector's development;
— The need to enhance the effectiveness of the projects cycle and the investments cycle for agricultural growth and development;
— The need to manage change, both in the farming and food sectors and in the integration of agriculture in the whole economic system.

III

The Latin American experience and the institutional framework for agricultural planning in the Caribbean Community

The storage, processing and systematization of information for the planning of agricultural development, the cycle of development and investment projects, and the institutions to administer the processes of sectoral planning seem to constitute the point of contact with respect to priorities for sectoral planning in all the countries of Latin America and the Caribbean.

In the experience of the Latin American countries recent years have confirmed a picture of frustration with developmentalist and structuralist theories; in turn, the debate about the planning and reform of structures seems to have been consigned permanently to the second rank. The neoliberal postures, far from assigning to agriculture the dynamic and central role which it played in the past, have scarcely recognized its importance in the problems of employment, foreign exchange, food supply and poverty.

Recognition of this fact has brought new emphasis to the planning function, with greater priority for programmes of integrated rural development and food supply and nutrition, and for initiatives connected with food security. The emphasis on plans has also been replaced by the preparation of special studies; and in addition, in response to encouragement from the international and national financial sectors, there has been renewed interest in giving priority to the techniques and processes of the identification, formulation, financing, execution and monitoring of investment projects.

There are various reasons for the rather unsatisfactory results of the evaluation of the planning of economic development in the countries of Latin America. It must be remembered that planning, and more specifically the preparation of global and sectoral development plans, has existed in the region in parallel and conjointly with the proposals and requirements of the Alliance for Progress, with developmentalist thinking, and with the structuralist stance of ECLAC itself.

In the various national experiences the different kinds of analysis have led to interpretations and conclusions which indicate different causes for the failure of planning. Some attribute the main cause to the lack of political will to carry through the strategies, programmes and policies entailed by the stated objectives; others blame the limited institutional capacity of the public apparatus or the planning techniques and methods used; some lay the blame on the failure of the State to secure structural changes in power groups; lastly, the economic and political decline of the farming sector in relation to the other sectors of activity and the transnationalization of the agro-foodstuffs system are also mentioned in the judgement on the sectoral planning process.

In the countries of the Caribbean Community, with a few exceptions such as Jamaica and Trinidad and Tobago, planning systems are very embryonic. In most of the countries these systems have been used for making diagnoses without any prior definition of the conceptual framework of sectoral planning; this has resulted in obvious defects in the diagnoses with respect to their use as tools in programmes and policies of agricultural development.

Today the three priority areas, i.e., improvement of the quality of the sectoral planning information, the integration of the projects cycle and the investments cycle, and the upgrading and restructuring of institutions to administer the planning process constitute a clear, agreed and explicit common denominator in all the English-speaking countries of the Caribbean.

As was pointed out earlier, today this common denominator is also an urgent priority in the Latin American countries.

In the Caribbean Community this holds good for Jamaica and Trinidad and Tobago as well, where the institutional structure of the planning systems is stronger and more experienced than in the other countries. It must be remembered that these two countries contain more than 60% of the Community's total population.

In Jamaica the Planning Institute of Jamaica (PIOJ) is responsible for the development and administration of the national planning system, for which purpose it enjoys, *inter alia*, the considerable technical support of the Project Development and Economic Programming Division. It is also responsible for co-ordination of project areas related to planning, acting as secretariat of the Pre-selection Committee which decides on the order of priority of investment projects. Where statistics are concerned, the PIOJ enjoys the active collaboration of the Statistical Institute of Jamaica (STATIN). Within the Ministry of Agriculture, agricultural planning services were recently reorganized in the Planning and Policy Review Division, which has three units: i) Planning; ii) Data Bank and Evaluation; iii) Rural and Physical Planning. The five-year agricultural plan for 1984-1988 is currently in force. Both national and sectoral planning are required to ensure co-ordination and consistency by means of permanent communication between and joint studies by the PIOJ and the Planning and Policy Review Division of the Ministry of Agriculture.

In Trinidad and Tobago national planning is the responsibility of the Ministry of Finance and Planning. Three five-year development plans were formulated and carried out between 1958 and 1973. Then up to 1983, during the period of high oil prices, the emphasis in planning was on programmes with specific investment and development projects. From 1983 to today a definite multisectoral approach has been taken through the Multisectoral Task Force Report, which provides a framework for the preparation and permanent review of the sectoral development strategy. The bases for the identification, formulation, financing and implementation of development projects are updated in accordance with this strategy. Since 1981 the Ministry of Agriculture, Lands and Food Production has been organized into three sections concerned with sectoral planning: i) Policy, Research and Planning; ii) Programmes and Projects; iii) Statistics.

In these two CARICOM countries with greatest experience in global and sectoral planning, serious defects have been found in the inter-institutional co-ordination within their respective national sectoral planning systems. Similarly, as is often the case in the other countries of the Community, the new institutional structures adopted by the two countries give clear priority to the need to improve the information for the planning of sectoral development and to introduce criteria and mechanisms suited to the projects cycle within the general framework of the development strategies, and, lastly, the need to focus the efforts to promote development by means of *ad hoc* and structural institutional changes required by economic and social progress in the present regional and international circumstances.

Despite the geographical location and the third world status of the English-speaking Caribbean countries and the Latin American countries, it is nevertheless difficult to identify clear similarities between their economies. The experience of the Latin American countries could be useful to the countries of the Caribbean Community only to the extent that these countries can assimilate certain characteristics, which is unlikely to happen in view of their history, culture and institutional traditions. However, the new priorities described above, which in the case of Latin America result in part from its practical experience of planning and in part from the international situation, are determined partly by that same international situation in the English-speaking Caribbean countries, but most of all by experience and by the adoption and assimilation of their own embryonic institutional structures which are the creators, depositories and driving-forces of the new modes of action for development.

This article began by identifying the areas of priority action in the planning of agricultural development in the CARICOM countries; it then offered some thoughts about the existence and influence of these priority areas in the Latin American countries. Despite their different historical, cultural, social and political characteristics, it seems to have been the international situation which determined that the long road travelled by planning in the countries of Latin America should lead both regions to tackle the problem of the administration and promotion of development in a much more similar way than would be indicated by mere observation of the temporal evolution of planning processes in each of them: several decades in the Latin American countries and only a few years in the English-speaking countries of the Caribbean.

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Agricultural sector policy and macro-economic planning

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This article is intended to provide a brief overview of some of the links which need to be established between sectoral and macro-planning. In the process it discusses some of the planning methods used in the small open economies of the Caribbean and provides some ideas as to the direction in which they may evolve over time. While examples are drawn principally from the experience of Trinidad and Tobago, the basic principles, as well as the more general comments, apply faithfully to the planning patterns prevailing in most Caribbean countries.

The article is divided into three parts. Firstly, some comments are made about the broader macroeconomic developments in Trinidad and Tobago since 1973, and an attempt is made to fit agricultural sector performance into that context. Secondly, the paper discusses various approaches to planning, progressing from the most basic to more complex and integrated approaches. An attempt is made to establish the relationship between sectoral and macroeconomic planning and in so doing integrate the "top down" and "button up" planning approaches which will be necessary in order to create the consensus required for effective plan implementation. Thirdly, before providing a summary of conclusions, some of the constraints which must be faced by planners in the region are also identified.

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I

An overview of economic trends and policies

The petroleum price increases between late 1973 and 1980 brought windfall gains to Trinidad and Tobago and permitted a level of economic activity, and an increase in the standard of living, not previously experienced.

Because it is an extractive industry, with limited linkages into the domestic economy as a whole, in the first round these windfall gains accrued primarily to the public sector in the form of increased revenues. In the second round, as the government distributed these revenues in the form of increased staffing of, or salaries for, the civil service; expanded welfare programmes; widely increased subsidies or a rapid increase in investment projects, the oil revenues impacted upon the other sectors and ultimately upon the standard of living and levels of consumption of the population as a whole.

Since the oil boom was also an export boom, it generated rapidly increasing quantities of foreign exchange and permitted the removal of the import constraints that had affected the economy up to 1973. While there was a rapid increase in imports, it was also possible (at least initially) to achieve a great increase in reserves and to benefit from the capital revenues which came from them.

Real weekly earnings increased by 6% per annum between 1976 and 1982, while the rate of unemployment fell from 17% to 10% over the same period.

Real national income is estimated to have risen by one-third between 1973 and the second oil price increase in 1981. A fair portion of this increased income was also transmitted to the poorest sectors, through increased employment, make-work schemes, and a series of subsidies tailored to their needs. At the same time, a fairly large programme of investments in activities downstream from the petroleum sector were put into operation (ammonia, urea, methanol and steel).

Due to the rapid increase in income, however, many of the productive factors were overstrained and a series of dislocations were created.

Increased incomes were not matched by increased productivity, many of the unskilled were employed to do skilled work, and others were employed to do non-productive tasks. Increased consumer demand could not therefore be matched by increased domestic production, resulting in a rapid increase in prices and imports. This was exacerbated by the fact that many local manufactures were large users of foreign exchange.

Costs of production increased rapidly, and while these increases were easily absorbed by local consumers, the effect was that industries were no longer competitive on the wider export markets, or even within the protected CARICOM market.

Finally, there were significant reallocations of resources into areas such as the distribution of imported goods, construction, and real estate, while at the same time there was a shift of resources out of sectors such as agriculture.

By 1982, a decline in petroleum output which had started in the late 1970s was joined by falling oil prices: a trend which has continued up to the present. Accordingly, many of the policies developed in the 1970s are no longer sustainable, and the dislocations created are now in the process of being corrected. Evidence of this readjustment is seen in reduced government expenditures, a variety of new sectoral policies, and regulations regarding foreign purchases, while the process of realigning the local currency has also begun.

1. *Agricultural sector performance*

The impact of past macro-economic trends and policies upon the agriculture sector was quite significant. Even though agriculture had not played a major role in the economy prior to 1973 its share of GDP was nevertheless halved between 1973 and 1982, standing in the latter year at only 2.7%. By 1985 this trend had been reversed somewhat due to the impact of changed economic conditions and policies, so that by the end of that year its contribution had increased to 3.7%.

Between 1971 and 1982, food imports doubled in terms of volume but increased eight-fold in terms of prices. In 1980, 90% of food needs had to be met through imports. The decline in agriculture was further demonstrated by the fact that labour was moving out of the sector, due no doubt to the fact that real wages declined. Agriculture absorbed about 18% of the labour force in 1974, but by 1984 this had gone down to 8%. Once again the trend seems to have been reversed, since this percentage grew to 10% by the end of 1985.

In effect what was happening was that, in line with a development philosophy common to the whole region, emphasis was being placed on industry as the path by which development would be pursued. These trends were evident throughout the region, but as in many countries the resources were more limited, the shifts in emphasis were not as dramatic. This very marked shift away from agriculture was also evident in other oil economies, such as Nigeria, which had traditionally been a major agricultural producer before its oil boom. Nevertheless, Indonesia provides an example showing that it is possible to develop an oil economy without hampering agricultural development, provided the appropriate macro-economic policies are applied.

Subsequent evaluation of the agriculture sector in Trinidad has listed a number of reasons for the decline of the sector:

a) Inadequate physical infrastructure;
b) High cost and/or shortage of labour;
c) Outflow of capital from the sector;
d) Social problems such as praedial larceny;
e) Excessive concentration on the export sector;
f) Insufficient research and development;
g) Competition from foreign food and dumping;
h) Shortage of professional and technical skills;
i) Declining public sector investment in agriculture, and
j) Spread of urban culture throughout the society.

Now that foreign exchange has resurfaced as a major economic constraint, and ways have to be found to earn and to save more foreign exchange, agriculture comes under scrutiny once more, since food imports constitute a major part of the foreign exchange bill. Moreover, agricultural exports have in the past been a significant contributor to foreign earnings.

By now, moreover, a number of things have changed in the sector, particularly in relation to export markets. The traditional export crops are now facing serious competition, and decisions need to be taken as to whether they can be placed on a competitive footing or whether new products should be tried. This is a particularly urgent decision, since about 70% of the land in production is in export crops such as sugar, coffee, cocoa, or citrus. Moreover, sugar production is a drain on the budget, the industry requiring TT$300 million per year in subsidies.

In actual fact, it would seem that a decision has been taken to retain the most productive parts of the traditional crops and to phase in new export crops where possible, with the remainder of the land being earmarked for domestic food production. But it is not clear whether decisions have been taken regarding what crops should be emphasized (based on a ranking of what can most efficiently be produced) and in what quantities (based on a knowledge of market requirements). It seems that these are issues for the agriculture planners, and it would be interesting to hear whether an investigation has been made in this respect and what its results have been. The implications for a land use policy are also obvious.

II

The orientation of policies towards specific goals

Most of the facts given in the short analysis above are already well known, and even if they are interpreted in different ways it will probably be agreed that there is a case for some form of systematic planning. Moreover, it is clear that whatever it is desired to do in the sector, such goals cannot be achieved if the overall macro-economic conditions are not in harmony. Consequently, there is a strong case for an integrated approach to planning of both specific sectors and of the overall economy.

A tendency has recently developed in the Caribbean not to talk too much about economic planning, but rather to emphasize economic management. This probably arises from a disenchantment with "planning" as practised in the past, and a need to emphasize the continuous process of guiding and fine tuning the economy that is essential for the effective achievement of planning goals. It must be conceded, however, that it is desirable to set out the planning process in a plan document, since this can help to provide a systematic approach to co-ordinating development decisions. An explicit plan can also provide a basis for judging performance at set intervals and for correcting those things that have not been achieved. So, although it must be acknowledged that planning can conceivably proceed without a formal document, such a document may be a useful way-station in the planning process.

All those dealing with the Caribbean are familiar with the three or five-year development plans, which absorb enormous creative energy and human resources, but are often left to languish on a shelf: not followed; never updated to adjust to the rapidly changing environment; sometimes never approved by the political directorate. There are also plans which are merely expressions of hope, or else are cynically intended for window dressing, unconstrained either by administrative or financial limits; incoherent plans that have a little something for everyone, but which add up to inconsistent and unworkable policies; plans which set goals without providing any suggestions of the means, or the instruments, that will be needed to achieve them, and yet other plans which leave out the politically difficult parts.

The existence of a plan, therefore, does not mean that the community has either the will or the means to implement it. As a result, while there has tended to be disenchantment with planning in some circles, in others perhaps a false hope has been instilled that the plan will be the panacea for development problems. A realistic evaluation will probably come somewhere between these two extremes.

1. *Planning stages in a mixed economy*

It may now be useful to discuss briefly some of the more common mechanisms used in the region, particularly as they relate to mixed economies.

Planning is more complex in mixed economies because in this system the planner has less influence over all the economic actors than is the case where the economy is concentrated in the public sector. Moreover, prices —which are subject to relatively free fluctuation in the mixed economy— change more rapidly than in a system where they are fixed administratively, and where both pricing systems coexist, there is the danger of sending inconsistent signals to the various economic actors. For convenience it may be useful to separate the planning processes used in mixed economies into three distinct stages of increasing complexity, with the understanding that conceptually they tend to progress from one to the other, in a continuum.

The basic minimum begins with the national budget, prepared on an annual basis. This is usually the starting point for most countries and provides indications for the forthcoming one-year period about expected revenues and expenditures, the latter being divided into recurrent expenditures and capital expenditures which will be undertaken by the government. At a more advanced level, the budget might include estimates of expenditures of all public sector entities. Either integrated with this or separate from it, there may also be a list of projects which will account for the total expenditure over the budget period.

For some of the Caribbean countries, this is as far as they are able to go in the planning exercise given the level of resources (particularly planning skills) available to them. the preparation of a slate of projects strains the resources of most of the countries in the area, and accomplishing this is often as much as the resources can manage.

But the budget is sometimes not a very accurate reflection of what is intended for the next year. All those who have worked in the public sector know that the bases on which budget estimates are made are not always the most scientific. Those who have worked in Ministries of Finance know that there is often a tendency to underestimate revenues at the first round in order to contain demands, while in the other Ministries there is a tendency to pad the estimates in the knowledge that the Ministry of Finance will make cuts. Then, as there is a desire to maximize expenditure, both in the hope of forcing the pace of development as well as in an effort to gain the kudos to be derived from a big budget, the political directorate might once again inflate estimates of revenue, and so on. The fact is that there is an element of gamesmanship in the budget exercise that really has no place in the more formal, and supposedly more scientific, planning process.

At this stage, it will be necessary to examine how the slate of projects is compiled. In some cases, the projects surface because there is an indication that finance may be forthcoming from a donor for such activities: this indication may be given by the lending or aid policies of multilateral or bilateral donors. However, these policies may or may not coincide with the particular development priorities or needs of the recipient country.

Alternatively, the slate of projects may be biased towards a sector which has developed the expertise to prepare projects in the past. This accumulated experience has not usually resided in the Ministry of Agriculture, but in truth these biases have represented relatively minor evils, since the greatest problem for most developing countries is the difficulty in compiling a reasonable slate of carefully prepared and viable projects.

The shortcomings of the project-by-project approach are, however, obvious, since the projects tend not to have any unifying basis, or any common policy thread. There is probably no systematic basis on which to assign priorities to them, either by sector or within sectors.

The Integrated Public Sector Investment Programme, which attempts to remedy the shortfalls of the case-by-case approach, is regarded by some as the proper initial stage of planning. It should take as its departure point a fairly rigourous estimate of public sector resources for the life of the programme, both in terms of revenues and of the resources it expects to be able to borrow (or to be given in the form of grants-in-aid). Estimates of local resources need also to be disaggregated from foreign exchange needs.

Funds are allocated on the basis of explicit, agreed-upon sectoral priorities. The allocation within sectors is then made in accordance with a ranking based on the priorities of the sector, cost-benefit analyses, and any linkages or catalytic effects in respect of other completed, ongoing or slated projects. This co-ordinated group of projects makes up the programme for the sector.

The various sectoral programmes are thereafter evaluated in order to maximize the aggregate benefits to be derived from a given quantum of investment and are ultimately integrated into the National Investment Plan. This often medium-term plan has an annual component which figures on the expenditure side of the national budget. It is usually evaluated on a yearly basis and may be updated or revised periodically, depending upon performance in the previous year or changing priorities.

Ideally, the public-sector investment programme seeks to incorporate all the funding requests made by public agencies, including those of semi-autonomous public entities, since their obligations are usually guaranteed by the government and form part of the national debt. At this stage of the planning process the private sector is incorporated only in so far as the government sets out to influence the investment climate or to channel investment into specific areas; detailed private-sector investment proposals are seldom available at this level of planning.

The Comprehensive Plan takes a different approach. It begins with targets —or, more appropriately, target paths— for certain key elements in the economy, which are perceived to interact in specific ways. A simple overall equilibrium model of the economy can thus be designed for the period covered by the plan, which is usually the medium term (three to six years). This is a sufficient amount of time over which to maintain a consistent policy line and to see its results, but is not so long that forward predictions would become meaningless. Even so, the constant monitoring and readjustment of targets is essential.

By monitoring the target growth path of, for example, the gross domestic product, the planner can gain some idea of the quantum of investment and savings which will be needed to attain the target based on investment and other coefficients, the amount of time needed in order for factors to be transferred and to become operational, etc. In order to do this, the planner draws on past experience, as well as taking into consideration expectations of change during the plan period. While it is obvious that the accuracy of the coefficients and of the appropriate elasticities is central to the exercise, this is difficult to achieve initially due to the weakness of the data bases and a shortage of the appropriate skills. Yet the process by which the planner arrives at these measurements (as well as the discipline needed to visualize and quantify the types of linkages between sectors) is essential if he is to be able to manage the economy effectively. In this way models of varying complexity may be developed to identify the rates of demand and supply, public and private consumption, savings, investment, employment, imports, exports, and so on which will result from the basic target paths.

The comprehensive planning model not only takes into account the public-sector investment programme, but also incorporates budgetary targets based on estimated public-sector resources for the plan period, the projected investment of the private sector, and the expected impact of public policy on such investment. The model might also be arranged so as to provide some notion of the best allocation of resources between the public and private sectors. Initially, for Caribbean countries, a relatively simple model using four or five appropriately disaggregated production and consumption sectors (such as agriculture, industry, services and, where appropriate, mining) might suffice to provide an adequate understanding of the way in which the economy interconnects and to allow the planner to select the basic tools needed for its management.

Using these broad aggregates as a starting point, the plan then goes into detail concerning each of the sectors, which, for their part, will have drawn up their own sectoral investment programmes. In this way "top-down" and "bottom-up" planning approaches are pursued simultaneously.

Once the detailed sectoral plans have been presented, the macro-planner will be in a better position to evaluate the balances involved in greater detail. The planner needs to ensure not only that the supply of labour balances with the demand for it, but also that the necessary types of specific skills are available. Imports should, of course, balance with exports, but the composition of imports is also crucial since, for example, capital goods imports must be forthcoming in order to sustain the quantum of investment. Investment is possible only if the level of savings is adequate, but these savings must also be sufficiently mobile in order to shift to those sectors on which investment priorities are placed. While some of these balances may be established through the operation of key price variables such as real wages, the exchange rate, and the cost of capital, other less tangible factors, such as confidence, need to be considered as well.

2. *Sectoral planning*

An attempt has been made here to show that in order for sectoral planning to be successful, it must be compatible with the overall macroeconomic framework. A word also needs to be said, however, about sectoral planning itself.

If such plans are to be relevant and implementable, the proposals advanced by the agriculture sector planners must closely correspond to the needs and aspirations of the farming community itself. For agricultural policy, perhaps to a greater extent than some other sectors, depends for its success on a large number of small private actors. A level of consensus is therefore crucial as what to produce, what rate of increase is possible and feasible, and what impediments need to be removed in order to implement a given policy.

Armed with an understanding of the problem and a measure of consensus, the sectoral planner will be in a better position to formulate more effective projects and to select the most effective instruments and policies for their implementation. (Appropriate pricing policies are obviously of great relevance in this regard.) The planner will also be in a stronger position to defend such policies and projects at the macroeconomic planning stage.

A significant source of delay and wastage of resources in the implementation of sector plans is inadequate project selection and preparation. A pre-condition for overcoming this problem is a comprehensive evaluation of the sector as a whole. In agriculture, the preparation of such an assessment requires a sound knowledge of land resources, soil types and the consequent production possibilities. It also needs to reflect a knowledge of the relative prospects of development in areas such as forestry, animal husbandry and various crops, and should provide a relatively good idea of the relative efficiency of producing for export or for domestic consumption, of what crops are best, and of what the foreign and domestic markets can bear. Furthermore, the assessment should clearly identify those areas in which there are knowledge gaps and those in which further research is needed.

Once potential projects have been identified, feasibility studies need to be prepared which take into account the economic, technical, financial and organizational aspects of the project so that it may ultimately be determined whether the costs are lower than the potential benefits and so that an effective ranking of the various project possibilities may be made. Are the necessary inputs available? What ancillary services are required? What of human and organizational skills?

Effective project preparation is expensive and time-consuming and requires a certain basic minimum of specialized data. It is essentially a multidisciplinary exercise and hence skills-intensive. Yet it is crucial if funds are not to be wasted on the implementation of non-viable projects; even more expensive is the budget subsidy required far into the future to sustain the operation of badly-conceived projects. Paradoxically, the risk of this happening is highest when domestic resources are used or when the repayment of project loans is guaranteed by the public sector, since multilateral donors normally tend to be more rigorous in assessing feasibility before disbursing such loans. Nevertheless, there is often a tendency for those impatient with the pace of development to regard the requirement of feasibility assessment as an impediment, and the temptations to circumvent the process are great.

3. *Constraints*

Before closing it might be useful to comment on two constraints which are sometimes used as arguments for denying the efficacy of formal planning whenever the question arises in the Caribbean. They relate to the extreme openness of these economies and the quality of the data available to the planner.

In economies as open to external factors as those of the Caribbean the planning discipline is faced with more constraints than is the case in larger and more self-sufficient economies. Since an open economy is subject to a much higher level of external vulnerability and therefore uncertainty, the planning process needs to be more flexible so that it can react to unforeseen circumstances, and a greater degree of attention must be paid to the review and readjustment of targets. At the same time, economic actors need to react rapidly —and, ideally, automatically— to external stimuli which create opportunities for expansion as well as potential risks of contraction. Price mechanisms which faithfully reflect external trends and impacts therefore have a central role to play in small open economies. Nevertheless, recent global trends suggest that even for the largest countries the idea of autonomous economic action is rapidly becoming a myth.

As regards the constraint represented by the available data, it is evident that the quality of the planning process is highly dependent upon the quality of information at the disposal of the planner. Statisticians often argue that the data set needs to be complete before planning can proceed, whereas economists may be willing to accept a less complete data set if it can be made available more quickly. In the real world one cannot await perfection; one must begin with the resources that are available, while hoping to improve them over time. It is also true that many of the Caribbean countries do not make the best possible use of the available data; nor is the collection of the data as systematic as it might be. In any event, the quality of the data clearly places some constraints on the type and extent of planning which is feasible.

III

Summary and conclusions

In conclusion it may be useful to restate some of the main points made in the foregoing discussion:

1) Planning, as defined in this article, is to be seen as a dynamic process which is an integral part of implementation and economic management;

2) Since planning requires constant feedback and adjustment, it is a good idea to revise the plan on an annual basis; some planners adopt a rolling plan with this in mind;

3) The type and degree of detail of the planning process is conditioned by the objective circumstances in each country and by what is deemed to be necessary, but is ultimately determined by what is feasible and what can be implemented;

4) There must be a symbiotic relationship between the sector and the overall economic framework, such that the macro-economic framework will be consistent with the goals and objectives of priority sectors, and vice versa;

5) Ultimately, development is dependent upon a succession of viable and productive individual projects in both the public and private sectors. The preparation of such projects is time-consuming and expensive and requires a variety of skills. The planner can skimp on this preparatory work, however, only at great risk to the long-term viability of the project;

6) The implementation and operation of such projects requires effective management skills and ongoing monitoring to ensure their continuing viability; and, finally,

7) Planning is data-intensive, but the process cannot be held up until a perfect data set is obtained. The scope and comprehensiveness of the plan must, however, take the data constraints into account and work within them, even while providing for the eventual upgrading of the data base.

Argentina: crisis, adjustment policies and agricultural development, 1980-1985

*Luis R. Cuccia and Fernando H. Navajas**

This article is chiefly concerned with the dominant trends in agriculture and the economy up to the crisis of the 1970s and the adjustment programmes and their effects on the sector, and it offers some thoughts about the main challenges and the role of agriculture in tackling them.

The authors stress as important precursors to the crisis the changes in the supply of exportable goods resulting from the rapid expansion of the production of soybeans and other oil crops and from the closure of the European market to meat exports. In the regions, in contrast, they point to the increased output of certain industrial crops, which they attribute more to the allocation of resources than to improved productivity.

They then examine the effects of the crisis on the costs and incomes of farming enterprises. The exchange rate, export duties, and financial and monetary policies emerge as the decisive factors, as seems to be confirmed by the widespread surge between 1981 and 1983 in farm export production as a result of increased productivity and a steadily rising exchange rate. This period was followed by a recession, also widespread, which has continued to today. The decline in international prices finally nullified those favourable effects, and there has been a marked decline in agriculture since 1984.

The recovery of agricultural export activities as a result of the introduction of an exchange-rate policy designed to offset the low international prices poses a serious dilemma with respect to other goals such as income distribution and price stabilization.

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I

Situation and trends in the 1970s

1. *The economy*

Towards the mid-1970s the Argentine economy was hit by a serious crisis which reversed the relative stability with growth that had characterized the period 1963-1974. The following years saw sharp falls and stagnation of the aggregate product, considerable de-industrialization, cuts in employment and real urban wages, and accentuated inflation. Investment, however, seemed to increase at a faster rate than in the past, raising questions about the effectiveness of the chosen policies. In foreign trade, exports performed well in the second half of the decade, with farm exports showing particular strength, and this produced positive trade balances.

The scene in the decade was dominated by two big experiments in economic policy: the populist policy of the Peronist government in 1973-1976 and then the neoliberal policy introduced by the military government between 1976 and 1980-1981. These two policies had different impacts on agricultural activity: the first hurt it by reducing the sector's incomes, and the second moved from a clearly favourable first stage (increased prices) to a second very unfavourable stage (exchange-rate slippage and higher cost of credit).

During the populist experiment there was a marked deterioration in the economic situation following encouragement of a sharp expansion of aggregate demand —by means of wage rises and generating fiscal and monetary imbalances— and the introduction at the time of price control measures; all this produced a big increase in inflation, which achieved monthly rates of 40 to 50% in early 1976. At these levels of inflation the overall functioning of the economy was altered considerably.

The military government which took power in 1976 adopted various policies to stabilize the economy, but this objective was achieved only partially. Between 1976 and 1978 real wages were first cut, then a brief period of control of industrial prices was established, followed immediately by stringent monetary restrictions. Later, at the end of 1978, an attempt was made to cut inflation by means of downward adjustment of the exchange rate and public tariffs. These measures produced some results in 1980, but the accumulated pressures on some key prices of the economy rendered these results ephemeral. This situation was exacerbated by the failure to pursue a policy of fiscal spending compatible with the other measures introduced.

The most important of all the repressed pressures were in the exchange rate —both in scale and in impact on the production structure— and in foreign borrowing and the surge in inflation which led to subsequent adjustment.

2. *Agricultural activity*

a) *General description of the sector*

Farm output supplies the home market and generates between 70 and 75% of the country's exports, which are concentrated in a few products: wheat, maize, sorghum, soybeans and sunflower seeds, oils and by-products of the oil-seed industry account for over 70% of the value of all exports.

In addition to this concentration on a few products there is the geographical concentration: 95% of grain output and 80% of the stock of cattle belong to the Pampas. Outside that region there is great heterogeneity, so that it is possible to speak of two categories of agriculture: the first, mainly agribusiness, uses modern and relatively homogeneous technology and reacts rapidly to changes in profit levels. The second, in contrast, caters to the whole of the domestic market, with intense heterogeneity and specialization at the regional level, and it has the inherent problems of small farms: unemployment and underemployment and low incomes. Its poor productivity denies it the possibility of competing in the external market.

Accordingly, the problems of the Pampas region relate to the levels, growth and composition of production and to technological change. For farms outside the Pampas, in contrast, the most important problems are low productivity, the small scale of the operations, the difficulties of accumulation and diversification of output, and the frequent episodes of overproduction.

b) *Trends in agricultural production in the 1970s*

Increased production of grains and oil crops was a feature of the 1970s, especially in the second half of the decade when soybean cultivation was introduced. Grain output rose at annual rates of 1.3% between 1970 and 1975 and 2.2% between 1975 and 1980; oil crops, however, increased at 2.7 and 23% a year respectively. Thus grain output rose at an annual rate of 4.5% throughout the decade (1.7 and 7.3% respectively for the two five-year periods). These increases were due to a considerable improvement in productivity which was in turn due to the introduction of new seeds, better management practices and increased use of pesticides, as well as to the increase in the area as a result of double cropping.

Beef production had a declining annual growth rate in the first five years but increased in the second. Its annual growth rate for the 10 years was 1.4%, lower than the 1.6% recorded in the previous decade. The reasons for this performance had to do with the closure of the European market in 1974 (the European Economic Community became an exporter), whereas the recovery was due to the opening of new markets. As a result of all this, Argentina's herds declined from 59 to 54.6 million head approximately. Milk production, destined almost exclusively for the home market, recorded an increase —and a large one in the first half of the decade.

In the regional economies the changes were due more to the allocation of resources than to improved productivity. The expansion of the cultivated area led to increased production of industrial cotton and sugar cane (3% for the decade) and of fruit (3.8% a year, a rate which remained unchanged throughout the decade). The production of vegetables, with the exception of beans for export, lagged behind the population growth rate.

The rural population declined by 9.5% between 1960 and 1980, while the total population increased by 40%. As a result the economically active rural population came to represent a smaller proportion of the total between those years —12 as against 18%. In the north-eastern region of the country the rural EAP remained high (30%) but its share in the total population fell.

The decade saw great differences both in the distribution of the fruits of development and in poverty. The increased output and productivity occurred in agribusiness, while output and productivity stood still on family farms. Accordingly the modernization was extremely unequal, and the remarkable agricultural growth was matched by the persistence of large pockets of rural poverty.

c) *Macro-economic policies and agricultural policies in the 1970s*

This article relates macro-economic policies to the agricultural sector in terms of the impact of global (not sectoral) policies on the sector's incomes and costs. The most important of these policies was the exchange-rate policy, by virtue of its influence on the relative price of tradeable (principally farming products) and non-tradeable goods. Other important factors were, for example, the financial policy in respect of its impact on interest rates, and the policy on regulation (in the macro-economic sense) of the tariffs of public services. Both affected the sector on the costs side.

A first examination of the (global and sectoral) policies pursued in the postwar period shows that agriculture was initially hurt by the trade and exchange-rate policies (which lowered the real exchange rate) but was then partially compensated by financial policies which reduced the cost of credit to the level of a subsidy. This pattern was maintained in the first half of the decade, but an attempt was then made to change it at the beginning of the second half. On the one hand, the reduction or abolition of withholdings on exports from 1976 involved a much higher effective exchange rate; on the other hand, the 1977 financial reform eliminated subsidized credit, and the sector was forced to make a rapid adjustment. Thus the purpose of both these steps was to change the mix of incentives and disincentives for the farming sector of the Pampas.

These changes had different effects. The price improvements between 1976 and 1978 occurred against a backdrop of increased productivity —a feature of the second half of the decade— although we cannot speak of a causal connection between the two. On the contrary, when the price trend was subsequently reversed, productivity continued to grow. The elimination of subsidized credit had more visible effects: purchases of machinery fell, crops were replaced by livestock, and the increased dependency on self-financing brought with it increased risk, which was why a large number of small and medium-sized producers rented out their properties to contractors who became producers instead of vendors of seed and harvesting services. The resultt was a clear tendency towards concentration of landholding.

Towards the end of the decade the use of the exchange rate as an anti-inflation tool reversed the upward trend in prices and caused a large drop in the sector's income, and as the financial policy remained in force, the situation ended up clearly unfavourable to producers.

Outside the Pampas, in areas of lower productivity and little capacity to adapt to shifts in the market, State intervention was necessary to offset the adverse effects. The removal of credit subsidies in 1977, together with the fall in the real exchange rate, eliminated the compensatory factors and hurt all areas of production, although to different degrees. Production for the home market had to compete on unfavourable terms with cheaper imports as a result of the sizeable reduction of tariffs. In view of the inability of these areas to adapt, the government had to forgive or liquidate the producers' debts as a means of compensating them.

3. *Visible or latent structural problems at the end of the decade*

a) *In the economy*

— Crisis of output and distribution from 1975 on. The country has still not returned to the yield levels of 1963-1974.
— The crisis affected the urban sector more than the rural. The industrial sector was hit hardest for it experienced disaccumulation, falls in employment and wages, and considerable openness to the exterior with an overvalued exchange rate. The situation worsened as there was no alternative to the imports substitution model.
— Increased foreign debt and considerable outflow of capital encouraged by the overvalued

exchange rate and the financial liberalization.
— Increased public debt as a result of unproductive investments, the limitation of public tariffs, and the transformation of private foreign debt into public debt, all of which caused a serious financial crisis in the State.
— Deterioration in income distribution, both functional and between the various groups of wage earners.

These problems extend to the medium and long terms but they also impose serious restrictions in the short term, thus creating instability.

b) *In agricultural activity*

i) *Pampas region*

— Reduced investment.
— Increased borrowing and risk as a result of more self-financing.
— Very large cut in the numbers of livestock as a means of obtaining self-financing.
— Tendency towards soil exhaustion as a result of double cropping without livestock.
— Displacement of livestock to more marginal land as a result of shifts in profitability and financing needs.
— Limits on the expansion of the farming area.

ii) *Regional economies*

— Drop in profits owing to higher interest rates, lower subsidies and other factors, all of which led to reduced investment in machinery and equipment and the failure to replace or replant perennial crops.
— Increase in the productivity gap between modern and family farming.
— Weakening of the family segment with a consequent increase in the size of small farms.

II

Plans, programmes and adjustment policies, 1981-1985

After the "adjustment" made in response to the acute payments crisis which began in 1981 six successive economic teams came to government, giving priority to different goals in accordance with their different approaches. Accordingly, instead of being an ordered and coherent process, economic policy became a series of abrupt shifts for short-term purposes against a background of resurgent inflation, until it ended with the stabilization programme of June 1985. A certain logic can be seen in these policy shifts if they are accepted as "solutions" or "responses" which the successive authorities found for the most pressing problems. First, in 1981, the devaluation to correct the external imbalance; then in 1982 a policy designed to reduce the real value of the domestic obligations of businesses and the financial system in order to prevent their collapse; and later, in 1983-1984, the attempt to ease social tensions by yielding to the demands for redistribution and for reactivation of the production apparatus; and finally in 1985 the emphasis on control of the worsening inflation. The degree of use of given policy tools in the period depended on the changing priorities of the objectives. Thus, while at the beginning of the adjustment period the scene was dominated by measures designed to cover the external deficit (basically adjustment of the exchange rate and reform of the foreign-exchange and trade systems), towards the end it was taken over by measures to combat the internal imbalance (fiscal and monetary adjustment and, in the first stage, freezing of prices, wages and exchange rate, etc.).

III

The impact of the adjustment policies on agriculture

The impact of these abrupt shifts in economic policy on the agricultural sector is obvious when it is remembered that the most important variable which summarizes the effects of macroeconomic policy on the sector was the exchange rate. This instrument and export duties (both shape the effective exchange rate) have traditionally determined the policy of incentives and disincentives for exportable agricultural production, undergoing fluctuations which have tended to offset changes in international prices, productivity, and the availability of exportable surpluses. Next in importance comes monetary policy (availability of credit and interest rates). Macroeconomic policies also determine the specific economic measures adopted for the sector, such as minimum prices, support buying, direct producer subsidies, and income tax policy. The only independent area is the policy on agricultural research and extension.

Within a general framework of crisis and disincentive reflected in the reduced investment of the last years of the 1970s, the period 1981-1983 saw a widespread surge in farm production for export (the cultivated area, stocks of animals and expenditure on inputs and capital goods all increased), followed by a period of equally widespread recession (all the above-mentioned indicators fell) which continued until 1985.

This remarkable change of direction in the sector's activity was due mainly to the sharp and widespread drop in international prices from 1982 which offset the beneficial effect of an increasingly more favourable real exchange rate (throughout the period except in the first part of 1984) and increased productivity. Lastly, a favourable demand for the sector's products, which was to be expected in a period of exchange rate adjustment, did not come about, owing to the fall in international prices. Furthermore, the cost of imported inputs and of those with a high imported content rose as a result of the higher exchange rate, as did the prices of domestically produced goods. Fuel stands out in this latter group, for its price rose significantly as a result of the policy of updating public tariffs in order to reduce the fiscal deficit.

Accordingly, the crisis and the adjustment policies did not bring about any big structural changes in agriculture or in its relationship with public policy and the other economic sectors, or in the sector itself.

The fall in international prices and the simultaneous rise in costs associated with policies designed to cover the domestic deficit brought about a large and increasing decline in profits from 1984, on top of the loss of a number of harvests. The higher interest rate caused renewed borrowing and financial restriction, which was also reflected in the increased costs, and it also limited production capacity. In this context of relatively high interest rates (for agricultural prices) the expansion of production in 1981-1983 was made possible in part by the "liquidation" of debts which culminated in the 1982 reform, but most of all by the greater degree of self-financing which was made possible by increased productivity.

If what happened to output is examined in detail, it can be seen that between the 1980/1981 and 1983/1984 seasons the increases were concentrated in exportable items, while goods for the domestic market remained at a standstill. Thus the devaluation improved the position of the first group but the position of the second was impaired by the higher costs.

It can also be seen that the production increases occurred in crops whose productivity had been rising since the 1970s (wheat, sorghum, soybeans, sunflower seeds and maize). To the improved productivity must therefore be added the effects of the devaluation, and the two factors more than offset the decline in international prices up to 1983-1984. In 1984 the drop in the exchange rate was greater than the recovery of international prices, while in 1985 its rise was nullified by the drop in these prices.

Changes were caused in the relative structure of the agriculture sector by the increased output of oil crops and the lower output of wheat and sorghum. The devaluations did not have a great effect on cattle owing to the low international prices and the drop in the export volume, for this meant that the cattle cycle depended more on domestic conditions (which were unfavourable), such as interest rate fluctuations, expectation of inflation, relative profitability, etc. As a result the areas of permanent grazing land were reduced in favour of crops, which were cultivated intensively by the double-cropping method, while the herds were shifted largely to inferior land.

In short, the sector's response to the fall in profits was to cut investment (continuing the downward trend initiated in the middle of the previous decade, which had been interrupted during part of the initial surge in that period), spending on inputs, areas cultivated, and stocks of animals. Of particular importance by reason of its impact on exports was the decline in the area under grain crops from the 1983/1984 farming season and, by reason of its short- or medium-term impact on domestic prices, the reduction of cattle herds from 1984.

IV

Future prospects and restrictions

From the perspective of economic policy this period has illustrated the limits of the capacity to carry through an exchange-rate policy designed to offset falls in international prices, when this entails raising the exchange rate beyond a level at which it begins to pose an excessive threat to other objectives (such as income redistribution and price stabilization). Moreover, the policy pursued to achieve domestic balance eliminated the traditional mechanisms for offsetting disincentives to agricultural production (such as direct subsidies, credit on preferential terms, etc.). In short, the prospect is of an agriculture less discriminated against by a low exchange rate (given the intensity and persistence of the external restriction) but also less favoured by the compensatory mechanisms that operate on the costs side.

The most obvious consequences of these changes within the sector are probably the accentuation of the trend observed since the end of the previous decade for concentration of capital and production. This concentration has been achieved at the expense of the small and medium-sized producers, who do not have sufficient capital to assume the risk of production, given the high cost of capital replacement.

The analysis set out in this article shows that agricultural development in the future will be heavily influenced by the direction taken by economic policy, the situation in external markets, and in particular the sector's capacity to step up productivity. Given the heavy burden of the interest on the foreign debt, the challenge facing economic policy is to reconcile this decline in the country's investment capacity with sustained growth within a framework of macro-economic stability and some equity in distribution. As the main producer of export goods, the agriculture sector will be a decisive factor in such a strategy. Accordingly, the policy on the real effective exchange rate (which includes taxes on exports) will remain the basic tool for relating macro-economic policies to the sector. In the short term the limits to a policy of high real exchange rates (as a strategy based on a single tool) point to the shifting behaviour of international markets and policies to promote investment in technology as the factors that will shape the sector's productivity. However, other changes in the direction of medium- and long-term economic policies, such as rationalization of the administrative and production apparatus of the State, the openness of industrial production to the exterior, and the rebuilding of the capital market could have positive effects on the sector to the extent that they affect the real exchange rate of economic equilibrium and reduce the costs of inputs.

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The external crisis, adjustment policies and agricultural development in Brasil

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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.

	Percentages	
	1970	*1980*
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:

	1970	*1980*
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 balance 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 (*millions of dollars*):	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 (*millions of dollars*) 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 financing 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 supplement 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.

CEPAL REVIEW No. 33

Colombia: effects of the adjustment policy on agricultural development

*Astrid Martínez**

Agriculture was the most important activity in the Colombian economy in the 1970s. It contributed 25% of the total gross domestic product, absorbed 32% of the labour force and generated about 75% of total exports. In the middle of the decade the country experienced an unexpected boom in coffee and certain illegal products which, in conjunction with a stronger influx of external resources, strengthened the position of international reserves. However, at the end of the decade the world recession, the fall in international export prices and the accumulated exchange rate slippage were sapping the economy's strength —a situation accentuated by the persistence of structural rigidities.

In 1981, faced with the resurgence of a trade deficit and inflation, the authorities voluntarily introduced a first programme of gradual adjustment, an initiative made possible by the availability of undisbursed loans and the offer of new resources. A second adjustment programme was carried out in 1984, this time controlled by the International Monetary Fund, which gave priority to public investment in exports projects, wage reductions, restriction of imports, and the establishment of a competitive level for the exchange rate. In 1985 the imminence of foreign-exchange crisis prompted the authorities to introduce more stringent adjustment measures in order to cut the external and fiscal deficits and check inflation and the drop in reserves.

Between 1980 and 1984 the agricultural growth rate, which had been 4% a year in the 1970s, fell to 1%, with a consequent decline in the sector's contribution to the gross domestic product to 22%. Reasons for this phenomenon were the stagnation of the production of export crops, their poor diversification, and the drop in food production. On top of this came the decline in earnings from exports other than coffee as a result of the world recession.

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Introduction

The change in external conditions from the end of the 1970s precipitated the well-known debt crisis in Latin America at the beginning of the 1980s. The increasing imbalance in international payments halted the practice of securing financial growth by means of external borrowing, and various adjustment programmes were introduced in the region.

The effects of the adjustment have been the subject of a debate, the heatedness of which is matched only by the shakiness of the empirical and theoretical arguments of the debators. The statistics and the methods are incomplete; the period of time is insufficient; there are no theoretical models that indicate in advance which coefficients will reveal the reactions that can be attributed to the use of the adjustment instruments and which indicators will reflect the presence of structural factors of economic disruption.

Furthermore, it is increasingly difficult to speak of Latin America as a homogenous whole evolving in a certain way and reacting alike to the external environment. The various countries all have their own history and their recent behaviour has been increasingly dissimilar. In the situation at the beginning of the 1980s the closure of the external financial market did not affect all the debtor economies by interrupting the flow of credit which was sustaining the economic expansion. However, the national economies had different degrees of vulnerability in the medium term and each had its own peculiar immediate reaction.

For all these reasons any analysis of the effects of the adjustment on Latin America's farming sector must proceed with caution. The faster modernization of some economies, the different starting points (in the sense that agricultural structures were organized and developed in different ways), and the differing degrees of integration with the world economy have produced, with greater emphasis in the past 20 years, a new profile of the region's economy.

The term "agricultural sector of Latin America" can only be a first approximation. The farming economies most oriented towards the external markets, towards trade crops or production for industry have different features and react differently from the rural structures more oriented towards major domestic markets for commodities and raw materials or which have a greater proportion of traditional and family forms of ownership and farming or outmoded production methods.

The use of the term "adjustment" means restricting the scope of the analysis with respect to the period of action and reaction and the instruments used. Furthermore, the concentration on one sector relegates the macrosystemic and dynamic elements of the process to the background. To that extent the peculiar structural factors of the agricultural sector of the Latin American countries could be of lesser importance. However, it will be seen that in the study of this situation there is constant reference back to the study of the genesis and future evolution of the economies.

I

Economic and agricultural development in the 1970s

1. *Main trends in overall economic development*

For 20 years from 1960 to 1981 the Colombian economy grew at an average rate of 6% in real terms. The per capita product increased by 3% a year and stood at US$1 380 in 1981. Despite the drop in the infant mortality rate, the population grew more slowly than in the past owing to urbanization, literacy and greater participation by women in the labour market. Although this development brought greater pressure to bear on the jobs market, employment increased by about 6% a year between 1973 and 1978.

The rise in domestic prices accelerated from 1970. Between 1970 and 1975 inflation was double the rate of the previous decade. Its levels of between 21 and 25% were far in excess of the 12% annual average of the 1960s. The main causes of the high inflation rate were the deficit financing of public expenditure, the pressures of food supply, and the monetization of the increasing external incomes almost throughout the decade.

The external situation changed from 1967. Partly because the foreign-exchange régime adopted in that year reduced the uncertainty and instability of transactions and partly because the world situation was propitious, in the mid-1970s when other developing countries were grappling with the upheaval in external trade conditions, Colombia experienced an unexpected surge in coffee and booms in illegal products which, together with the increased flow of capital, strengthened the position of the country's reserves. The trade deficit was not to reappear until 1981, then owing to the exchange-rate slippage, the world recession and the drop in external coffee prices.

Agriculture, manufacturing and trade contributed equally to the aggregate supply, responding to the export incentives and the expansion of home demand. Coffee was the biggest source of agricultural growth in the 1970s. Manufacturing grew up to 1974 as a result of the export incentives but its growth rate slowed owing to the cutback in domestic activity, its technological backwardness sheltered by tariff barriers, the revaluation of the peso following the coffee boom at the end of the decade, and the world recession. Economic activity weakened from 1978.

In the case of demand, the biggest contribution to the expansion was made by the private sector in investment and consumption, encouraged by the government. But the great importance of spending on food restricted the capacity to diversify consumer demand.

The growth is also reflected in the changes in the factors of production, capital and labour. The increase in reserves of capital contributed one half of the product growth between 1963 and 1980, while construction contributed a third and more than half of the formation of capital. Four-fifths of the contribution of labour was due to increases in the active population and one-fifth to more education. A quarter of the growth in the period was associated with the adoption of economic policies designed to create favourable investment conditions and stimulate output and exports (World Bank, 1983).

2. *Main trends in agricultural development*

Agriculture remained the most important sector of the economy in the 1970s, contributing a quarter of the gross domestic product. Thirty-two per cent of the labour force lived in rural areas and seven products (rice, cassava, bananas, tomatoes, maize, brown sugar and beans) accounted for one half of harvests.

Farm exports contributed between 68 and 75% of total exports, with coffee's share being somewhat variable. Coffee exports made up 60% of the total in 1977-1980, falling to 48% in 1981.

Agriculture grew between 4 and 5% in 1967-1979, a point or two below the average for the economy. The sector's growth was negative from 1982, falling more sharply than the rest of the economy. More than half of the increased production in the 1970s was due to exports growth, of coffee in particular; but the other farm exports also recorded increases: starting from a small base they doubled in real terms. Food imports tripled, with a consequent increase in supplies for domestic consumption (5% a year) and per capita consumption (2.7%) (World Bank, 1983).

Ninety per cent of the increased coffee production was the result of improved productivity. The introduction of the *caturra* variety brought changes in sowing practices, consumption and yields, and this altered the face of the coffee bean economy. In the other crops 56% of the increases were due to expansion of the cultivated area. The advance in tradeable products was more remarkable than in traditional agriculture, and this introduced a bias in favour of production for industry and export which reduced the capacity to supply foodstuffs. The higher yields were achieved by the use of machinery and improved seeds and required large investments in irrigation and land improvement, whereas the peasant economy suffered official neglect, fragmentation of properties and marginalization from the market, from credit and from technological progress (Martínez, 1987).

Relative agricultural prices moved favourably, but costs tended to rise even more, impairing the profitability of operations. Rural wages improved sharply with the coffee boom in the second half of the decade. Some exports such as bananas and flowers benefitted from the export incentives between 1967 and 1974. But the overvaluation of the peso, which amounted to 47% in the last six years of the decade, the emphasis on the external promotion of manufactures, the export incentives for certain inputs which were expensive in the local market —all these factors made the export of farm goods less attractive during the period.

3. *Visible or latent structural problems at the end of the 1970s*

At the end of the 1970s the Colombian economy began to show the first signs of slower growth under the impact of the world recession and the problems of its production structure and the domestic market. Agricultural yields began their decline and farm production fell in response to the drop in the international prices of such items as coffee, cotton and sesame.

After several years of surplus the trade deficit returned, partly as a result of the drop in external demand and partly because the stabilization measures and measures to reduce the monetization of the increasing international reserves had had the effect of opening up the economy.

After easing a little in 1978, inflation ended the decade at over twice the level of the average for the 1960s (27% in 1980 against an annual average of 12%).

The main causes of the new surge of inflation at that time were the rigidities in the agricultural supply, the expansionary financing of the fiscal deficit, and the financial anomalies caused by the monetary and credit restrictions.

II
The adjustment policies: their main features

The Colombian experience has pecualiarities which set it apart from the other debtor countries of Latin America. When the Mexican crisis broke the surface, Colombia still had US$3 700 million of undisbursed loans, and the decline of new commitments in 1983 was due to the limits imposed by its authorities and not to the closure of the market. Commercial banks continued to lend and multilateral banks continued to offer programme and other loans.

This policy of gradual adjustment was adopted in Colombia voluntarily —unlike what happened in the rest of Latin America— without being subject to the rules laid down by the International Monetary Fund (IMF).

However, from 1982 the international banks were pressing for the country to win the support of IMF and to this end they reduced their new lending to the government. The banks had a powerful weapon. In addition to the resources to finance the fiscal deficit, the economy urgently needed new loans for the oil and coal projects, which were acquiring greater importance as a result of the external difficulties. The favourable export prospects were dependent on the implementation of major works in the energy sector.

The government then proposed the alternative of IMF supervision. This option not only allowed the retention of relative independence in the design of adjustment policy but also avoided the costs of restructuring the public debt and facilitated the acquisition of new resources without having to give State backing to private obligations.

The adjustment programme sought to keep the share of public investment in the gross domestic product constant in 1985; to give priority to the oil and coal export projects; to check the unruly growth of certain public undertakings such as electricity projects; to cut real wages, but introducing measures to penalize the lower levels less; to maintain the real incomes of coffee producers; to restrict imports growth by 10% in 1985; to continue the search for a competitive level for the exchange rate gradually but firmly; and to avoid massive devaluation, the expectation of which had generated speculation against the peso and the reserves.

III
The general manifestations of the crisis and the adjustment policies

1. *The global effects of the adjustment*

Faced with an imminent foreign-exchange crisis, the government adopted in 1985 a stringent programme of adjustment. The main goals were to cut the external and fiscal deficits to check the slide of international reserves, to gain access to US$1 000 million of credit from the world banking system with IMF support, and to reduce inflationary pressures. Once the internal and external balances had been restored, it would be possible to take the road of recovery.

The immediate aim of the external adjustment policy was to reverse the outflow of capital and goods. The country agreed to accelerate the devaluation, dismantle its systems of exports subsidies and protectionist tariff barriers, and the volume controls on imports.[1]

[1]The policy actually put into practice was heterodox partly in that it continued to use controls as simple exchange-rate management was not cutting the demand for essential imports or stimulating exports of non-manufactured goods. Colombia has abundant past evidence of lack of response to changes in the exchange rate; it is admitted, however, that excessive and permanent overvaluation produces undesirable distortions in the allocation of resources.

It also made a commitment to reduce the fiscal deficit and keep wage increases below inflation. The devaluation accelerated to a real 25% in 1985, and reserves rose for the first time since 1982 (US$280 million).

The trade deficit fell to US$417 million in 1985. Exports had begun to grow in 1984 and imports to fall in 1983. The strongest exports growth was in coffee, coal, ferronickel, gold and flowers. The growth of other exports was nullified by the fall in oil and derivatives. In view of the seriousness of the crisis, an 8% tax was imposed on all imports and the volume controls were extended.

Most of the saving on the current account went to increase the payment of interest on external obligations. In any event, a reduction of US$500 million in the current deficit was achieved in 1985.[2]

Colombia's foreign debt continued to increase (at 11% a year) in 1985, mainly as a result of new official borrowing. The ratio of foreign debt to exports (250%) remained more or less unchanged as the two items increased at similar rates.

In the fiscal area the government obtained authorization from the National Congress to alter the tax structure, and an attempt was made to cut expenditure. Fiscal revenue increased by 47% in 1985, operating expenditure by only 16%, and investment by 47%. The fiscal deficit fell from 35% of total government spending in 1984 to only 22% in 1985.

The price stabilization targets ran up against difficulties in 1985. Despite the stringent policy of real wage and salary cuts by means of faster devaluation and a tight wages policy, several factors nevertheless fuelled inflation. The devaluation itself, increased between May and June to the equivalent of a nominal 60% a year, caused price rises which were promptly checked by the government by means of imports and price controls. But the recovery of the international price of coffee and the new external loans meant that reserves were no longer a constraining factor.

The consumer price index had risen 18.3% in 1984; the inflation rate of 22% a year in 1985 was achieved at a high cost in terms of equity and the financial equilibrium of public enterprises.

The greater negative impact of the adjustment policy was evidenced by the regressive nature of wages policy. Real wages fell between three and 5% in 1985. The cut in real wages was needed because of the emphasis on making the exchange-rate policy a success. The lower wage costs offset the increase in the costs of imported inputs caused by the devaluation and made a real adjustment of the exchange rate possible.

Farm and commercial wages fell by 4 and 5% respectively, and industrial wages by 3%; all wage earnings fell in real terms, but the biggest losses were among the lower paid.

The government's vigorous action in the financial market and the sharp devaluation prevented a fall in real interest rates, with consequent undesirable effects on investment.

In short, the 1985 adjustment was successful in that it attained the proposed external and fiscal targets, although at the cost of cutting activity to a dangerous level of gross domestic product (2.5% a year).

To judge by developments in 1986 and early 1987, the adjustment was sufficient. Several factors contributed to the 1986 results. The coffee boom and external credit resources improved the payments indicators. The tax reform increased fiscal revenue while at the same time freeing the purchasing power of wage earners.

Economic activity recovered in all sectors except construction, and the gross domestic product grew by 5%. If the current talks result in the granting of new foreign loans and if private investment and production consolidate their recent growth, the way would seem to have been cleared for a return to longer-term policies.

2. *Effects of the adjustment on income distribution*

The adjustment policy has altered both the composition of demand and relative prices since 1983. The impact of the shifts in the pattern of demand was not serious between 1983 and 1985, according to the only available assessment (Lora and Ocampo, 1986).

[2]In local currency the current deficit rose from 6.0 to 6.6% of the gross domestic product. The devaluation helped more towards reducing the fiscal deficit by increasing the peso revenue of the National Coffee Fund.

The most important effect was the changes in the relative prices of inputs and goods. Real rural wages fell, reflecting according to Lora and Ocampo the low agricultural growth rate and the lag in the minimum wage. The real wages of urban and public sector workers increased up to 1984. In that year they began to fall. The changes in relative prices at the same moment affected other non-wage incomes. The Lora and Ocampo study distinguishes the impact of the rise in relative prices on income distribution from other impacts, and it finds that it benefitted rural landlords most and peasants a little, while imparing wage incomes; the first two groups gained 1.5% in total income in 1985.

Urban landlords also had to lose because the rent surcharge was fixed at 10% from 1983, below the inflation rate of between 17 and 23% in the 1980s.

A recent assessment of the impact on incomes calculated the results in terms of the real income and employment level of the groups studied. This work shows that the capitalists bore the weight of the recession and the macro-economic adjustment as they lost income from 1981, while peasants and rural landlords had better incomes in real terms, with a remarkable jump in 1985 producing increases of 30% over the real 1980 levels.

The excellent performance of the economy in 1986 led to an improvement in private profits which was not accompanied by a rise in the share of wages in the national income.

Activity maintained a recovery rate in 1987, but the wages lag and the paralysis of important public investment programmes have generated civil and trade-union pressure for proper provision of services and wage increases which should lead to a change in the distribution of the benefits of the economic recovery.

IV

The impact of the adjustment policies on agriculture

Colombia's agriculture sector grew only 1% between 1980 and 1984, whereas in the two previous five-year periods it had grown at an average annual rate of about 4%. At the same time the share of the farm product in the gross domestic product fell from 23.9% in 1975 to 22% in 1985. But these figures do not convey the qualitative changes in the sector's output. Food self-sufficiency declined in the period, and the value of food imports rose steadily. The improved productivity of tradeable crops recorded up to 1975 came to a halt, and the diversification of farm exports slowed down. The concentration of income, the smaller domestic market and the technological model adopted in farming are what shape the sector's present profile, which is largely a result of the development route chosen by Colombia, which has stimulated the urban economy and production for export.

For the purposes of evaluating the impact of the adjustment policy on Colombia's farming sector and on rural society, it is important to distinguish within the model the results which constitute responses to the *ad hoc* shock measures used in the management of the external imbalance in the 1980s from the effects of other phenomena which are merely the age-old expression of historical difficulties of the farming sector in the Colombian economy and consequences of the development model.

Traditional exports of farm and manufactured goods were affected more by the world recession than by the domestic measures. The fall in export earnings as a result of the drop in prices and demand for agricultural exports was accentuated by the reversal of the coffee boom when external prices fell sharply, and it revealed in the first years of the current decade the scale of Colombia's industrial and exports weakness (Misión de Empleo, 1986).

The recession has bitten deep in recent years: the product grew at barely 2.2% a year between 1979 and 1985; the slow population growth rate of 1.8% a year led to a small increase in the per capita product, in contrast to the Latin American experience of the 1980s. Industry and the farming sector showed little growth (1.4% a year on average). Although services grew faster than the average at 3.2% a year, this growth was two points lower than in the previous period.

Coffee earnings increased little in real terms in the 1986 coffee boom and their effect does not seem to be very great. The smaller harvest, a result of the age of the modernized estates, will reduce the demand for labour by 65 000 temporary and 16 000 permanent jobs between 1987 and 1988, and this will come on top of the past reduction of 139 000 and 35 600 jobs respectively between 1983 and 1985. Unless investment is made in infrastructure or transfers are made through the National Coffee Fund, the Agricultural Financial Fund and the DRI Fund to maintain coffee productivity, reduce the social inequalities and guarantee a stronger demand for farm products in the years to come, any coffee booms will lose a large part of their impact on the aggregate demand.

1. *Agricultural employment*

Agricultural employment accounted for 59.2% of the total in 1938, 49% in 1964, and 32.7% in 1984. The sector's contribution to the creation of new jobs was 18% between 1951 and 1980, but it contributed only 12% in the first four years of the 1980s. This loss of strength was also found in manufacturing. Industrial jobs provided 17.5% of the total in 1980 but had fallen to 16.4% by 1984. Industrial growth generated 21.3% of new jobs between 1951 and 1980, but between 1980 and 1984 industry provided barely 4% of the new jobs in the labour market. Services generated over 70% of the new jobs between 1980 and 1984, 80% of them concentrated in the urban areas of the country. This "tertiarization" of the economy, which is apparently in line with world trends, has peculiar features in the Colombian economy, as in other developing countries. The increasing importance of services conceals forms of underemployment, temporary work, changes in hiring practices, and own-account activities of varying profitability, the analysis of which demands not only a breakdown of figures but also, and more importantly, a redefinition of categories for a services economy, and a treatment which incorporates "informality" and "tertiarization" as simple economic manifestations in the present phase of the cycle. The similarity between the farming sectors's contributions to job creation and to production growth in the country (around 20%) for three decades indicates stability in the growth of the sector's productivity, which reduces underemployment and reveals the degree of modernization of farming. More so than in other Latin American countries, in Colombia agricultural growth is due to the incorporation of technology and capital (Elías, 1985).

The demand for labour for maintenance and harvesting work fell by about 10% in the 1984-1985 coffee year. As the Misión de Empleo notes, coffee-growing has not had the ability assigned to it by some people to compensate for the loss of vigour in the non-coffee farming sector; the increase in its demand for labour has not been large, nor has it absorbed migrant workers. Increases in labour productivity have limited the expansion of coffee jobs resulting from the more intensive use of labour in the cultivation of the *caturra* variety. The labour demand for the harvest is concentrated in October and November and only at that time can there be any question of taking on more migrant workers in the coffee zone (Errázuriz, 1986).

The estimates of employment in the non-coffee sector do not allow any conclusions to be drawn about the behaviour of the labour demand in other crops, but they do indicate trends: mixed crops determined the cycle of farm jobs; tradeable crops provided increasingly fewer days of work per hectare; the lower demand for cotton and rice was not made good by the higher output of bananas (for export), sugar cane, African palm oil and sorghum.

At the regional level, there was a redistribution in favour of the eastern zone, which provided more than 35% of the jobs in mixed crops, whereas in 1976 its demand for labour was only 27.5%, and to the detriment of the Atlantic zone where the share in the demand for labour fell from 16.5 to 12.5% between the two years in question. The central and Pacific zones lost a small part of their shares.

2. *Expenditure in the agricultural sector*

Changes in public expenditure and the administrative and institutional capacity of the State are the principal reasons for the sector's recent loss of strength.

Analysis of the budgetary allocations to the agricultural sector, the implementation capacity of the institutions and the distribution of spending on operation and investment produced the following results:

a) The percentage of budgetary funds allocated to the Ministry of Agriculture fell steadily between 1975 and 1982 from 2.96 to 1.58%; it then recovered to 3.4% in 1984 but in 1985 fell back to 2.39%, below the 1975 level;

b) The farming sector and its decentralized institutions showed a poor implementation capacity both in the central nucleus, which suffered definite reductions in its allocations, and in the subsidiary institutions, which received increasing amounts;

c) With respect to the distribution of expenditure, there was a sustained rise in the budgeted and actual spending on operation. The growth rate of these two items was positive throughout the period 1975-1985, with a relative slowdown between 1980 and 1982, and in 1984-1985 it was the reason for the increase in transfers as a percentage of operating expenditure at the expense of personal services. Transfers amounted to under 2% of the farming sector's spending in 1975 but almost 10% in 1985. The proportion of operating expenditure in the sectoral total grew to the same extent from 8% in 1975 to 15% in 1985. The proportion of investment spending changed little. It lost five points in 1983 from its 1975 share of 85%, but in 1985 it recovered to 83%. The share of investment was fairly stable in the 1980s except in 1983 when, owing to the adjustment, the budgeted and actual debt service both increased;

d) Public investment in land improvement has fallen 65% in real terms since 1971; in 1970 it represented 0.6% of the agricultural gross domestic product, but in 1983 only 0.14%; since 1973 spending on irrigations works has practically ceased (Balcázar and Supelano, 1986). Spending on physical infrastructure, including operation and maintenance of the irrigation zones and the supplementary works, fell from almost 2% of the agricultural gross domestic product in 1981 to under 0.5% in 1985. Expenditure on agricultural research, according to the Office of Agricultural Sector Planning (OPSA), which includes the management of the centres and stations, retained its share of about 0.4% in the agricultural gross domestic product between 1970 and 1985. But when expenditure on research and development is compared strictly with the sectoral product, it falls appreciably from 6.51% in 1970 to 0.25% in 1981-1982 (Balcázar and Supelano, 1986).

e) The resources of the institutes responsible for maintaining the expansion of the commercial farming subsector, the Colombian Institute of Hydrology, Meteorology, and Land Improvement (HIMAT) and the Colombian Agricultural Institute (ICA), increased much more than those of the Colombian Institute of Agricultural Reform (INCORA) which is concerned with the peasant economy (table 1); this demonstrates once again the bias of spending policy in favour of commercial agriculture and production for export;

f) The external debt of the decentralized institutions rose at a dizzying rate, making independence in programme implementation more difficult and increasingly subject to directives from international financial institutions, and undermining the co-ordination capacity of the Ministry of Agriculture.

The macro-economic policies designed to facilitate the working of market mechanisms in the allocation of resources in economies such as Colombia's affect farming activities in several ways. The overall reduction of expenditure in order to correct the fiscal deficit has a greater impact on a sector in which the public contribution is crucial in the provision of physical infrastructure, basic research and development, price stabilization, commercial intermediation, the supply of inputs and loans on terms which guarantee average profitability, and the promotion of exports.

Table 1

COLOMBIA: INVESTMENT BUDGET AND IMPLEMENTATION OF NATIONAL PUBLIC BODIES, 1975-1983

	1975	1976	1977	1978	1979	1980	1981	1982	1983
ICA									
PD	897	1 031	1 486	...	2 121	2 636	3 428	4 192	5 547
EP	83.7	83.6	71.6	-	84.9	91.4	83.6	98.8	84.8
INDERENA									
PD	368	348	502	639	869	1 186	1 419	1 492	2 070
EP	71.8	80.4	74.7	71.9	84.6	97.9	81.5	90.3	95.3
INCORA									
PD	1 884	1 690	1 903	1 669	2 071	2 706	3 776	4 274	5 932
EP	74.9	74.4	66.9	60.5	53.4	63.5	52.0	86.1	65.0
HIMAT									
PD	57	110	343	676	980	1 339	1 623	1 788	3 715
EP	92.2	71.9	66.2	65.4	73.1	79.6	75.3	91.2	75.0

Source: *Informe financiero,* May 1986, p. 64.
Note: PD: Final budget, in millions of pesos.
EP: Implemented, in percentages.

Table 2

COLOMBIA: SHARE OF AGRICULTURAL CREDIT IN TOTAL CREDIT AND RATIO TO ITS CONTRIBUTION TO THE PRODUCT

Year	New loans to the sector/total	Agri. port-folio/total (%)	Sector GDP/ total GDP (%)	Lending to sector % agri./GDP %
1978	21.8	29.2	23.0	19.5
1979	19.9	31.3	23.0	19.3
1980	14.8	27.5	22.7	21.2
1981	19.0	25.4	22.9	21.9
1982	21.4	27.8	22.1	24.2
1983	22.1	27.0	22.3	25.5
1984	21.5	26.6	22.3	25.8

Source: Bank of the Republic (1985).

3. *Agricultural credit*

The share of the farming sector in total credit was slightly higher than its contribution to the product (table 2), and its growth was in step with the growth of the sector and of total credit (Sarmiento, 1986).

However, the general policies adopted in the 1980s changed the nature of the sector's borrowing and accentuated biases which were already emerging in earlier decades.

The acquisition of resources became more expensive, as in the end did the financial terms of the official funds which were formerly instruments of agricultural promotion. The quest for realistic interest structures in the credit market and for homogeneity in the treatment of different activities reduced the credit subsidy in the areas in which it was still available. The resources for farm marketing are insufficient, and the official lending institutions are not entirely committed to making the machinery work better, nor are they carrying out their original functions. The Caja Agraria (Agricultural Savings Bank), the official intermediary specializing in small and medium-sized savers, is looking increasingly like a commercial body and the Agricultural Financial Fund discriminates in its lending against persons not assisted by banking intermediaries.

Moreover, the financing of the foreign debt of the Agricultural Marketing Institute (IDEMA) leaves no room for more flexible treatment from the standpoint of the monetary implications of the expansion of agricultural credit.

The mixture of the promotion and monetary functions in the Bank of the Republic (the central bank) has always been a source of conflict between the objectives of the policies of stabilization and of sectoral stimulus, laying the investment plans and the production of the products financed open to uncertainty (Sarmiento, 1986).

The drop in agricultural activity and the higher cost of imported machinery and credit caused a slowdown in the growth of lending for land-improvement and infrastructure works and for farm machinery from 1982, which can be seen from an analysis of the demand for inputs and the scale of the increase in farm costs in the sector's crisis.

V

Restrictions and determinants of agricultural development

1. *Agricultural production*

Agricultural production has been weakening in the past 15 years. Table 3 shows its growth broken down by group of farm products. The most important groups of products (oil crops, grains and sugars) followed the agricultural cycle described above. Output increased in the first five years of the 1970s; in the following period it stabilized and fell slightly, and in the first years of the 1980s the growth rates became zero or negative. The production of legumes, which was three times the growth average in the early 1970s, has fallen spectacularly in the past 10 years.

The 20 crops which account for 95% of the country's agricultural production (without coffee recorded substantial falls in physical production between 1980 and 1985. Of the most important crops, only African palm oil and sugar cane showed any improvement.

The areas sown and harvested tended to decline or remain unchanged, so that the production increase in the past five years was due to higher yields.

Livestock production achieved better results, with falls between 1981 and 1982 and a relative recovery from 1983 (table 4). Taking the products individually, only milk and chicken production can be considered acceptable during the 1980s. Beef production fell 1.5% as an annual average; pork production rose 0.6% a year and egg production 1.6% (Balcázar and Supelano, 1986).

There are several reasons for the decline in the agricultural product in recent years. The most important on the supply side is the neglect of the importance of the peasant subsector,

Table 3

COLOMBIA: GROWTH OF AGRICULTURAL PRODUCTION BY GROUP OF PRODUCTS, 1970-1984

(Annual rates)

Group	1970/ 1975	1975/ 1980	1980/ 1984
Cereals	9.4	3.9	-
Oils	1.0	-2.1	-8.8
Legumes	18.2	-0.2	0.1
Tubers	3.0	4.0	0.2
Fruits	2.4	7.7	-0.3
Sugars	7.0	7.1	1.7
Others	1.2	9.0	-1.2
Total	5.7	3.8	0.7

Source: Balcázar, 1985, p. 72.

Table 4

COLOMBIA: VALUE OF AGRICULTURAL PRODUCTION, 1981-1986

	1981	1982	1983	1984	1985[a]	1986[a]
	Millions of 1981 pesos					
Agriculture with coffee	272 134.8	260 319.5	265 838.1	260 437.3	267 508.1	285 750.8
Agriculture without coffee	213 159.7	207 228.7	205 615.1	209 815.9	218 208.9	233 211.7
Biannual crops	86 739.7	84 133.1	80 896.1	85 056.3	83 813.2	91 557.0
Permanent crops	126 420.0	123 095.6	124 719.0	124 759.6	134 395.7	141 654.6
Coffee	58 975.2	53 090.8	60 223.0	50 621.4	49 299.2	52 539.1
Livestock	144 396.2	145 659.8	143 604.1	151 986.4	155 993.1	161 501.2
Slaughter	62 379.3	59 243.5	54 970.0	59 744.1	61 295.2	63 153.8
Other livestock	82 016.9	86 416.3	88 634.2	92 242.3	94 697.9	98 347.4
Total agriculture without coffee	357 555.9	352 888.5	349 219.2	361 802.3	374 202.0	394 712.8
Total agriculture with coffee	416 531.1	405 979.3	409 442.2	412 423.7	423 501.2	447 252.0

Percentage variation

	1981/1982	1982/1983	1983/1984	1984/1985	1985/1986
Agriculture with coffee	-4.3	2.1	-2.0	2.7	6.8
Agriculture without coffee	-2.8	-0.8	2.0	4.0	6.9
Biannual crops	-3.0	-3.8	5.1	-1.5	9.2
Permanent crops	-2.6	1.3	-	7.7	5.4
Coffee	-10.0	13.4	-15.9	-2.6	6.6
Livestock	0.9	-1.4	5.8	2.6	3.5
Slaughter	-5.0	-7.2	8.7	2.6	3.0
Other livestock	5.4	2.6	4.1	2.7	3.9
Total agriculture without coffee	-1.3	-1.0	3.6	3.4	5.5
Total agriculture with coffee	-2.5	0.9	0.7	2.7	5.6

Source: Calculations by the National Planning Deparment/UEA on the basis of Ministry of Agriculture data.
[a] Preliminary figures.

which has suffered the full force of the fiscal and monetary correction policies adopted by the government in this decade. The calculations made by the Conference of Governmental Statisticians of the Americas (CEGA) and by A. Machado show that the peasant economy provides between 35 and 43% of livestock production, between 27 and 42% of foods for direct human consumption, and between 19 and 23% of raw materials for industry.

Second in importance is the technological model adopted in farming, which produced high yields in the 1970s but began to run out of steam at the end of that decade and moved into crisis in the 1980s. This model, characterized by its high component of imported inputs, bias in favour of the intensive use of capital, imitation of the cost structures of the input-supplier countries, and required investment levels incompatible with domestic resources produced, respectively, increasing dependence on and vulnerability to changes in the external sector of the economy, a fall in farming jobs, a failure to advance towards a more competitive supply at the international level, and a need to support activities with subsidy and exemption measures (as in cotton and beans) which ended by increasing and fuelling a structure of relative prices which distorted the allocation of resources (Balcázar, 1985).

Third in importance are factors associated with movements in farm profits; these factors have still not been sufficiently evaluated but they do seem to explain the temporary falls in the supply of certain goods. The higher cost of inputs caused by the faster rate of devaluation, and the effects of the commercial and tax policies which exposed the sector to disastrous competition from imports and raised its taxes may have discouraged agricultural production in 1984 and 1985; changes in these policies reversed their impact from 1986.

On the demand side, exports of farm products other than coffee have fallen in recent years and the home demand has risen very slowly. Final personal consumption rose barely 1.9% a year between 1980 and 1984 (Balcázar and Supelano, 1986)

The value of farm imports grew by 26.4% a year between 1970 and 1975, 24.2% between 1975 and 1980, and only 2.5% between 1980 and 1983. Their volume followed a different trend: the average annual growth was only 1.2% in the first five years, 20.5% in the second, and 16.7% in the last four years. The most seriously affected group was direct-consumption products, imports of which increased in volume by 25% a year in the first years of this decade.

The value of farm exports other than coffee rose by 26% a year between 1970 and 1975 and only 11.2% between 1975 and 1980; it fell 1.5% between 1980 and 1983. High prices were the reason for the increases in these exports in the 1970s, but in the 1980s the opposite has happened. Between 1970 and 1975 the volume exported increased only 4.9% and in the next five years by 9.9%, a rate below the increment in the value. In the present decade, despite the improvement of 2% in volume, the value of exports without coffee has fallen to almost the same extent. The foreign sales which suffered most (after coffee) were of raw materials. They had been the second strongest item in the 1970s (after direct consumption) with an average annual increase in value of 28%; in the 1980s they fell by the same amount.

In 1984, as a result of the trade policy and the low international prices, farm and agro-industrial exports without coffee increased 8% and imports fell 16%. When coffee is included the increase in exports jumps to 14.5%.

The domestic market, with its weak growth, is the high demand component which may explain the feebleness of the agricultural response in the medium term. Rural wages ceased to be an important element in costs; despite their relative increase, in the crops which pay the minimum, their share in production costs was less than 10% of the share of tradeable crops.

More than 80% of farm output is for direct consumption and the rest for industrial consumption; this proportion has remained unchanged in the past two decades. Hence the importance of increased personal spending on food as a driving force of the sector's development. According to CEGA calculations, households which earn up to two minimum wages, which account for half of the households surveyed by the National Bureau of Statistics (DANE), spent 98% of their monthly income on food in 1981. When it is remembered that food prices have risen faster than the 1979 total average, except in 1972, it becomes obvious that the policies designed to stabilize prices must be reconciled with the policies to stimulate farm production and jobs and the expansion of the domestic market as a whole. For these reasons any assessment of the short-term adjustment policies adopted to cover the fiscal and external deficits must take into account the knock-on effects which can reverse the positive results in the medium term by fuelling the forces which generated the original imbalances.

2. *Prices*

Food production is affected less by the movement of input prices than by stability of demand and policies of price support and subsidy which guarantee the producers some certainty in the medium term (Balcázar and Supelano, 1986).

The implicit prices of agricultural value added fell between 15 and 20% between 1975 and 1985 and this fall must have influenced production decisions in the sector. Other factors affected relative farm prices in the past decade. The overvaluation of the peso, barely corrected in 1985, the tariff policy whch has removed the sector's protection in recent years, the protectionist practices of trading partners, and the exchange-rate and sectoral changes made by Colombia's neighbours all aggravated the loss of competitiveness of agricultural production in relation to the rest of the world. The faster rate of devaluation and the adjustment of tariff and trade policies in 1985-1986 helped to reverse the negative effects of the earlier measures and offset the impact of smuggling in neighbouring countries and of farm production subsidies in those countries and in the developed countries. However, the imbalances are so pronounced in the cases of Venezuela and Colombia that in the past year Venezuelan products served to hold down the inflation rate in neighbouring areas, at a time when there was a degree of disorder in fiscal and monetary management.

Although relative prices favoured the farming sector more than manufacturing in 1970-1985, the output response did not occur, because producer prices moved differently. Initially the decline in producer prices was due to increased productivity resulting from the introduction of improved seeds and investments in infrastructure and land improvement. Nevertheless, in 1980 the technological model began to show signs of exhaustion.

The price trend, together with the unfavourable ratio to input costs, meant lower profits from farming activities that were also hit by the trade and tariff policies which exposed domestic production to competition and sought to eliminate State support in the form of subsidies and lower taxation. The tendency to "de-administer" support prices and restrict the supply of credit and fiscal resources for development of an adequate storage and marketing infrastructure exposed agricultural investment to even greater uncertainty.

With respect to support prices, in 1982 82% of the purchases by IDEMA (Agricultural Marketing Institute) (excluding the cotton marketed directly by textile producers) were of tradeable products. The rice support differential caused the Institute great losses. The activities of IDEMA do not bear analysis from the standpoint of purely commercial profit; they must be assessed in terms of the policies of price support and exports promotion.

Despite the attempted general change of direction in the price support policy in the mid-1970s, IDEMA continued to pay high prices, above production costs, which encouraged high stocks; this applied more to tradeable crops than to traditional crops (beans) in the past decade (Chaparro, 1982, cited in Misas and others, 1986).

3. *Agricultural costs*

Lower farm profits have been cited as one of the main causes of the sector's loss of vigour in the 1980s. An important factor in these lower profits seems to have been the higher costs of production with both local and imported content.

The implicit deflator of intermediate farm consumption grew more than the sector's product between 1978 and 1985, and farm prices to the producer fell in relation to industrial prices. Accordingly, the proportion of intermediate consumption increased at the expense of the value added in farming.

The recent economic adjustment measures go some way to explain the movement of farm production costs. Fertilizer prices initially rose in 1985 by 3.2% owing to the 8% surcharge on imports; when the exemption was extended to private as well as official imports of nutrients, the price fell 5.2%. This surcharge also explains the 3.4% increase in the cost of pesticides in 1985. The tax on imported machinery and equipment was in practice increased by the additional tax of 10% on value added introduced under Law 50 in 1984.

The accelerated devaluation in 1985 accounted for 23.7 and 27.3% of the increase in fertilizer prices. The very short payment periods for imports also affected the prices of raw materials and machinery and equipment. The already short periods of 180 days and three years were reduced to 90 days for fertilizers and to six months for farm machinery and equipment at the end of 1984. The discontinuation of the measure from January 1986 reduced the impact of this restriction on price formation and contributed to the drop of 4.8% in pesticides and 1% in synthetic fertilizers. In 1985 it had contributed to the rises of 5.8% for pesticides and 2.9% for synthetic fertilizers. The additional requirement of 20 days advance deposit increased the cost of these two items by 0.7% in 1985.

The decline in the peso's purchasing power affected production costs in other ways. This was true of the tariffs of the Colombian Ports Corporation (COLPUERTOS), charged in dollars, making inputs even more expensive. The importer paid US$26.82 per ton of urea, 14% of its CIF price. When import is permitted via private wharves, prices fall almost 20%, and if the raw materials are imported by the owner of the wharf for processing by himself, the port costs can fall up to 2.4 pesos *ad valorem* and US$10 a ton. If urea was handled in this way, these costs would amount to only 8.1% of the CIF value (Ministry of Agriculture - National Planning Department, 1986).

The price adjustment policy for natural gas affects the cost of fertilizers produced in the country. The 25% adjustment in January 1986 raised the price of ammonia, a basic component in fertilizers, by 11.5%. The price of synthetic fertilizers, under the combination of these two effects, rose by 1.7%.

Colombia had 1.1 million unemployed in 1985, of whom 100 000 had joined the line between 1980 and 1985. The level remained at about 8% even in the boom periods of recent decades, indicating a structural component in Colombian unemployment. However, the increased unemployment in the past five years must be attributed to temporary factors of the recession.

Real rural wages grew sharply between 1958 and 1962, then remained stable until 1976, after which they rose with the 1977 coffee boom and fell with the coffee depression. The different directions taken by the coffee and inflation cycles helped to reduce the difference between rural and urban wages at the end of the last decade. Recently, however, the gap between these two wage incomes has begun to widen again.

VI
Agriculture in the context of future world developments

1. *Immediate and longer-term prospects of the overall economy*

The increase in unemployment from 10% in 1980 to 14% in 1985 is one of the most important minifestations of the economic and social decline in this decade. Similarly, the 10% drop in real rural wages is worrying in its implications for living standards in the countryside.

In the strategy outlined in the study by Chenery, commissioned by the government of Belisario Betancur, farming is given new importance both because it will benefit from the global policies for recovery of economic activity and because its characteristic feature as a powerful source of foreign exchange and demand for labour and domestic resources places it in a prominent position with respect to branches which are less competitive internationally or which have different technical profiles in the use of the factors of production (Misión de Empleo, 1986).

It remains to be seen whether the exports promotion policy will make the necessary choices to encourage the external sales of products which, since they complement the output of the purchaser countries, are not subject to protectionist measures; whether this policy will be backed up by a reduction of internal costs by technical means and by tariff, credit and tax management; and whether priority will be given to the goal of food self-sufficiency in order to reduce the inflationary pressure of the inadequate food supply and permit greater diversification of the home market. In short, it is to be hoped that economic policy will become stable and take a long-term view, in order to remove the structural shackles on the country's development.

2. *The farming sector in the next few years*

The farming sector has suffered a serious loss of vigour since the last decade. The next few years are intended to see the eradication of absolute poverty and the resumption of growth in Colombia. In view of the backwardness described above and the magnitude of the challenge, the farming sector must make radical changes in its structures, assume a leading position in economic policy, and accept the rise of new groups to cater to the needs which will emerge in this process.

The solution of the crisis depends on the outcome of the diagnosis which will determine farming policy in the immediate future. If the debate is won by the argument that agriculture's performance is due mainly to the slower growth of commercial production brought about by exchange-rate and foreign trade policies, then an attempt will be made to reduce the discriminatory impact of the industrial protection policies and the exchange-rate overvaluation which produced this decline in agriculture.

If the crux of the matter lies in the restriction imposed by food production on economic expansion, emphasis will be given to the complementarity of farming and industry, and an effort will be made to correct the shift in relative prices resulting from the restriction of the farm supply which has acted against the industrial sector in the past (Ocampo, 1986).

The most sensible thing would be to admit the importance of both these variables and produce a diagnosis which integrates the economic policy factors that work for or against agricultural development with developments in trade and the food subsector (which were part of the reason for the sector's performance), and to devise a policy to promote agriculture's recovery.

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Costa Rica: crisis, adjustment policies and rural development

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At the end of the 1970s Costa Rica was hit by the worst crisis in its history. The coffee boom ended abruptly in 1978, causing a sizeable drop in export earnings. Furthermore, public spending increased sharply, generating a deficit which was financed largely by short-term foreign borrowing. In addition, the exchange-rate slippage, in conjunction with the deterioration in the terms of trade, brought about the exhaustion of monetary reserves, and this situation was exacerbated even further by the higher interest rates in the international market.

The gross domestic product fell 10% between 1980 and 1982, the fiscal deficit amounted to 42% of revenue and 22% of gross domestic product, the devaluation totalled 600%, and per capita income declined 25%. It is estimated that the country lost 24% of its income owing to the worsening of the terms of trade, the payment of interest on the debt, and remittance of profits abroad. When this situation became insupportable, the Government decided to defer payment of the debt. Meanwhile, unemployment and inflation, scourges virtually unknown in the past, climbed to unprecedented levels.

The new Government which came to office in 1982 set out to cut the fiscal deficit and dampen expectations of devaluation. To this end it took a number of steps which, together with international financial aid, helped to rebalance the fiscal and external accounts and thus facilitate the renegotiation of the debt and the agreement of a new adjustment programme with the International Monetary Fund.

Agriculture saw its contribution to the gross domestic product fall from 50% in 1977 to 37% in 1985, mainly owing to the behaviour of coffee prices in the international market. The steps taken to counter this trend and to stimulate exports growth and diversification do not seem to have been successful. The sharp devaluations apparently facilitated an increase in export earnings but not in export volumes, for the products in question were subject to export agreements or quotas.

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I

The situation up to de 1970s

Up to the end of the 1950s Costa Rica's agricultural sector absorbed about 55% of the economically active population, generated some 90% of export earnings, and contributed 40% of the country's gross domestic product. The relatively small public sector was concerned mainly with the provision of services and creation of infrastructure. The population and most of the activities were concentrated in the central region.

In the 1960s the Government began to encourage industrialization based on imports substitution. The country took an active part in the integration agreements which led to the establishment of the Central American Common Market, with a view to having access to a large and protected market. The hope was to obtain high growth rates by means of this industrial development and thus to increase employment, improve incomes and eliminate poverty. It was likewise hoped to reduce the country's vulnerability, for its foreign trade was entirely dependent on agriculture.

The steps taken to promote industrial activities, basically the set of instruments contained in the Industrial Protection Law promulgated in 1959 and the Central American Agreement on Fiscal Incentives, had almost immediate results.

Industry grew 9.4% a year on average between 1965 and 1973 and increased its contribution to the gross domestic product from 16% to 20%. Industrial jobs also increased, to 12% of the total in 1963 and to 15% in 1978, a proportion which has remained constant.

Agriculture, however, saw its share of employment fall from 50% in 1963 to 30% in 1983 and, what is more, it shed manpower. The workers who left agriculture and those entering the labour market for the first time were largely absorbed by the growing industrial sector and by the public sector, which underwent a large expansion. The public sector provided barely 6% of jobs in 1950 but by 1983 it had increased its share to 19%.

The new development model enabled the country to modernize the economy and establish an extensive network of communications, transport infrastructure and manpower training systems, as well as a wide range of commercial and financial services.

II
The structural problems

This development model soon began to exhibit a number of undesirable features. On the one hand, these included consumption patterns which had a high imported component and a low savings coefficient, equivalent to about 6% to 7% of the national income; this caused the country to resort to foreign borrowing to finance the accumulation of capital. On the other hand, neither the highly protected industrial sector, nor the primary sector were capable of placing very much of their production outside the Central American market. Furthermore, some of the specific policies adopted encouraged a technological pattern heavily dependent on imported goods.

When the need subsequently emerged for adjustment of the development model, a number of measures were introduced, including in particular the creation of the Exports and Investments Promotion Centre, the granting of tax exemptions on non-traditional exports to markets outside Central America, exports incentives, and the establishment of the Development Corporation of Costa Rica which, with its subsidiary bodies, was intended to diversify the production structure and promote the use of domestic raw materials.

III
The crisis

At the end of the 1970s a combination of phenomena —structural and contingent, external and internal— produced the worst crisis ever experienced by the country in all its history. One of the main factors in the crisis was the oil price rise and its impact on domestic prices. The first increase in 1973 did not have serious consequences because the country had an adequate supply of external financing and coffee, the main export product, was trading at high prices in the international market.

Costa Rica's terms of trade underwent a sustained decline in 1970-1976. In 1974 the ratio was only 78.6% against the 100% of 1970, for although export prices increased almost every year, import prices rose at a faster rate.

The Government took a much more active role between 1970 and 1978, especially with respect to investment, which was financed by foreign borrowing on generally advantageous terms. The aim was to alter the production structure in order to increase exports of manufactured goods with a high domestic component. Investments were made in production plants for cement, aluminium and derivatives, and anhydrate alcohol, amongst others.

A number of incentives were introduced in the rural sector for enterprises which set up in the countryside and constructed transport and communications infrastructure works. The Government also intervened in the installation of processing plants for commodities such as cotton.

These and other measures cushioned the effect of the deterioration in the terms of trade. The inflow of capital to finance public investment was sufficient to obviate recourse to devaluation to cover the increasing external imbalance. Stimulated by the investments, production grew at a rate of 6% and unemployment accordingly remained low, at a rate of under 5%.

The foreign exchange earnings helped to counter inflationary pressures by enabling imports to grow in step with the expanding demand.

The dramatic recovery of the economy as a result of the rise in export prices in 1977 was reflected in a considerable improvement in the country's external accounts, which made adjustment of the exchange rate seem unnecessary. Against this background, with good coffee prices, the Government contracted more foreign loans to finance new public investments.

After the change of Government in 1978, economic policy goals gave emphasis to private initiative in the allocation of resources and assigned a marginal role to the Government.

That year coffee prices fell 6.7%, putting an end to the boom, and the situation worsened sharply. Despite the declared objectives, public spending rose 52% between 1978 and 1979, while revenue rose only 28%. As a result, investment fell and the deficit had to be financed by short-term foreign borrowing.

The maintenance of the exchange rate was another objective given preference even at the expense of other variables. As a result of the level of debt and the use of international reserves, the colón was maintained at 8.60 to the dollar.

The terms of trade continued to worsen, monetary reserves were depleted and became negative in 1980, and the foreign debt became a burden difficult to bear. The outbreak of the international financial crisis meant a smaller supply of resources for lending and higher interest rates.

In view of this critical situation, the currency was devalued. In 1981 the gross domestic product recorded a negative rate for the first time (-4.6%). However, public spending continued to grow in that year, at a rate of 10%. The fiscal deficit rose to 41.8% of revenue and 21.8% of gross domestic product. The fall in the gross domestic product continued in 1982, at a rate of -8.9%.

The gloomy prospect prompted the authorities to take two important steps: they imposed taxes on export activities and resorted to internal borrowing. The taxes on foreign trade eventually amounted to 66% of new tax revenue, and the public sector took up 44.7% of the loans of the national banking system.

In March 1980 agreement was reached with the International Monetary Fund on a two-year stabilization programme designed to reduce the fiscal deficit and the current account deficit of the balance of payments. Of the SDR 60.5 million approved, only 15.4 million were disbursed, owing to failure to comply with the agreement.

In June 1981 an expanded service arrangement with the Fund replaced the earlier agreement, making SDR 276.8 million available to the country for a period of three years. Of this amount, only 22.5 million was actually disbursed, again owing to failure to meet the agreed targets.

In August that year the debt service became insupportable and the country decided to defer payment. The currency was devalued by 600% between 1981 and 1982 and, because of the urgent need to finance essential imports, the debt was concentrated in short-term obligations. The gross domestic product fell at a rate of about 10% between 1980 and 1982, and output reverted to its 1977 level, while per capita income fell 25%. It is estimated that interest payments on the debt, the deterioration of the terms of trade, and the remittance of profits abroad by foreign companies together took 24% of the country's revenue.

Inflation, a process virtually unknown in the country up till then, broke out in 1982, forcing the consumer price index above 100%. The result was a profound change in the costs structure in the production of goods and a decline in workers' real incomes of about 45% between 1979 and 1982.

Open unemployment increased rapidly in this situation, affecting in particular wage earners in the modern sector and rural dwellers, especially the youngest. Unemployment among young people aged 15 to 19 reached 18% in 1982.

This deterioration in the situation can be clearly appreciated when it is remembered that the cost of the basic shopping basket took about 60% of the average wage in 1980 but 86% in 1982.

1. *The manifestations of the crisis*

The most important manifestations of the crisis included the fall in output, the external imbalances and the fiscal deficit.

The growth rate of the gross domestic product began to slow down in 1977, reaching a rate of 0.8% in 1980; in 1981 it fell in absolute terms for the first time, recording a rate of -4.6%. The rate was -8.9% in 1982; this trend was reversed in 1983 but without a return to the earlier rates.

This development was due to the following causes, amongst others:

— The restriction of lending to the private sector. Domestic credit was cut back by the sharp increase in resources for the public sector, while external credit declined owing to the difficulties connected with the tightening of the international financial markets;
— The higher production costs caused by inflation, devaluation of the currency and increased interest rates;
— The contraction of aggregate demand as a result of the drop in real wages and the stagnation of external demand;
— The climate of uncertainty in the business world, which led to a fall in private investment and an outflow of capital from the country;
— The development of speculative financial activities whose profitability made them more attractive than the production of goods.

Although the problems of the external sector are many and complex, for the purposes of this article they can be reduced to two: the trade balance deficit and the large foreign debt.

The trade balance deficit dates back to the mid-1950s and is due to the stronger growth in the value of imports in comparison with exports. Exports accounted for 23% of the gross domestic product in 1970 and 30% in 1980, while the contribution of imports was 25% and 40% respectively. In these circumstances the trade deficit, which was equivalent to 40% of exports in 1970, rose to 60% in 1980.

This situation was brought about, among other factors, by the heavy dependency on imported raw materials and capital goods, a consumption pattern with a large imported content, the sustained decline in the terms of trade, and the weak performance of exports, especially non-traditional ones, as a result of the powerful protection —both internal and in the Central American Common Market— and the very conservative behaviour of businessmen.

The methods used to cover the trade balance deficit were foreign borrowing and foreign investment, with the first being the more important. The public foreign debt rose from US$900 million in 1978 to over US$3 000 million in 1982. The structure of the debt worsened in this period, with concentration of payments in the short term. The debt service, moreover, amounted to 60% of the value of exports.

2. *Income distribution and poverty*

In 1977 25% of all Costa Rican families were unable to meet their basic needs to some extent and 13% lived in extreme poverty. The rural areas contained 34% of poor families and 19% of extremely poor families. No great change occurred in this situation until the outbreak of the crisis and the introduction of the adjustment policies. A comparison of 1970 with 1983 shows that the share of the poor sections of the population in income declined in favour of the higher-income groups; this was mainly an urban phenomenon. Furthermore, according to a MIDEPLAN study, 41.7% of wage earners were poor in 1980, and this proportion rose to 56.4% in 1981 and 70.7% in 1982, indicating the impoverishment of wage earners as a result of the crisis and the adjustment. The causes must be sought in the drop in real wages and employment, the higher public tariffs, and the cutback in government assistance programmes.

The same study offers more dramatic figures for the rural sector. Poor rural families made up 57.7% of the total in 1980, and this proportion rose to 72.1% in 1981 and 82.3% in 1982. The rate of child undernutrition among poor rural families was double the national average.

No specific research on the food supply has been carried out since 1971. However, analysis of the development of the apparent supply shows no major falls in aggregate terms in the main foods in the basic shopping basket. In other words, a "normal" supply of rice, beans, maize, meat, milk and eggs was still guaranteed despite the reduced supply of foreign exchange. It is not possible to draw any definitive conclusions from this information, for it refers to aggregates and does not indicate the effects of changes in income distribution.

IV

Description of the main adjustment policies

With the change of Government in 1982, a series of measures was adopted with the aim, on the one hand, of reducing the fiscal deficit —considered to be the main generator of inflation— and, on the other hand, of reorganizing the exchange market in order to reduce the high level of expenditure and discourage expectations of devaluation. These measures included:

— *Modification of the exchange-rate régime.* Purchase and sale of foreign currency was restricted to the Central Bank and its authorized agents in the banking system. This checked speculation and expectation of a devaluation.

— *Measures to adjust the fiscal deficit.* In view of the rigidities in expenditure, it was decided to make adjustments on the income side by means of increases in public tariffs, fuel prices and income tax, and the introduction of new export taxes based on the exchange-rate differential, together with import taxes and reduction of certain subsidies. In addition, enterprises of the Development Corporation of Costa Rica (CODESA) were put up for sale, and the rates of contribution to the social security system were increased.

The large increase in fiscal revenue achieved by the introduction of these measures reduced the non-financial fiscal deficit from 8.6% in 1982 to 3.7% in 1983, despite an increase in public expenditure of 44.5% in nominal terms. The adjustment achieved by these methods enabled the country to resume its negotiations with the International Monetary Fund and reschedule its foreign debt, thus gaining access to the international financing which it needed.

In December 1982 a new standby arrangement was agreed with the International Monetary Fund for SDR 92.25 million for a period of three years. Disbursements remained subject to attainment of the goals, which consisted basically of reduction of the fiscal deficit to 4.5% of the gross domestic product, reorganization of the foreign-exchange market, and containment of inflation. This time the programme was carried out and the payments were made as planned, for most of the proposed targets were attained and even better results were achieved. With respect to the foreign debt, an agreement was reached with foreign banks on rescheduling of the payments; a similar agreement was reached with the Club of Paris on the external public debt.

In order to offset the social costs of the adjustment, the Government introduced a number of specific measures such as the plan to rescue businesses hit by the crisis and the Social Compensation Plan, which included the provision of food for extremely poor families, half-yearly adjustment of wages in step with changes in the prices of the items in the basic shopping basket, control of these prices, a programme to create jobs by means of subsidies, a social housing programme, and a land provision programme.

Attention must necessarily be drawn to the role played by foreign aid in overcoming the crisis. In 1983 and 1984 the United States, through the International Development Agency, provided more than 25% of the external resources received by Costa Rica. If the contributions of bodies in which the United States Government has a decisive influence are included, the total comes to 83% of the external resources in 1983 and 65% in 1984. In the first three years of the Government of President Monge, United States assistance through the IDA amounted to US$634 million. Clearly the success of the stabilization programme owes much to these amounts of aid, which reduced the independence of the national authorities.

Accordingly, the IMF and IDA have imposed their views on economic management. In 1984, for example, the IDA made a loan conditional on modification of the organic law of the Central Bank in order to give private banks access to that institution's resources.

V

The impact of the adjustment policies on agriculture

Since 1975 Costa Rica's farming economy has followed a pattern of irregular growth with periods of definite stagnation. More or less every three years the sector experienced large drops in its output (negative growth of the gross domestic product), alternating with years of great expansion, 1983 and 1984, for example, when it recorded growth rates of 9.2% and 8% respectively. This phenomenon is explained partly by the performance of two items, coffee and bananas, which have a great impact on the sectoral economy. After a period of recovery, coffee output fell sharply in 1985 and the same happened to bananas, which were already showing some weakness. It is therefore important to stress the influence of coffee production on the whole of agriculture: coffee's relative weight in the gross domestic farm product was almost 50% in 1977 and it fell to 37% in 1985. The rest of the crops did not record any great changes, except those due to the weather and plant disease.

It can thus be seen that macroeconomic stabilization policies apparently did not have a very great effect on this performance. Moreover, in conjunction with the introduction of these policies, the State adopted a number of compensatory measures, on top of the great external aid received. Thanks to these two factors, there was no need to resort in agriculture to the drastic measures of a shock policy.

The farming sector was especially favoured by this compensatory action on the part of the State, for it was designed primarily to correct the drop in the demand for foodstuffs and subsidize basic inputs of external origin in order to keep food production stable. This goal was attained by the introduction of a price stabilization policy in 1982, the purpose of which was to maintain the balance between the strength of output and the level of consumer prices. The external assistance was translated into a number of initiatives such as, for example, the Farm Productivity Incentives Programme (IDB), which in conjunction with the tax policy increased the domestic demand by incorporation of technology without forcing production costs up by very much.

The implementation of this set of measures was facilitated by the high domestic component in farm production, which is largely immune to external restrictions and increases in import prices.

However, the crisis did have a greater effect on the farm exports sector, which also had a number of internal problems such as the considerable adverse effects of the withdrawal of the banana companies. Thus, despite the establishment of a number of programmes to stimulate the output of exportable farm goods, especially bananas and sugar cane, exports remained virtually unchanged.

Nor did the devaluations influence export volumes. Coffee, bananas and sugar cane, which accounted for more than 54% of total foreign sales, were subject to export quotas. The devaluations did not have any great impact on other farm products either, for their domestic prices remained far above international prices; prices for the 1984/1985 harvest were 90% higher in the case of rice, 102% for maize and 50% for beans. It must therefore be assumed that the increased income resulting from implementation of this measure went mainly to export consortiums and did not serve to stimulate producers.

The results of various pieces of research confirm that one of the social costs of the adjustment policies has been the drop in income from work; it is nevertheless admitted that the adverse effects were greater in urban areas and the impact on the countryside was less. Here again the domestic component helped to cushion the recessive effects.

With respect to specific policies for agriculture, the *"Volvamos a la tierra"* plan (Let Us Return to the Land) of the Government of President Monge sought to make agriculture and agro-industry the axis of the development process. Five main action areas were defined for this purpose: agricultural production, agro-industrial integration, the agrarian issue, the support system, and natural resources.

The public agricultural sector was then restructured, the planning system was strengthened, a specialized irrigation and drainage service was established which brought together the resources dispersed among several bodies, and the Ministry of Agriculture was reorganized to increase and improve its regional presence and avoid duplication of functions.

The following measures were implemented in 1982-1986:

— Prices policy to stimulate and then stabilize production, thus favouring both producers and consumers. The period 1982-1983 had seen price increases of over 100% for producers of rice, beans and sorghum, and somewhat smaller increases for producers of maize and eggs. The rises were moderate in 1984 and 1985 as a result of the fall in inflation and the stability of input prices.

— Policy for support of banana production by means of an incentives plan which envisaged price compensation, assistance with disease control, and production incentives. The aim was to restore the competitiveness of banana production, which had been impaired by the high incidence of disease, the drop in prices, and other factors.

— Quest for new alternatives for cane production. Alcohol production was tried for this purpose, both for the home market and for export. This activity has been affected by the low international prices, but the area and the yields were nevertheless increased, and output showed sustained growth.

— Policy of support for cocoa production. As a result of increased State support —through the Cocoa Promotion Programme— the sown area was expanded and the downward trend reversed.

— Policy of farm credit and insurance for the most important food crops. Finally, as a result of the introduction of these measures and the influence of imponderable external factors, banana output rose in 1983 and 1984 before falling back in 1985 owing to the drop in prices and incidence of disease; cane production increased but ran up against problems of overproduction and low international prices; livestock production grew between 6% and 10% from 1982, the year in which it had experienced a sharp fall; and the output of rice, maize and beans recorded increases which made it possible to meet the national requirements —except in the case of hard maize— and even to make some exports, although at subsidized prices, the cost of which had to be borne by the official marketing body.

CEPAL REVIEW No. 33

Chile: effects of the adjustment policies on the agriculture and forestry sector

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In this article the author analyses the situation of Chile's agriculture and economy in two periods. In the first, from the end of 1973 to June 1981, the economy grew at a high rate, inflation fell, wages rose, fiscal surpluses were achieved and reserves built up. In contrast, unemployment grew sharply, investment and saving fell, income distribution deteriorated, and the private sector's debt reached very high levels. The balance-of-payments deficit, the worsening of the terms of trade, the higher interest rates and the very large foreign debt acted as detonators of a crisis which stamped its mark on the second period. This period, from 1981 on, is characterized by the introduction of various adjustment measures designed to correct the imbalances without altering the essential nature of the adopted model.

The first measures introduced in agriculture had the objective of suspending the agrarian reform, restoring 30% of the expropriated land to its former owners and allocating the rest as smallholdings, and opening up the land market. A number of specific measures were also introduced, including forestry subsidies in particular. Other more general initiatives such as derestriction of the labour and capital markets and trade liberalization shaped the framework within which agriculture operated. This period saw spectacular growth in exports production, especially fruits, and a sharp drop in traditional crops such as wheat, beet, rape and marigolds.

Having abandoned the idea of automatic adjustment to overcome the crisis, the authorities intervened and established reference prices, purchase powers, tariff surcharges, price bands, and special credits for producers of basic goods. Taking 1981 as the reference point, agriculture performed better than the economy as a whole, owing largely to the strength of traditional crops and the expansion of fruit-growing, which benefited very much from the devaluations and the falls in wages and financial costs.

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Introduction

This article on Chile analyses two periods. The first runs from the end of 1973 to mid-1981, when the new government initiated an economic strategy which made substantial changes in traditional policies, including policies for the agricultural sector; and in the second period, from June 1981 onwards, various policies designed to correct the existing imbalances were carried out against a background of economic crisis.

I

The general lines of economic strategy and agricultural policy

1. *The global economic model*

One of the main criteria which have guided the actions of the economic authorities is the belief that the State should not steer or control production activities and that it is for the private sector to allocate resources in accordance with its motivations and assessments. In other words, the State should take a neutral stance, i.e., it can neither stimulate nor discourage production activities.

Accordingly, development policies, both sectoral and regional and of a business organization nature, should be eliminated or considerably reduced.

In this context the role of activator is transferred from the discriminatory decisions of the State to the signals emitted by prices, which are transmitted through the operation of competitive and decentralized markets free of any kind of governmental interference. The conclusion of this argument is that there is no need to use sectoral development policies and that it is enough to issue general directives valid for all activities.

2. *The subsidiary State*

One of the main goals of the military government was to reduce the size of the State. The implementation of its policies led to the privatization of a number of medium-sized enterprises, mainly agro-industries, which were owned by the Production Development Corporation (CORFO) or other bodies such as the National Farm Trade Corporation (ECA). The private sector took over dairy and dehydration plants, poultry and pig farms, olive estates, fisheries, fruit stations, silos, refrigeration equipment, seed selection equipment, agro-industrial complexes, the VINEX wine corporation and the National Seeds Corporation.

Similarly, the role of the National Forestry Corporation (CONAF) was reduced to a minimum and its place was taken by a system of subsidies for the private sector, to which were transferred forested land (60 000 ha) with nurseries and sawmills. In addition, large cellulose plants and their forests were sold and many forestry properties owned by the State or by insurance funds were put up for auction. the process of agrarian reform was abruptly halted and a large part of the land was returned to its former owners, while the rest was allocated in individual smallholdings. The withdrawal of the public sector was much more serious with respect to its functions of promoting development and assisting the technologically most backward and poorest rural sectors.

The abandonment by the State of the first of these two functions meant the abolition of measures considered selective and discriminatory in favour of the farming sector. As a result, tariffs were made uniform, tax exemptions, selective loans and inputs subsidies were removed, interest rates standardized and prices deregulated. Attempts were also made to transfer to the private sector the functions of providing technical assistance through subsidies for small producers to enable them to contract services.

3. *Trade liberalization*

In the government's view, the Chilean economy enjoyed excessive self-sufficiency which must be sharply reduced, for it was one of the reasons for the slow rate of development. In other words, the excessive and discriminatory protectionism had caused inefficient allocation of resources. The government decided therefore to open up the economy to the exterior in order to facilitate the expansion of exports and an increased supply, this by import of goods for which the country has no comparative advantages.

With this in view, and in order to improve the standards of internal efficiency, the government established a single exchange rate, which was to reflect the social value of foreign exchange, and a very low and uniform customs tariff, and it sought to remove the obstacles to foreign trade; at the same time it eliminated the customs exemptions which favoured certain production activities and the consumption of certain products. These measures were put swiftly into effect: the single exchange rate was set at 39 pesos to the dollar in June 1979 and tariffs were reduced to a uniform 10%, with very few exceptions to this rule.

These measures entailed important changes for the agriculture sector, for the import of goods already produced in the country was practically prohibited and the ECA had a monopoly of purchases abroad when national output did not satisfy domestic consumption. It also acted as a compensation fund to smooth out the differences between the internal and external prices of the products which it imported, and so the most important had their prices fixed at levels below their external purchase cost. In accordance with the government's diagnosis, a consumption subsidy was introduced and a tax imposed on producers. A similar situation existed for inputs, for most inputs and capital goods for the sector were imported free of customs duties.

Once these measures had been put into effect, the sector and its producers were exposed to increasingly intense foreign competition.

As a transitional stage in its liberalization policy the government established between 1977 and 1978 price bands based on the external market prices in the previous period. the system envisaged the use of variable tariffs when the external prices fell below the band's minimum. This mechanism worked for wheat and oil crops, but it was suspended at the request of the farmers themselves for the 1978/1980 harvest, for they thought that they could obtain better prices without the bands.

4. *Prices policy and market intervention*

The military government planned to eliminate price controls, arguing that the market was the most efficient control mechanism. In accordance with this plan, prices were quickly deregulated, and at the same time governmental interference in the operation of the markets was reduced.

This new policy meant profound changes for the sector, for prices had traditionally been fixed by the Department of Industry and Trade; this procedure was backed up by the ECA through its participation in market operations. Despite its convictions, the government had to move in stages with the deregulation of prices. After the first widespread deregulation, only maize, wheat and rice were still controlled in 1975, but in 1976, owing to the dire effects of this shock treatment on the people's living standards, controls were re-established for a wider range of products. However, most prices were again deregulated in 1977, and the ECA used its purchase powers only for wheat, maize, rice, oils and wools. while at the same time it allowed private companies to import foodstuffs. The price bands machinery was established in the 1977/1978 season; the bands were set before the production cycle began, in order to reduce the risks to the producers.

The instability of international markets finally persuaded the government not to intervene in the operation of the markets, both for products and for inputs.

5. *Loans and interest rates*

In its economic policy the military government attached great importance to the capital market. Its diagnosis was that the biggest problems in this area were caused by excessive State interference. It therefore decided to withdraw the State and encourage the installation and operation of new enterprises, while still retaining freedom to fix interest rates, eliminate selective loans and encourage international capital flows.

Before the adoption of these measures the sector had traditionally operated with a high level of debt in relation to its value added, with heavy dependence on State sources of credit (the State Bank for short-term loans, CORFO for investment finance, and the Agrarian Reform Corporation (CORA) and the National Institute for Agricultural Development (INDAP) to cater to small owners) in addition to the special lines of subsidized loans. However, the government believed that the trade liberalization would improve profits so that there would be no need for special loans financed by these institutions, whose place would be taken by the private banking and financial system.

Extremely high short-term interest rates prevailed between 1975 and 1978, seriously affecting agriculture. The causes of this were the abrupt deregulation of the capital market, especially of the interest rate, despite the serious economic instability caused by inflation; the low level of savings in the private sector and of working capital in business, a situation aggravated by the inflation and the 1975/1976 recession; the difficulty of obtaining external financing as a result of the weak international supply and the restrictions imposed by the Central Bank up to 1979; and the broad current spread, which was due both to the required levels of cash reserves and to the oligopolistic behaviour of the banking system.

6. *The labour market*

The government's policy in this area too meant great changes in the existing situation. the main measures adopted were the liberalization of the labour market by simplification of the legal rules governing recruitment and dismissal, and changes in the rules on relations between companies and trade unions by reducing the supposedly monopolistic powers of trade unions. This led in practice to the reduction of the political, financial and institutional power of the trade unions and the suppression of the right to strike. Cuts were also made in labour "taxes", i.e., social security contributions, which were proportional to earnings and reached a rate of 60% in 1983, so that they were considered a disincentive to work.

It must be added that unemployment remained high, contributing to the real fall in wages.

7. *The land market*

The idea rapidly gained ground in the military government that the land resource should be treated as an additional capital good and that the restrictions on free trading in land should be removed. Among these restrictions the official diagnosis noted the uncertainty about rights of ownership caused by the agrarian reform and the appropriation of land, not to mention a whole series of restrictive legal regulations. The following were the most important measures adopted in this connection:

i) As a first priority, about 30% of the physical area expropriated up to September 1973 was restored to its former owners (almost 10 million ha). Most of this was better-quality land.
ii) Of the area actually expropriated (around 10 million ha), 35% was allocated to the peasants, 17% was transferred to other institutions or sold off cheaply, and 18% was left unallocated.
iii) The land was allocated to the peasants in individual plots, except in a small area of the dry coastal strip. The restrictions on the sale of this allocated land were removed at the same time, and it is estimated that 25% to 40% of it was transferred to third parties.
iv) After a series of modifications, the agrarian reform law was finally abrogated in 1978.
v) Freedom was granted for subdivision of properties and sale of water rights.

8. *Tax policy*

The tendency here was to establish single taxes, as for example the value added tax (20%) and a tariff with similar features. At the same time a sharp reduction was made in tax exemptions, both regional and sectoral and for individual products.

The progression of the income tax was also reduced, together with its contribution to total taxes, with a view to encouraging private saving and cutting the size of the public sector in accordance with the government's thinking.

The tax policy produced no major changes in the agricultural sector. Most of the enterprises remained under the system of presumed income, calculated as a percentage of the official valuation, which is generally lower than the commercial value. The establishment of the value added tax (VAT) extended the system to products which had formerly been exempt from taxes, However, the tax burden borne by the sector was lower than the national average, owing mainly to the system of presumed income.

The forestry sector received special treatment which included a one-off subsidy equivalent to 75% of the cost of forestation, and it was also exempt from the lad tax, taxes on presumed income, the supplementary general tax, and taxes on legacies, transfers and gifts.

9. *Research and the transfer of technology*

Here the government's policy was designed to secure financing for basic research and pass the cost of applied research on to the direct beneficiaries.

Although the National Institute of Agricultural Research is the main research body, steps were taken to reduce its influence. Forestry research is the responsibility of the Forestry Institute, the universities and private business.

The policy of transfer of technology was given a serious setback by the provisions which ended the agrarian reform and the extension and training work of CORA and the Training and Research Institute for Agrarian Reform (ICIRA) and transferred their functions first to the SAG and then to INDAP, so that this body could concentrate the services on some 300 000 smallholder families. This work was usually carried out on an individual basis with the peasants, without strengthening their organizations.

A transfer of technology policy was not formulated until 1978 with the establishment of the Technical-Business Assistance Programme (ATE) for small producers. An attempt was made to promote the establishment of Technical-Business Assistance Centres (CATE) to provide services for producers who required them, with State finance provided through subsidies of between 56% and 70% of the value of the services. This programme had little success: in its best year (1980) it catered to 14 275 users but then declined sharply in the following years.

II

Trends and results

1. *Output*

When the sum of the gross domestic product (GDP) for 1974 to 1981 is compared with the total for 1964 to 1971, it can be seen that the product of the agriculture and forestry sector grew 17.1%, i.e., slower than the total GDP and the population growth rate; this means a decline of 1.2% in per capita terms.

These figures conceal very dissimilar performances within the sector. Traditional crops, which accounted for about 30% of the value of production, fell as a result of the decline in the area sown from 1 270 000 ha on average in the 1960s to 1 012 000 ha in 1980-1982. The main crops affected were wheat, beet, rape and marigolds, for after the trade liberalization it was cheaper to import them.

There is evidence that vegetable production may have increased during the period.

The rise in fruit production was spectacular. The reasons for this abundance are to be found in the fruit-growing plan carried out in the second half of the 1970s and in the export incentive entailed by the establishment of a high and stable exchange rate. These circumstances favoured investment and the incorporation of technology, and productivity showed a substantial improvement. The area planted increased from 63 900 ha in 1974 to 86 800 ha in 1981, while output rose from 545 900 to 885 400 tons.

Livestock increased at a slow but steady rate; the production of milk and poultry meat rose in this subsector but the production of sheep and eggs fell.

2. *Foreign trade*

Farm exports showed a remarkable increase from US$73.5 million in 1971 to US$807.3 million in 1981, with a consequent increase in their share in the total from 7.6 to 20.5% in the same period. Fresh fruit, timber and forestry derivatives contributed most to this increase. If these latter items are excluded by reason of their large industrial component, the figures fall to US$41.5 and US$548.3 million in 1971 and 1981 respectively, and the share in the total rises from 4.3 to 13.9%.

Imports also increased substantially from US$186.9 to US$410.1 million in the same period. However, their share in the total fell from 16 to 6.1%. The same trend is observed when food imports are included.

The result of this performance was that the sector's trade balance, which had been in deficit, moved into the black.

3. *Investment and borrowing*

Although there is no reliable information about investment, various estimates indicate that it declined by about 53% in the public sector (public agricultural expenditure on capital goods), while private investment rose between 1965-1969 and 1974-1979 from US$17 million to US$36.3 million as an annual average.

Within this development, it is estimated that investment in equipment and machinery fell sharply, while investment in livestock and fruit farms rose sharply. These figures are not reliable and critics cite other figures which indicate that in fact private investment in 1974-1979 was unchanged or lower than in 1965-1969.

The forestry sector has better figures which show that investment grew. Proof of this is provided by the expansion of the planted area, as an annual average, from 28 212 to 79 586 ha in this period. This performance was certainly influenced by the subsidies granted to this activity.

Lending to the sector increased rapidly in real terms, although at a slower rate than in other activities. It is important to stress that this lending was concentrated in short-term obligations and, moreover, that there was a deep cut in resources for the peasant sectors.

According to the available information, the ratio of the volume of credit to the sector's value added rose from 35 to 76% and then to 91% in 1965-1970, 1981 and 1982 respectively. The heaviest borrowers in this scenario were the small and medium-sized farmers who, moreover, concentrated their obligations in the short term as they lacked liquidity and working capital.

4. *Relative prices and profits*

Leaving aside the question of the validity of the consumer price index (CPI), food prices rose less than the overall index between 1974 and 1981 (73 against 85 times) and the average annual rates were lower throughout the period, except in 1976 and 1981. However, a comparison of prices between 1970 and 1981 produces opposite results; it shows that the food item showed a relative improvement in 1970-1974, contrary to the expectation of official policy.

The wholesale price index (WPI) shows that food prices rose more than the overall index (117 against 112 times), that this increase was concentrated in the period 1975-1976, and that the ratio was reversed between 1977 and 1981.

Both indexes seem to show that the trade mark-ups between wholesalers and final consumers fell in comparison with other activities. This could be a result of the trade liberalization, although in view of the unreliability of the indexes it is difficult to assert this with any certainty. It can however be said that the terms of trade did not improve for the agricultural sector as a whole.

The prices of inputs which ceased to receive subsidies rose, as did those of fertilizers and seeds. Petroleum and electricity prices also rose.

Financial costs increased, as already pointed out, and it is estimated that the revaluation of properties may have resulted in higher direct taxation. The only cost element that certainly fell was wages.

It can thus be inferred that farm profits did not improve in the period 1974-1981, indeed the available data indicate that they deteriorated. This is in global terms, for certain activities such as fruit production performed very well while others clearly declined. This heterogeneity was also found at the regional level.

5. *Employment, wages and income distribution*

Employment showed a slight increase in absolute terms from 480 300 persons employed in 1973 to 511 400 in 1981. There was thus a break in the sector's tendency to shed manpower owing to increased productivity. It is estimated that employment in the sector fell 31% between 1960 and 1973. Any variations in this trend were due to the fact that drops in real wages and social-security costs and the improved negotiating power of the workers acted as a stimulus on labour-intensive activities; the higher unemployment and lower real wages in the towns discouraged migration from the countryside, and the increased subdivision of properties may have encouraged greater retention of labour, although with lower productivity.

Nevertheless, employment grew slower than the population, and unemployment thus rose from 2% in 1966-1970 to 5.7% in 1974-1981.

As to income distribution, there is very little information on which comparisons can be based. However, in view of the greater heterogeneity in the sector and according to the information which is available, it can be asserted that the worst poverty is concentrated in rural areas. This assertion is supported by the existence of a backward sector made up of smallholders (about 180 000 properties) who receive little or no attention from the government, a sector which was swollen by the plots allocated under the agrarian reform and by a large mass of farm workers without permanent jobs living in very precarious conditions.

It is important to stress that the available information shows good efficiency indices for the smallholders —evidence of an unused business capacity.

III

The crisis and the adjustment policies

1. *The crisis*

After the recession in 1975-1976 the gross domestic product grew rapidly in the next five years and exceeded the all-time highs in 1980 and 1981. Inflation fell to under 10% a year, real wages increased, the fiscal targets of the government itself were surpassed, with surpluses between 1979 and 1981, and the Central Bank steadily accumulated reserves.

It was in this context that the government promulgated the so-called "seven modernizations" which consisted, *inter alia,* in reform of the labour laws to make the jobs market more flexible, the social-security reform which privatized this activity, a new mining law to facilitate large foreign investments in this area, and the education reform. However, the economy had a number of very serious problems, including:

i) The rise in unemployment to 11%, an exceptionally high level in historical terms. If the persons enrolled in the Minimum Employment Programme are included, the level rises to over 15%.
ii) The low level of investment during the 1970s and the low rate of national savings, which fell from 16.4 to 13.6% between 1961-1970 and 1974-1981.
iii) The worsening of income distribution. The 1969 and 1978 household surveys illustrate this development: while the poorest 20% saw their share fall from 7.6 to only 5.2%, the 20% of families with the highest incomes improved their position, with their share rising from 44.5 to 51% of the national income.
iv) The heavy borowing by the private sector, which enabled it to acquire assets. This was intensified by the close relationship between the owners of the big companies and the banks; as a result the financial system became particularly vulnerable. Lending to the private sector increased from 6.9 to 23.8% of GDP between 1970 and 1981, while in foreign currency it exploded from US$78 million in 1970 to US$5 549 million in 1981, a level equivalent to 16.8% of GDP.

In addition to these problems, the crisis triggered a series of macroeconomic imbalances. They included an enormous deficit in the current account of the balance of payments, which rose from US$1 088 and US$1 189 million in 1978 and 1979 to US$1 971 and US$4 814 million in 1980 and 1981. These figures are equivalent respectively to 7.1, 5.7, 7.7 and 16.3% of GDP in those years. The causes of this phenomenon included: the fixing of the exchange rate at 39 pesos to the dollar in June 1979 and its maintenance in the following years despite continued inflation at levels higher than the international rates (the CPI rose 67% between June 1979 and June 1981, while the United States CPI rose only 25.2%); and the standardization of tariffs at 10% which helped to make imported goods cheaper.

These two measures produced changes in the relative prices of tradeable and non-tradeable goods. The result was that exports increased from US$4 190 million in 1979 to US$6 558 million in 1981, while exports, which had been rising rapidly, came virtually to a standstill, increasing from US$3 835 million in 1979 to US$3 960 million in 1981.

These imbalances were aggravated by the deterioration in the terms of trade caused by the 5% rise in import prices and the 10% fall in export prices, which pushed the trade balance deficit up by US$780 million. The higher interest rates in the international market increased it a further US$200 million. However, these US$980 million account for only a quarter of the total deficit of US$4 800 million in the current account in 1981.

The foreign debt grew enormously as a result of the financial liberalization, as external saving came to take the place of internal saving, which fell from 15.5% of GDP in 1980 to 8.5% in 1981, in which year external saving accounted for 66% of total saving.

In short, there was a serious imbalance in the economy between the product level and the expenditure level, an imbalance which was financed by external resources. Proof of this is that the long- and medium-term debt rose from

US$7 507 million in 1979 to US$12 553 million in 1981. The situation became unsupportable from 1981, when the prime rate rose to 20% a year.

The other economic distortion was in the domestic financial system. The rapid growth of bank lending, facilitated by the simplification of access to external resources and aggravated by the persistence of high interest rates over a long period, ended by causing excessive debt, with a wave of bank and business failures.

2. *The automatic adjustment (June 1981 to April 1982)*

The exchange-rate slippage caused serious problems, for the avalanche of imports displaced domestic production and discouraged exporters, this on top of the abrupt increase in the debt.

The government authorities maintained that the existing model possessed automatic mechanisms for resolving this situation, and so no new measures were needed, except partial ones. As they saw the problem, there was excess aggregate demand but devaluation was not the remedy, for it would not affect the balance of payments or change relative prices, and would only lead to more inflation.

The idea was that the Central Bank should maintain a neutral monetary policy and issue money only when foreign exchange came in. Otherwise, there would be a loss of international reserves, an equivalent cut in the money supply and a higher interest rate, which would lead to a decline in expenditure and imports to a level compatible with the inflow of external credit, and exports would therefore increase owing to the fall in domestic demand.

What actually happened was that as inflation fell and the nominal interest rate was maintained, the real interest rate rose considerably in early 1981. Furthermore, the amount of money in private hands declined in the second half of 1981 owing to the reduction of the Central Bank's reserves.

Two other factors will also have affected the increase in the interest rate: i) the favourable expectations about the future, which increased the demand for loans to a level above the available supply of external credit; in addition to business requirements, there was borrowing for consumption encouraged by the low prices of imported goods; ii) increased demand owing to the capitalization of interest; furthermore, the banks avoided declaring these loans as uncollectable in order to prevent administrative intervention by the State as long as a "pardon" was expected; iii) a tax system which encouraged businesses to borrow and not to use their own resources.

The higher interest rates and the competition of imported goods had considerable recessive effects on construction and manufacturing which were passed on to trade and services. The over-indebtedness caused serious liquidity problems which made intervention and the liquidation of eight financial bodies unavoidable.

On the other hand, the downward reaction of prices was slow and insignificant. The CPI rose slowly up to January 1982 and stabilized in the first half of the year. Wholesale prices, measured by the wholesale price index (WPI), recorded falls, but smaller ones than needed for the restoration of the balances. This was due to the rigidities of the Chilean economy itself and the time-lag in the operation of policies; the habituation of businessmen to inflation but not to deflation, which was why they did not behave as the authorities expected; and the difficulty of lowering production costs owing to: i) the impossibility of lower prices for imported inputs with the dollar at 39 pesos; ii) the increase in financial costs resulting from the rise in interest rates; iii) taxation which, being basically indirect, was proportional to other costs; and iv) the legal regulations which required the automatic adjustment of wages in step with past inflation. In August 1981, with the automatic adjustment in full flow, there was a general upward adjustment of wages and salaries, which did not begin to fall until May 1982.

The failure of the policy of automatic adjustment caused a considerable recession. Businesses opted for production cutbacks, with consequent effects on employment.

3. *The phase of anarchy (April 1982 to March 1983)*

The new economic team made some changes which, although important, did not alter the essential nature of the model. They included the following: i) devaluation in June 1982 followed by adoption of the mechanism of minidevaluations; partial exchange controls in September 1982; ii) abolition of the automatic adjustment of wages in step with inflation, leaving matters open to voluntary negotiation; iii) tax measures to prevent any reduction in tax revenue; increases in certain taxes such as vehicle licenses, land taxes, advance payment of the general supplementary tax, and a labour tax surcharge; and iv) intervention in the main banks and financial corporations to keep them in business; this also had an indirect effect on the bigger related businesses.

The economic results of these changes were as follows:

Although the dollar reached 72.39 pesos in December 1982, an increase of 85%, the government did not immediately institute exchange controls; this triggered speculation and the Central Bank lost part of its international reserves, which fell from US$3 775 million at the end of 1981 to US$2 578 million a year later, and to US$1 486 million in April 1983.

There was also a sharp drop in imports, a slight fall in exports and increased payment of interest on the foreign debt despite the lower international rates. The current account deficit which stood at US$2 382 million in 1983, was covered by a new inflow of capital (US$1 304 million) and by Central Bank resources.

The situation became unsupportable. The inflow of capital from abroad fell dramatically, and reserves were at critical levels; all this persuaded the government to seek rescheduling of the foreign debt while suspending repayments.

Other factors also contributed to this state of affairs. A profound economic recession: the gross domestic product fell 14.3%, with agriculture the least affected sector, declining only 3.3% despite everything. Industry fell by 21.6% and construction by 29%. On the demand side, private consumption declined 14.4% and investment 37.1%, producing an investment rate of 9.6% of gross domestic product.

Unemployment rose to 23.7% in September 1982, and to over 30% if the emergency programmes are included. Nominal wages continued to rise till April 1982, then began their decline.

Inflation broke out again as a result of the devaluations; the consumer price index rose 21.1% between May and December 1982, and the wholesale price index rose by 45.7%, while the nominal amount of money in the private sector fell 1.4%.

These results exacerbated the problems of income distribution and extreme poverty.

Public finances were in deficit for the first time in three years. Real fiscal expenditure remained constant, but tax revenue fell by 13.8%. The fiscal imbalance was 8.1% of expenditure.

4. *The programme agreed with the International Monetary Fund (IMF) (March 1983 to December 1986)*

A standby arrangement required as a condition of renegotiation of the debt was signed for the period 1983-1984. The Chilean and IMF authorities reached remarkably rapid agreement both on the diagnosis and on the remedy. In this agreement the government did not exploit the fact that most of the debt was private nor did it refuse to accept the use of mechanisms which treated the State as the new debtor.

The agreed programme covered a cutback of the fiscal deficit by restriction of public spending, reduction of the sector's size, trade liberalization, use of neutral instruments in lending, tariffs and the exchange rate, decontrol of prices, and wage restrictions. In fact the policies in force up to the crisis were maintained but with a more structured macroeconomic programme.

This policy has continued up to the present. The foreign debt was again rescheduled in 1985 and another agreement was reached with the IMF, with a contribution from the World Bank in the form of a structural adjustment loan.

The main goal of the strategy was to secure balance in the external sector and lower inflation. The devaluations and the tax drawback (10% of their value) favoured exports, while imports were controlled by the high exchange rate and restrictions on the growth of the GDP and the national income designed to maintain them at levels compatible with the supply of foreign exchange.

Small changes were made in tariffs policy; customs tariffs rose uniformly to 35% in September 1984 and then fell to 30% in February 1985 and 20% in July that year. Some differential tariffs were introduced in verified cases of dumping and protection measures were established for some products, several of them of agricultural origin.

Partial exchange controls were introduced, regulating the acquisition of foreign currency for previously authorized foreign payments, and the level of reserves at the end of 1982 was maintained in an effort not to incur arrears in foreign payments.

The fiscal policy sought to balance public finances and reduce the sector's size and, in conjunction with a tight monetary policy, output and income were held down at levels compatible with the anti-inflation targets. An attempt was also made to cut interest rates by means of a "level" suggested periodically by the Central Bank.

Several steps were taken to solve the problem of excessive internal debt: creation of a preferential dollar for foreign-currency debtors and the option of converting the debts into national currency on advantageous terms; rescheduling of national-currency debts, transforming them into long-term loans at subsidized interest rates; and special rescheduling for mortgagees and shippers.

Furthermore, the banks also received assistance in the form of purchase by the Central Bank of their matured portfolios and doubtful debts in exchange for notes payable from future surpluses; direct subsidies by means of interest rate differentials in the purchase and sale of notes; and, lastly, loans to prevent cessation of payment owing to illiquidity. These measures were the main reason for the expansion of lending and new issues.

At the same time cuts were made in the remuneration of public employees and the pensions paid by the social security system.

In contrast to the greater participation of the State through these interventions, steps were also taken to reprivatize the banks and main conglomerates. These consisted of subsidies for new owners, preferential dividends, interest-free loans, tax rebates, and the use of foreign-debt notes, among others.

The aim of the employment policy was to keep labour costs low, and the government therefore met part of the cost of social security benefits and introduced new emergency programmes.

5. *Economic results*

After its large drop in 1983 the gross domestic product recovered slowly but did not return to its pre-crisis levels. In 1985 it was still 7.1% below the 1981 level in absolute terms and 13.1% in per capita terms, at levels similar to those of 1968.

Unemployment took a considerable turn for the worse during the crisis, with open unemployment increasing from 420 400 to 923 900 between March 1981 and September 1982. The unemployment rate rose from 11 to 23.7% in the same period and, if the special jobs programmes are taken into account, unemployment amounted to 35% of the labour force. The situation began to improve in mid-1983, and in September 1986 open unemployment stood at 13.9%, or 19% if the emergency programmes are included. The causes of this improvement were the recovery of output, the large increase in informal low-productivity jobs and the maintenance of wages at low levels.

Wages increased up to May 1982 but then fell to their lowest level in mid-1985, showing a drop of 21.8%. Since then there has been a slow recovery, but without a return to the pre-crisis levels.

The scant data available on income distribution indicate a deterioration in the situation. Inflation accelerated as a result of the devaluations to rates of 27.3% in 1983, 19.9% in 1984, and 30.7% in 1985, when it began to slow down.

The balance of payments was restored to balance in 1982 owing to the fall in imports. Imports fell again in the following years, while the value of exports stood still. In order to meet the current account deficits it was necessary to resort to new foreign borrowing and use of reserves; this led to a larger outflow of resources in service payments. These payments amounted to 51% of the value of exports in 1982-1985. The result was that the foreign debt grew swiftly from US$11 207 million in 1980 to US$15 591 million in 1981 and US$20 842 million at the end of 1985.

IV

Agricultural policies during the crisis

1. *Price bands*

This was the most important change and it consisted of government intervention in certain products such as wheat, oil crops, beet and, to a lesser extent, milk and dairy products. In April 1982 it was decided that the Industria Azucarera Nacional S.A. (IANSA) (National Sugar Corporation) would begin to issue contracts for beet sowing for a period of four to five harvests with a view to absorbing labour. In April 1983 a minimum price was announced for wheat, guaranteed by specific tariffs if the import cost was below the stipulated price.

Price bands were set in the 1984/1985 season for wheat and oil crops; in March or April each year the price was announced for the period running from 1 November to 30 October of the next year.

A tariff surcharge was imposed on imported sugar in June 1984 but replaced by a price band in the 1985/1986 season.

Minimum reference prices were set for milk and dairy products and flour in September 1983, and customs surcharges were subsequently imposed on milk.

These measures had a great influence on the areas sown and the country's level of self-sufficiency. Between 1982/1983 and 1985/1986 the area of annual crops expanded from 872 647 to 1 138 770 ha (a 30.5% increase over 1981/1982). Wheat accounted for much of this expansion, with an increase of 58.5% in the area sown, together with oil crops and beet. The improved yields made large production increases possible.

These improvements were due to the devaluations, higher tariffs and price bands, which made exports more expensive and reduced the producers' risks.

Trade mark-ups showed a considerable drop, owing partly to the lower wages and the sector's reduced risks.

In the case of sugar, IANSA operated from 1982 to 1984 with no other protection than the devaluations and the general increase of tariffs. Oil crops, however, operated with bands of between 41 and 44% with no need for surcharges, for international prices remained high. Milk and dairy products required a surcharge to offset the exports subsidies introduced by the countries of the European Economic Community.

Self-sufficiency was almost achieved in the 1986/1987 grain and beet harvests; this worried the authorities, for surpluses could not be sold in the external market owing to its low prices. The reason for this was that the estimates for the price bands did not take into account the long-term trends of the products in the international market.

2. *Special credits for agriculture*

Despite the criterion of neutrality in credit policy, steps were taken to finance production (through the State Bank and IANSA in the specific case of beet), with the harvests, and not assets, as the only surety requirement. Warrants were also introduced with the product as surety as a means of stabilizing prices between harvests.

In addition, in November 1984 70% of the outstanding obligations of former smallholders of the Agrarian Reform Corporation (CORA) were forgiven and the remaining 30% made payable with adjustment, but without interest. The debts of the small producers served by INDAP were rescheduled with State Bank financing.

3. *The forestry policy*

A special forestry development programme was introduced at the end of 1982, together with other programmes to provide seasonal employment. The best monthly average was 15 584 workers in 1985, with a subsequent low of only 5 916 in 1986. The most important measure was the increase from 75 to 90% in the subsidy of the cost of forestation carried out by the private sector.

4. *Irrigation policy*

An eight-year programme was introduced in January 1986 to cover 75% of the costs of irrigation and drainage works and the necessary equipment, provided they did not exceed 12 000 Promotion Units (*Unidades de Fomento - UF*) (about US$192 000).

5. *Transfer of technology*

Mention must be made of the successful experiment with the Technology Transfer Groups Programme set up in 1982 by the Agricultural Research Institute (INIA).

V

Effects of the adjustment policies on the sector

1. *Output*

If 1981 is taken as the reference year, it can be seen that the sector has developed more favourably than the economy as a whole. While the overall gross domestic product fell 14.7% in 1983, the sectoral product fell only 5.7%. Its recovery was also faster, for in 1985 the sectoral GDP was 6.7% higher than in 1981, whereas the overall economy recorded a drop of 7.1%. Accordingly, the contribution of agriculture and forestry to the overall product rose from 7.5% in 1981 to 8.8% in 1986.

Crop performances had a decisive impact on this development. Their recovery was also due to the wide margin for substitution of food imports despite the low consumption resulting from the crisis. This is demonstrated clearly by the supply composition of the protected crops.

In contrast to this, the livestock items fell by 8.9% between 1981 and 1985, while vegetables made a slow recovery.

Fruit-farming is the activity to have benefitted most from the macroeconomic policies pursued since 1982. In this case the devaluations acted in concert with the fall in wage and financial costs. Since this activity reacts to economic stimulus with a time-lag, the figures must be adjusted; between 1974 and 1981 the growth rate of the area planted was 4.7%, rising to 6.8% between 1982 and 1985. The total area of fruit farms increased from 65 630 ha in 1973 to 116 650 ha in 1985.

Forestry activities also expanded rapidly up to 1980, and then fell sharply in 1981 and 1982 (26.6%), with a subsequent recovery to a 1985 level almost equal to that of 1980.

2. *Public expenditure*

Public expenditure has fallen sharply since before the restrictions imposed by the crisis, as can be seen from its real drop of 44% between 1970 and 1981. Public resources under this item fell even further in 1982; they began to recover in 1983, but by reason of the increase in service of the public debt made by INDAP. Leaving this factor out of account, the budget for the Ministry of Agriculture was 10% smaller in 1986 than in 1981.

3. *Profits and relative prices*

When the movement of the overall WPI is compared with the index of agricultural products, it can be seen that between 1979 and 1982 the WPI rose 63.3% and the agricultural index only 39.8%, indicating the deterioration in agriculture's terms of grade as a result of the trade liberalization and cheap imports. This trend was reversed in 1983 but things deteriorated again in 1984-1985, indicating that the better prices for wheat and oil crops did not extend to the rest of the sector. Similar conclusions can be drawn from analysis of CPI movements.

It can be concluded from this picture that drastic changes occurred in the structure of prices in favour of wheat, oil crops and beet.

With respect to export crops, the CPI rose 119.2% between 1981 and 1985 and the WPI 178%, while the official value of the dollar increased 312.5%, a situation which reflects the relative improvement in these activities.

4. *The trade balance*

Imports suffered a large decline. If all intermediate, consumer and farm goods and foodstuffs are taken into account, imports amounted to US$1 024 million in 1980 and US$250 million in 1985.

Exports are more sensitive to the impact of exogenous factors than to internal policy measures. Commodities showed an increase from US$283 million in 1980 to 452 million in 1985. This increase was due almost exclusively to fresh fruit. The value of foreign sales of agro-industrial products remained unchanged or fell, while the value of forestry derivatives, which are hard to absorb in the sector, was around US$224 million.

When total imports of farm and food items are compared with total exports of commodities, the balance shows a deficit of US$741 and US$515 million respectively in 1980 and 1981, but it later moved into the black, with a surplus of US$202 million.

5. *Employment and wages*

During 1981 and up to March 1982 employment in the farming sector grew faster than the national rate. There were large drops in employment in September 1982 and March and September 1983, consistent with what was happening in other economic activities. The subsequent recovery was slower than in the other sectors: the growth rate of jobs in agriculture was 2.4% between 1981 and 1986, as against 11.2% in other activities.

Nevertheless, the number of unemployed increased at a slower rate (6.7%) than in the rest of the country (45.2%) in the same period. This is connected with the different growth rates of the labour force: the national rate was 14.1%, while in farming and forestry the rate was only 2.7%.

No suitable index is available for an analysis of movements of farm wages. On the assumption that they generally keep step with the minimum legal wage, they will have fallen by 34.7% between 1982 and 1985.

VI

Future prospects

After the profound transformations caused by the shifts in relative prices between 1982 and 1987, the agricultural sector has began to operate at a more stable rhythm.

If current macroeconomic policies are maintained in the future, the sector's strength will depend on its exports capacity and the development of domestic demand. The most modern activities —fruit-growing and forestry— ought to expand rapidly as a result of the sizeable investments already made. Production of legumes and vegetables can be included in these activities.

On the other hand, the prospects for livestock and basic crops are not so rosy, for they depend on the development of internal consumption, and this will grow slowly owing to the poor income elasticity of its demand.

The main cause of the sector's instability is rooted in the peasant economy, where the possibilities of improvement depend on radical alteration of the policies used in the past decade.

CEPAL REVIEW No. 33

Ecuador: crisis and adjustment policies. Their effect on agriculture

*Germánico Salgado**

In the 1970s the production and export of oil caused enormous economic and social changes in Ecuador. The gross dometic product grew at rates of between 14 and 25%, and there were considerable increases in the formation of capital, in demand —especially in the public sector— and in imports. The first signs of a balance-of-payments problem appeared in 1975 and they reappeared with force in 1977, reaching two years later levels of external debt whose service took 65% of export earnings.

Agriculture underwent important changes in its production structure in that decade. There were sharp declines in output in the Sierra for domestic consumption and in traditional exports; rice production increased on the Coast; and the most significant change was in livestock, with a doubling of the area of grazing land.

The rise in the international interest rate at the beginning of the 1980s caused a large deficit in the balance of payments which was financed by further borrowing and depletion of international reserves. The first adjustment measures were devaluation and restriction of imports. The situation turned critical in 1983, the year of the catastrophic floods which caused a sharp drop in farm output. A new series of economic measures included devaluations and minidevaluations, higher interest rates and control of public spending. With the change of government in 1984, priority shifted to adjustment of the exchange rate and management of interest rates, while State controls and intervention were reduced.

The trends in agriculture were unclear between 1980 and 1985. Nevertheless, there was a definite recovery of the area under basic crops as a result of the policies introduced for that purpose, including in particular the credit policy. Industrial crops, in contrast, made only a moderate recovery, while export crops achieved a large increase as the result of the various incentives introduced. Livestock production increased at high rates but without any improvement in its average productivity levels.

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I

The 1970s: the oil shock

1. *The effects on the product and other economic variables*

The feature of the 1970s, which began with a period of sluggish exports —especially of bananas— and balance-of-payments problems, was the start of oil production in Eastern Ecuador and of oil exports. After the economic downturn which lasted until 1971, oil exports triggered a real explosion of economic activity: exports comfortably increased fivefold between 1970 and 1975, while the gross domestic product rose 14% in 1972 and over 25% in 1973. The expansion of public spending and the formation of capital, especially of public origin, transmitted to the economy the vigorous stimulus of the increased exports, causing a rapid rise in imports. In any event, the fierce acceleration of the growth rate was a phenomenon limited to the period 1972-1974; the rest of the decade was characterized more by accommodation or by delayed effects, but the repercussions of the second oil price rise still had a powerful impact towards the end of the decade. For the purposes of this analysis it is of particular interest to observe the influence of this rapid growth on the economy's internal and external stability.

The legacy of this period, which began paradoxically with an abundance of external resources, was an acute disequilibrium in the balance of payments. This did not originate in the expansion of imports —although they grew at almost the same rate as exports— for international reserves increased throughout the decade except in 1975; nor can it be said that there was a shortage of external resources. The disequilibrium stemmed from the increased service of the foreign debt which began to make itself felt in 1976-1978. The debt began to increase in about 1977 and by 1979 it was already very large; in 1979 the service amounted to 65% of export earnings.

The origins of the debt must be sought principally in public finances. From 1975, after the boom of the previous two years, the public deficit grew rapidly and was financed with external resources, causing steady expansion of the debt. By the end of the decade the economy was suffering from a shortage of domestic saving and external resources which was steadily growing worse.

The expansion caused by the oil exports also had an impact on the behaviour of the consumer price index, which achieved a growth rate of 23% in 1974, unprecedented since the index began to be recorded. Up till then Ecuador's economy had been characterized by prudent monetary management and low inflation. The stagnation of exports and the fiscal deficit which it experienced towards the end of the 1960s and in the early 1970s increased the inflation rate, which reached almost 10% in 1971 (partly as a result of the 1970 devaluation). The surge of oil exports in 1972 initially dampened the inflationary presssures, but they later came back strongly as a result of the remarkable inflow of foreign exchange. Demand pressures pushed inflation up to 23% in 1974, as already pointed out. The adoption of a policy designed to neutralize the effects of the exports boom, especially by means of restriction of internal credit, helped to reduce the inflation rate but it has remained in two figures since that time. The "foods and beverages" item in the consumer price index seems to have played a leading part in the intensification of inflationary pressures.

It was logical that a period of such rapid growth as the one described above should produce profound changes in the structure of the product by sector of activity. The growth rate of manufacturing industry between 1970 and 1975, which was 14% as an annual average, contrasted sharply with that of agriculture, which remained at the same 2.8% a year of the 1960s. Operations in the mining and petroleum sector naturally achieved a remarkable growth rate, and the construction and services sectors (trade, transport, public administration, etc.) recorded rates slightly below that of the total gross domestic product (9.4%). The importance of these developments can be appreciated from an analysis of the distribution of the economically active population (EAP) between the census years of 1974 and 1982. Industry created jobs for a large number of persons (59 000) in the period, while the agricultural EAP fell in absolute as well as relative terms, which was a symptom of the sector's lack of vigour in a period of strong growth in demand. It employed 47% of the EAP in 1974 but only 33.7% in 1982, reflecting a massive rural exodus which occurred in this period.

Services increased their share of the EAP from 36 to 50%, with almost zero growth of the product per person employed, an indication that these sectors were expanding on the basis of underemployment. In agriculture too the product per person employed showed little increase; in industry, however, it recorded a considerable rise.

The trends in oil exports were described earlier; their share in total exports was so great that it is easy to forget what happened to other exports. Apart from their enormous overall increase (from US$190 million in 1970 to US$2 140 million in 1979) exports underwent considerable diversification not only as a result of the oil boom but also because of the increased exports of processed cocoa and coffee products and of fisheries and fish-farming products, and traditional farm exports also increased fairly regularly.

These years really saw the beginning of the export of manufactured goods, some of them relatively complex (such as articles of the so-called white line), one of the main markets for which was the Andean Group which had come into being in 1970. However, for various reasons a large part of this diversification proved unstable (processed cocoa products, goods for the Andean Group, etc.), and therefore decisive importance was retained by traditional exports, in the markets for which, despite the relative stability of those years, conditions persisted which made them too potentially unstable. In any event, this was a relatively favourable period for Ecuador's traditional exports.

Imports also increased rapidly from 1970 to 1979, but at a somewhat slower rate than exports (22 and 30% a year respectively). This growth was due in part to the effort to reduce the cost of imports of capital and intermediate goods and certain consumer goods in order to check inflation and stimulate industrialization. External purchases of these items increased in absolute and relative terms but risked making the balance of payments less flexible; industry showed a strong increase in its dependence on imported inputs, which were very difficult to substitute.

Imports of agricultural products comfortably tripled in the period (1978-1979 average against 1970-1971 average), although they fell in relative terms, indicating a shift in demand, especially in the case of foodstuffs, towards products which were in short supply in the country and also difficult to substitute; this also increased the vulnerability of the balance of payments.

A period of such rapid income growth should have had visible effects on the social structure, although this was not an explicit goal of the policy actions. The structures of privilege and inequality certainly remained in place, but major changes did occur and they must be emphasized. As a result of the slow implementation of measures introduced in earlier years, such as the agrarian reform laws, and as a consequence of the "modernization" of the economy, which increased sharply in the 1970s, there was an increase in the numbers of people in the middle levels of income distribution in both urban and rural areas. The agrarian reform made a contribution to this development in rural areas, for apart from the undesirable consequence of a larger number of small farms, it produced a situation in which medium-sized farming units (10 to 100 hectares) became the dominant operation in Ecuador's countryside. In urban areas the rapid growth of jobs in activities of relatively high productivity such as industry, construction and some services lifted a large part of the population to the intermediate levels of income distribution. The social groups at the extremes of the income scale ended the decade with even more pronounced differences in living standards than before. The situation of the deprived did not improve and very probably worsened, although at least their relative weight in the urban economy did not increase. Something similar may have happened in the countryside among owners of smallholdings of under one hectare and landless workers, although their numbers were reduced by the rural exodus.

2. *The macroeconomic policies and their results*

According to Chhiber and Wilton, macroeconomic policies are "policies which play a predominant role in determining the intersectoral allocation of resources".[1] In this sense, the exchange-rate policy, with fixed rates and increasing undervaluation of the rate throughout the period, was probably the most influential factor in creating a bias in the allocation of resources. This policy discriminated against the expansion and diversification of exports and substitution of imports, although in the latter case its impact was offset to an undetermined but large extent by the combination of tariff policies and the benefits of development legislation.

In the case of non-traditional exports as well (both manufactures and farm products) some compensation was provided by the *Certificado de Abono Tributario* (CAT) (Tax Payment Certificate), although it was insufficient, especially in the case of farm products, owing to the undervaluation of the exchange rate. In both cases, exports were subsidized by this certificate but it provided a larger subsidy for industrial goods, which also enjoyed tax incentives under the development legislation. The traditional export products (coffee, cocoa, and bananas) suffered the greatest adverse discrimination: they did not receive the CAT and, moreover, coffee and cocoa were subject to export taxes. The discrimination against these products was clear, but this did not prevent export operations from being often profitable.

The effective total protection of imports substitution products was very high, and the output of the food industry was also protected. According to the studies by Parot,[2] several subprogrammes of the food industry were among the industries which he classifies as "protected" or "superprotected", but there are others which he considers "doubtful" in this sense, such as milling, which made increasing use of an imported raw material (wheat) in the prior licensing system. In these and other cases (barley for the brewing industry, oats) the shortages which seem to have existed and which hurt

[1] Ajay Chhiber and John Wilton, "Macroeconomic policies and agricultural performance in developing countries", *Finance and Development*, vol. 23, No. 3, International Monetary Fund and World Bank, September 1986, p. 6.

[2] Rodrigo Parot, *Elementos técnicos para una estructuración de incentivos industriales*, Centre for Latin American Development Studies (CLADS), XV, vol. 1. *Estructura de Incentivos Industriales de Ecuador, 1981*, February 1985 (photocopy).

primary production may have been due to a mistaken prices and imports policy.

The effects of the other macroeconomic policies —interest rate, credit, prices and wages— varied from case to case; the prices policy seems on the whole to have favoured agricultural production, by commission or omission, except in the case of wheat, barley and milk. The policy of low and negative rates pursued almost throughout the decade benefitted capital-intensive activities most of all and therefore industry and certain forms of farm modernization, some of which may have been inconvenient. Lastly, the policy of lower and less controlled farm wages did not encourage the sector's development either and certainly helped to speed up the rural exodus.

3. *Trends in agricultural production 1970-1979*

In view of what has been said in previous sections, it is worth emphasizing certain features of agricultural production in the 1970s.

a) The production of goods for domestic consumption and of traditional export goods rose slowly and held back the sector's overall growth. The annual growth rate of the agricultural gross domestic product in the 1970s (2.8%) was virtually the same as in the previous decade; moreover, the sector's contribution to the gross domestic product fell from 25% in 1970 to 14.3% in 1979. The rest of agricultural production performed vigorously.

b) Agro-industry acquired decisive importance in exports diversification. However, its expansion increased the dependence on external supplies as its demand for raw materials contributed to the rapid growth of imports.

c) The substitution of imports of agro-industrial goods, which advanced strongly in the decade, seems to have reached a standstill. There was thus a slowdown in the growth rate of external purchases of non-food raw materials and a halt to the increase of the domestic output of farm raw materials.

d) Livestock production and the production and export of forestry and fisheries products, for which there is a vigorous demand, recorded rapid growth.

As can be seen, the relative importance of crops for domesic consumption declined and there was a considerable increase in the importance of livestock production.

There was thus an enormous cutback in the area sown with temperate crops for domestic consumption (soft maize; wheat, barley, potatoes) and in their output, except in the case of potatoes which showed a slight increase. These crops, together with rice, are the main items in the diet of low- and middle-income groups. Per hectare yields remained unchanged, except for wheat which showed a slight increase in the last years of the 1970s, soft maize which fell slightly, and barley and especially rice, yeilds of which increased.

With respect to the sharp rise in rice yields, according to data of the Inter-American Development Bank,[3] 53% of the area was sown with high-yield varieties. This was the most noticeable effect of the green revolution in Ecuador.

On the other hand, the area under traditional export crops such as cocoa and bananas declined; although the contraction was large in the case of bananas, it seems to have been offset by the introduction of newer varieties with higher yields. Coffee and cocoa yields remained unchanged, although coffee showed a slight increase in its area sown.

This situation contrasts with that of other items of farm production which experienced strong growth. This was true of hard maize, soybeans and animal feeds. Output of the first two items showed the greatest growth between 1970 and 1979: output of hard maize rose from 102 000 to 182 000 metric tons, and soybeans from 600 to 30 000 metric tons. The area under feed crops doubled (208%) and continued to expand at a fast rate up to 1985 when it stood at 4.5 million hectares. This expansion took place mainly on the Coast and in the East, but also in the Sierra, as a result of the increased production of milk and meat.

[3] Inter-American Development Bank, *Economic and social progress in Latin America. 1986 Report.* Washington, D.C., IDB, 1986, pp. 110-111.

The rapid growth of these items indicated a change in the production structure, with the emphasis now on production of livestock and poultry and the feeds required in these activities. The decade's strongest growth was in poultry production, which achieved annual averages of 18.1% for birds, 17.6% for meat, and 13% for eggs. The annual average output of beef and milk was slightly lower at 7.8% and 2.08% respectively.

The apparent consumption of grains clearly fell slightly in 1974-1980, while the demand for meat, eggs, milk, fish and shellfish increased in the same period. But this increased demand was not the only cause of the shift in production; the increase in the number of small farms and the predominance of medium-sized properties contributed to the reduction of the area under wheat and barley and their replacement by other crops, many of which must have been subsistence crops and do not even appear in the statistics. The State's prices and subsidies policy also made a contribution, especially in the case of wheat. This latter factor may have been the most important, for although the price policy was generally favourable to foodstuff production, there were instances of discrimination, such as the low prices for some products (wheat, maize, rice), the very profound changes in farmers' prices and costs, as well as large regional price differences and erratic price movements. It is also useful to examine the influence of public finances and development credit on the progress of the agricultural sector in the decade in question. The increased resources resulting from oil exports eased the pressure on agriculture as a supplier of foreign exchange and source of State revenue. Thus exports, which furnished 15.6% of total State revenue in 1973, saw their contribution fall to 5.5% in 1977. The taxes on farm exports also had their relative importance in tax revenue fall from 13.5% in 1965 to 8.6% on average in 1975-1977. At the end of the decade the only export taxes still in force were on coffee and cocoa, and the sector's contribution to tax revenue was somewhat lower than that of other economic activities.

On the other hand, State expenditure clearly favoured the farming sector, but as most of the resources went to cover bureaucratic costs, the effectiveness of the results must be questioned. Between 1970 and 1978 the number of civil servants working in public services in agriculture increased by 112.5%.

Development credit, another factor favourable to farming, was channelled through the National Development Bank. It grew 3.5 times in real terms between 1973 and 1974; it remained at a high level until 1976; in 1977-1983 it fell, and from 1984 to 1986 it stood at the average values of the 1970s.

The main period of credit expansion was 1973 to 1976 and it was concentrated on certain items which were virtually the key to this expansion. The crops which seemed to receive clear priority were rice and hard maize, especially in 1976, and cotton, especially in 1975. Lending for animal feeds and livestock showed a more moderate increase but still a sizeable one in terms of the amount involved, rising from 454 million sucres in 1972 to 1 104 million in 1975.

The increase in these three crops between 1972 and 1973 was several times greater than the amounts of credit granted previously. When lending for feeds and livestock is included, a close relationship can be seen between the loans granted and the increase in area and output.

Between 1972 and 1976 there was a sizeable increase in lending for almost all home-consumption products, followed by a widespread drop, a trend not reversed until 1984 and 1985.

With respect to the recipients of the loans, the access of small producers improved but overall the big land-holders remained the main beneficiaries. According to Commander and Peek,[4] only 4.5% of the families of farmers with five hectares of land or less had access to credit. These data presumably refer to the Sierra, but the situation was perhaps somewhat better for the small farmer in the country at large, as can be seen from the development of rice co-operatives, which had privileged access to credit. The importance attached to the small farmer led to the establishment of the Fund for the Development of Rural Areas and Marginal Sectors (FODERUMA), which makes small loans and furnishes technical assistance.

[4] Commander and Peek, "Exportaciones petroleras, reforma agraria y el proceso laboral rural: la Sierra ecuatoriana en los años setenta", in Central Bank of Ecuador, *Revistas*, No. 37, July 1986, p. 11.

The fact that the National Development Bank is governed by banking criteria explains why it should have given priority to the "most capitalized" peasants, but in any event this is not inconsistent with the purpose of public expenditure and development credit, which is to favour the most needy sector. Economic policy from 1973 to 1976 was clearly biased against the agricultural sector and it discriminated in particular against the peasant and the small producer, but development credit seems to have been something of an exception. However, for all these ambiguities, an overall assessment shows that despite the obstacles and setbacks, these were the years of greatest transformation of Ecuador's agricultural structure.

II

The 1980s: financial crisis and adjustment policies

1. *Growth trends and problems*

After the runaway increase in the service of the foreign debt in 1979, financial pressures built up rapidly to a climax in 1982 and 1983. There was a large drop in international reserves in 1981, with a flight of capital in anticipation of a devaluation. The credit supply fell to US$360 million in 1982 and available international reserves fell to a level barely above the equivalent of one month's exports.

The adjustment policies then began to take real effect and they included a devaluation, the first since 1970. These policies, which are considered below, had a dire effect on imports in 1983, for they fell 35%. That year marked the most serious point of the crisis, for apart from the impact of the restrictive adjustment measures, the country was hit by serious floods in late 1982 and in 1983. In any event, in 1981 and 1982 more than 70% of export earnings had to go on debt service; in 1982 this figure amounted to virtually half the country's gross domestic product in that year. This situation had a profound effect on the whole national economy and especially on public sector finances, which were what had caused the debt in the first place. While credit was available from 1979 to 1982 the public sector managed with apparent ease to meet its deficits. In 1982 the contribution of external financing, which was already very low, fell below that of internal financing. External financing was negative from 1983, so that the authorities were compelled to generate a surplus in the public sector by recourse to measures which boosted current revenue (ranging from increases in gasoline prices to higher taxes on commercial transactions) and produced an abrupt cut in expenditure.

The situation in 1983 was exacerbated even further by the floods. The transport infrastructure was seriously affected on the Coast and the crop losses caused widespread shortages. This was in addition to other serious damage, and the total losses were estimated at US$640 million. This was the main cause of the drop in the gross domestic product in 1983 and the sharp increase in the inflation rate.

For this reason and also because of the financial pressures, the total gross domestic product fell 2.8% in 1983 to the lowest point in the downward trajectory which had begun in 1981. Increased consumption sustained the economy in 1980, but in 1981 the deterioration set in with the drop in investment. The trend worsened in 1982 and was accompanied by the balance-of-payments problems and loss of reserves described above. No macroeconomic variable recorded an increase in 1983, and the serious drop in the gross domestic product represented a decline of 5.6% in the per capita product.

The years 1984 and 1985 were difficult times of adjustment and slow recovery. The 4% growth in gross domestic product in 1984 was due to the expansion of exports. The adjustment policies were less stringent in 1985; public investment and consumption rose and the gross domestic product grew 3.8%. The 1986 and 1987 results must have reflected the effects of the fall in oil prices in 1986 and the suspension of oil exports following the 1987 earthquake. This latter year saw a further drop in the gross domestic product, and a generally difficult situation prevailed.

2. *The adjustment policies*

In 1980 the short-term policies were aimed at stabilization and not adjustment, with a view to easing the inflationary pressures generated by the increased consumption. Emphasis was given to the fiscal issue in 1981 and an attempt was made to get to grips with the problem of the growing fiscal deficit (by raising gasoline prices, for example). But the adjustment policies really began in 1982 following the worsening of the balance-of-payments problems caused by the foreign debt. Although the rescheduling of the debt clearly influenced the adjustment policies, it is not thought necessary to describe it in detail. The private external debt was renegotiated six times between 1982 and December 1984; the public external debt with commercial banks was renegotiated three times between 1983 and 1985, and in September 1983 the arrangement for refinancing of the debt with official lenders was agreed with the Club of Paris.

Three stages should be distinguished in the adjustment period. In the first (1982 to early 1983) the measures adopted were not subject to external conditions. In the second stage (1983 to August 1984) the International Monetary Fund began to have a decisive influence in the negotiations. In the third stage, from September 1984 up to the present, the policy has been based on neoliberal thinking.

a) *The 1982 adjustment*

In the first month of the year the basic aim of the measures was to adjust the interest and exchange rates. In January the legal interest rate rose from 12 to 15% and the rate for savings from 8 to 12%. The exchange-rate system was altered in March and two markets were created: the free (of intervention) market of the Central Bank with an exchange rate of 30 sucres to the dollar and resources provided from private exports; and the official market with 25 sucres to the dollar and resources provided by oil. Both markets operated with a list of exchange rates for the determination of priorities.

The continued worsening of the balance of payments forced a second devaluation in May. Then the new exchange rate was 33 sucres to the dollar for all goods transactions and for most services transactions in the official market. In the free market the dollar was fixed at 35 sucres and despite the devaluation of 32%, the real exchange rate of 38.10 sucres calculated by the Central Bank at that time was not reached.

A number of steps were taken in continuation of the policy of discouraging exports; for example: prohibition of imports of luxury goods and restriction of purchases of other goods such as vehicles, for the import of which swap agreements were required for Ecuadorian exports. In order to make imports more expensive and difficult, they had to be paid for with loans, and a system of advance deposits proportional to the amount of the loan was introduced, together with changes in the lists of imports. Imports on List II were banned in November and imports of capital and transport goods were suspended for more than a year. These restrictions and the weakening of demand were the reasons for the drop in imports in 1983.

Exports were stimulated at the same time. In addition to the Tax Payment Certificate (CAT), they were encouraged by the devaluations and the swap mechanism, the establishment of minimum domestic prices for export goods in order to benefit producers, and the greater credit facilities and the amounts of the loans.

Credit was also used to maintain the level of activity. With this in view, a fund (of 2 000 million sucres) was established for exports promotion, together with a Value Regulation Fund for private investment, with long-term credit; the Central Bank's system of financial funds was simplified into separate funds (agricultural, small industry and handicrafts, tourism, fisheries, etc.), and a special fund was established for construction.

In order to control inflation, lending by the Central Bank was restricted and the banking reserves requirement was raised by 1% to 23%; and open-market operations were stepped up, improving the profitability of the Stabilization Bonds. However, inflation reached 24.4% in 1982 under the impact of the devaluation, the second gasoline price rise, and the higher wheat prices resulting from suspension of the imports subsidy.

These last two measures were also among the economic policy tools used to reduce the fiscal deficit, one of the priority goals. The attainment of this goal was also facilitated by the revaluation of the currency and the considerable increase in the State's share in petroleum sales. As a result of the policy carried out in 1982, the public sector deficit fell to below the 1981 and 1980 levels (although the State budget deficit persisted in real terms).

b) *The adjustment between 1983 and August 1984*

Three measures constituted the cornerstone of the adjustment policy carried out in this period: the devaluation and the adoption of the system of programmed minidevaluations; the higher interest rates; and the Law on Economic Regulation and Control of Public Expenditure.

A further devaluation could not be postponed, for inflation reached 52.2% in 1983 (December-to-December average); the exchange rate was set at 42 sucres to the dollar, with minidevaluations of 0.04 centavos per working day. The devaluation was 27%, but it did not reach the real value, which the Central Bank studies estimated at roughtly 50 sucres to the dollar; the minidevaluations were intended to prevent the slippage growing any longer.

The keynote of these measures was flexibility. The shift was made from a fixed exchange-rate system to one of minidevaluations, and a dual foreign-exchange market was introduced, together with various lists of rates. In June 1983 the minidevaluations were fixed at 0.05 centavos per calendar day; in February 1984 the lists of exchange rates assigned to the two markets were altered in order to favour non-oil exports and make some imports more expensive.

Higher interest rates, another pillar of the adjustment policy in this second stage, were introduced in conjunction with the system of minidevaluations in order to prevent speculation. The goal was to prevent the flight of capital rather than to stimulate national saving. The increases came into effect in March and September 1983 and June 1984; the maximum level reached by the commercial rate was 21% in 1984, below the inflation rate of 25% in that year.

The Law on Economic Regulation and Control of Public Expenditure of March 1983 was part of the policy of fiscal austerity and increased revenue. This law extended the functions of the Central Bank and the Office of the Superintendent of Banks; some items of public spending were reduced or suspended (on furniture, vehicles, transport, etc.) and the pay rises of public employees were suspended; tariff surcharges ranging from 5 to 15% were re-established; fuel prices which had not been adjusted in 1982 were raised (diesel oil, fuel oil and kerosene). With the creation of the National Emergency Fund in June 1983, all tariff exemptions were cut by 35%; this reduced for the first time some of the incentives available under the development legislation.

These measures had the result of eliminating the public sector deficit for the first time since 1974, despite the expendture caused by the floods; the surplus of 2 408 million sucres almost covered the negative external financing of 2 993 million sucres; and although the State budget deficit persisted it was considerably reduced.

The serious imbalance in the balance of payments called for new import controls; in March 1983 some items were transferred from List I-b to List II; imports of other goods were suspended and the many prohibitions remained in force. When the situation improved in February 1984, the suspensions or prohibitions were lifted from 75% of the imports which had previously been subject to this kind of control.

Many measures were also introduced to stimulate exports and economic activity. In September 1983 10% of the foreign-currency earnings of traditional exports was transferred to the free market (except for petroleum); in March that year non-traditional exports were given access to financing through Development

Bonds; in May the Central Bank opened a line of credit for fisheries; and in August comprehensive export permits were introduced to facilitate foreign sales of perishable goods such as flowers and fruit.

Selective action was also taken to encourage economic activity and help businesses affected by the crisis. As already stated, the development bonds arrangement was extended; the Rural Electrification Fund was established in April 1983; the National Emergency Fund and the Irrigation and Drainage Fund were established in June; and that same month saw the promulgation of the Law on Agricultural Roads Development and Manpower Promotion, in the implementation of which use was made of part of the funds accruing from the increase in oil earnings; in June a special line of financing was opened for the Sistema Mutualista (Mutual Aid System); in September the Central Bank was authorized to discount or rediscount the loans of financial bodies which were in difficulties; and 1984 saw the establishment of the Business Capitalization Fund (February) and the Forestation and Reforestation Fund (August).

Lending by the National Development Bank increased by 30% between 1982 and 1983 and lending for food crops rose by 45%.

c) *The adjustment from September 1984 to 1986*

The change of government brought a gradual redirection of policy towards changes of a neoliberal kind. The adjustment policy gave first priority to the exchange system and to management of the interest rate as a means of overcoming the savings deficit in support of the exchange policy. Furthermore, clear preference was given to market mechanisms and the goal of reducing direct and selective controls in the management of the economy.

Within the system of priorities of the adjustment policy, attention was also given to public finances, including the implementation of new development programmes and the control of inflation.

The debt was rescheduled in December 1985, but the fall in the price of oil in 1986 and the suspension of oil exports in 1987 as a result of the pipeline damage caused by the earthquake made a further rescheduling necessary.

The measures relating to the exchange system were introduced when the new government took over in September 1984. The system of minidevaluations was abolished and an exchange rate of 95 sucres to the dollar was established for the free market of the Central Bank to which all transactions were assigned, except for oil exports and imports on the Special List, for which the exchange rate was 66.50 sucres to the dollar. With respect to imports, the liberalization process was completed with the removal of the suspensions or prohibitions on the remaining 25% of the goods subject to these control measures.

A series of transfers to the free market of the Central Bank was started in March 1985 in an effort to unify the exchange rate at a much higher level; almost all transactions had been transferred by November that year. The formal devaluation of the exchange rate took place shortly afterwards. The average exchange rate for exports rose (32%) from 68.29 to 89.62 sucres to the dollar and for imports (29%) from 62.79 to 93.51 sucres to the dollar. The average exchange rate was thus brought roughly into line with the real rate. The dollar stood at about 123 sucres in the free market, with an upward trend.

This unification of the markets seems to have been carried out solely to achieve a further devaluation of the currency. The dual market system was restored in January 1986, with an official exchange rate maintained at 95 sucres to the dollar buying and 96.50 sucres to the dollar selling; in the free market the exchange rate was 110 sucres to the dollar.

The official exchange rate was used only for accounting purposes, for almost all exports were traded in the controlled market and importers acquired foreign currency in the free market (between 132 and 136.40 sucres to the dollar). A few exports were traded in the "private" free market (with foreign exchange provided by exports of rice and maize), where the dollar fluctuated around 160 sucres.

A number of liberalization measures were also introduced. For example, the list of producers requiring prior licences was reduced in February 1986 and permission was also given for imports of vehicles, which had been banned or subject to quotas since the 1970s. As a result of the consequent increase in imports, in March that year the trade balance showed a deficit of US$32 million.

The direct controls had gradually been lifted, with a view to ensuring basic regulation by means of the exchange rate. Apart from the requirement of advance deposit and the export subsidies, devaluation was the main means of tackling the balance-of-payments problem.

In view of the drop in the price of oil, a floating system was established in August 1986 for the exchange rate and interest rates; this was really what had been intended from the beginning. A dual market system was established: one for private transactions called free or private because shifts in the exchange rate were determined by the law of supply and demand; and an official market to underpin State expenditure with foreign exchange provided by oil exports. When this measure was adopted, the dollar fell to 140 sucres in the free market, entailing a sizeable devaluation for exports (27 to 30%). The official exchange rate followed the floating rate, so that in practice a single exchange rate was established. The rate rose after March 1987, moving above 160 sucres to the dollar in April.

The aim was to stimulate exports by removing discriminatory measures and speeding up procedures. The reduction of the protection of domestic production was evident, and this was quite inconsistent with the typical neoliberal models.

As already pointed out, interest rates were another essential factor in the adjustment policy. Commercial interest rates rose from 21 to 23% in December 1984; the interest rates for savings rose to 20%; and the rate for financial paper to 25%. The "special" Accumulation Vouchers were introduced at the same time, with a minimum amount of one million sucres, a term of at least 90 days and floating interest rates tied to the market; these rates varied from 24 to 36 or 37%. By the end of 1985 34 000 million sucres had been taken in, i.e., a quarter of the money supply. However, the credit based on these resources was of little interest for production activities owing to its high cost.

The government's actions did not achieve such concrete results as in other areas. For example, owing to administrative omission, the control of consumer prices ceased, although it was something which the government wanted. Furthermore, although steps had been taken to promote foreign investment, such as the abolition of most of the conditions introduced in Decision 24 of the Cartagena Agreement and the agreement with the Overseas Private Investment Corporation, the results were not satisfactory. The benefits provided under the industrial development legislation were also limited, but at the same time the government introduced other laws with similar features (handicrafts and small-scale industry, agro-industry). Nothing concrete happened with respect to privatization, except in agricultural marketing.

In contrast, although this was not among its priorities, the government had to attend to the financial consolidation of the State. With this in view, fuel prices were increased in December 1984 and March 1987; the tax on commercial transactions was raised from 6 to 10%; and a number of indirect taxes were introduced or increased.

Despite the enormous increase in current revenue and transfers (83% over 1984 in current sucres), spending under the State budget increased so much that the deficit rose by 58% over the previous year. The result seems to have been the reappearance of some of the conditions which led to the heavy borrowing of the late 1970s. In the present circumstances the acquisition of new loans would mean an even greater deterioration in the growth rate or a resurgence of inflation.

3. *The main effects of the adjustment policies on the sector's development and other aspects of the economy*

Tariffs —the traditional protectionist tool— remained basically unchanged during the 1982-1984 period of the adjustment; they were not altered until the end of 1986, with a slight reduction of the protection in both nominal and real terms. The effect of other instruments (devaluations and para-tariff measures in all their variety) from 1981 to 1984 increased the nominal protection but without discriminating against any particular sectors. The policy goal in this emergency period was to secure a radical shift in the ratio of internal to external prices and to cut imports sharply. When the subsequent softening of the para-tariff measures is taken into account, the system tended to be somewhat less protected than before and more favourable to exports. It was more favourable to the agricultural sector than the resource allocation machinery of the 1970s and early 1980s. The system had a generally restrictive effect on imports in 1984, a factor which lost much of its impact from 1986 as a result of the measures and policies adopted in that year.

The crisis and the adjustment produced considerable changes in the sectoral growth trends of the past 20 or 30 years. The seriousness of the situation can be seen in the lower growth of all activities; the farming sector was among those which fared best, with an average annual growth rate of 2% in its gross domestic product between 1979 and 1985. Industry contracted for three years in succession from 1983 to 1985 and this weakness has lasted to the present; construction fell sharply in 1983 but began to recover in 1985.

The agricultural sector's growth was due first to livestock production and then to fisheries and forestry. Output of traditional exports fell in 1983 and rose slowly in the next two years. Domestic consumer goods and farm raw materials fell by a similar amount in 1983 and did not recover subsequently. The situation was certainly not favourable to these two subsectors, and the basic cause lay in the disasters of 1983.

The crisis also caused a significant retreat from the diversification achieved in Ecuador's exports in the 1970s. The total value of these exports increased at an average of 4.3% between 1979 and 1985, a rate which can be described as fairly satisfactory. But it masked the weakness of non-oil exports, which fell in comparison with 1979.

The main cause of this decline was the sharp drop in exports of industrial goods, both foods and non-foods. Most remarkable in the case of food products was the drop in foreign sales of processed cocoa products; several non-food export lines which were of special interest by virtue of being important items in trade with the Andean Group came virtually to a halt.

Accordingly, the only non-oil items to show any strength were a small group of non-traditional commodities, the most important of which were prawns, exports of which quadrupled between 1978 and 1985.

In any event, there are marked differences between the present exports structure and that of the end of the 1970s, and exports have gloomy future prospects in view of the predominance of sales of petroleum and traditional products, which have unstable and weak markets.

Imports were one of the variables most affected by the adjustment policies. In 1983 they fell 41% with respect to 1982, and recovered slowly in 1984 and 1986. The import figures show how the adjustment affected the different activities: in the depths of the crisis there was a sharp drop in imports of capital goods for industry, transport and construction. Overseas purchases of raw materials for industry grew much more slowly than in the past and with extreme fluctuations from year to year. In agriculture the import of direct-consumption food products fell regularly from 1979 but this was the only agricultural item to behave in this way; the others (capital goods, agricultural raw materials for industry, agricultural inputs) rose steadily, except at difficult moments such as 1983. In this case farming seemed to predominate in the composition of imports as well, at the expense of other sectors such as industry. The increased proportion of farm imports, apart from reflecting greater external dependence, is an indication that this activity was less affected than others by the crisis and the adjustment.

With respect to price trends, the main measures of the adjustment policies (devaluations, higher prices for gasoline and other goods and services, higher interest rates, etc.) had an inflationary effect which was reflected in the steady rise of the consumer price index from 1980. It rose 14.8% in that year; the rate was 24.4% in 1982, and in 1983, with the shortages caused by the floods, it rose to 52.5%. Inflation was checked in the last month of that year and reduced to 25.1% in 1984; from then until 1986 it remained more or less at that level.

The faster inflation and the adjustment policies themselves caused real wages to fall from their 1980 level following the doubling of the minimum wage decreed in that year. According to an approximate calculation based on the minimum wages, it is estimated that real wages in 1986 were equal to 77.5% of their 1980 level.

Unfortunately there is little information about the effects on employment and income distribution. The signs point to a profound deterioration since the last years of the 1970s. The inequalities also seem to have worsened. According to research carried out in rural areas, the real average income of peasants was lower in 1981 than in 1970 and open unemployment increased 65%. Other estimates of open unemployment and underemployment indicate similar conclusions about this deterioration.

4. *The agricultural sector in the 1980s and the adjustment policies*

Despite the large volume of resources received by the country during the oil boom, the rural sector still has difficulties which are really a reflection of structural problems in the area. First among them is the underemployment which is thought to affect more than 50% of the country's economically active population; this problem has proved impossible to alleviate.

As stated earlier, the government's spending, credit, development and other policies in the 1970s were intended to favour the sector, but the most important macroeconomic instruments, such as tariffs for example, were biased towards urban activities. A change seems to have been made in the 1980s with the aim of removing this bias and introducing a favourable pattern, especially for exports of commodities. In contrast, the situation of farm production for domestic consumption is more ambiguous, for price policies and other tools seem to favour it, while the contraction of consumer demand and other elements of the adjustment policy have affected it adversely.

The difficulties can be seen more clearly in the light of the priorities of the adjustment policy, for the aim is to encourage a "modern agriculture with medium-sized and large farms".

The agrarian reform and integrated rural development were still being implemented at the beginning of the 1980s, but in the past three years the reform has almost come to a halt and there has been a considerable reduction of activities in the rural development programme, which promotes mainly the modern sector producing for export.

a) *Situation and trends in agricultural production 1980-1985*

A summary now follows of the main features of agricultural production in the period in question. In the farming subsector the production of traditional export crops (bananas, coffee and cocoa) underwent a transformation between 1980 and 1983, especially as a result of the floods, with its growth rate falling from 8.3 to -35.4%. The heading "other farm products", which includes products of direct domestic consumption and agro-industrial products, also fell sharply in those two years and in 1985.

Output remained stable in the livestock subsector in 1980-1985 except in 1983. The heading "hunting and fishing" recorded spectacular growth rates, owing mainly to the development of prawn farming.

The destruction caused by the floods made 1983 a completely abnormal year, and all items recorded negative growth rates.

Some 950 000 persons, or 11.8% of Ecuador's population, were directly or indirectly affected by this disaster, losing their homes, harvests, or subsistence incomes. According to CONADE,[5] between 12 and 15% of the country's area was flooded. There was also a great scarcity of commodities which made itself sharply felt in supply difficulties, speculation and hoarding. Export output fell sharply and there were widespread and serious difficulties in the marketing of farm production.

With respect to trends in agricultural output, the expansion of the area under basic food crops, which reached 6.9% (equivalent to 35 000 hectares) in 1980-1985, may indicate a reversal of the general trend of 1970-1985. The small recovery brought the total area to 502 000 hectares in 1980, considerably below the 795 000 hectares of 1970. Although productivity improved, it was still lower than that of farm products for industry and export or that of other Latin American countries.

Lending by the National Development Bank for food production increased at an annual rate of 8.9% between 1979 and 1985, which was second only to lending for livestock and animal feeds production.

There is clearly greater awareness of the need to reduce the external dependence for food supplies and that one of the solutions to the international crisis is the development of the

[5] CONADE, *Ecuador y lineamientos para una estrategia para el desarrollo*, July 1984 (mimeograph).

agricultural sector so as to satisfy the requirements of direct consumption, industrial consumption and exports.

The increase in the area used for the production of industrial raw materials in 1980-1985, was 5 000 hectares, considerably below the increase of 15 000 hectares in the previous period.

The marked preference in agricultural policies for increased exports is the reason for the rise of 150 000 hectares in the cultivated area in 1985, especially for coffee, in contrast to increases of 30 000 hectares in 1980 and 700 hectares on average in the 1970s.

Owing to limitations in the external market or in domestic industrial use, the area for "other farm products" (figs, tea, pyrethrum, tobacco, agave and other less important items) declined by almost 10 000 hectares, in contrast to an expansion by 70 000 hectares in the previous decade.

The area under crops showed a decline in the 1970s (-64 000 hectares); in the first five years of the 1980s, however, it increased (200 000 hectares) owing mainly to export crops, especially coffee.

The increase in grazing land, which reached 83 000 hectares a year, is considerable but shows a marked decline over the increase of 230 000 hectares a year recorded in 1970-1980; this decline was due to the fact that it is becoming increasingly difficult to convert land.

The net increase in the agricultural area was 600 000 hectares between 1980 and 1985, while in the previous decade it was 2.2 million hectares. The overall area increased from 3.5 million hectares in 1970 to 5.5 million in 1980 and 6.2 million in 1985.

The amount of lending by the National Development Bank to the agricultural sector is consistent with this increase. Preference was given in this lending to animal feeds production and livestock, which increased from 742 million (1975) sucres in 1975 to 1 424 million in 1985, a growth rate of 11.5% a year and a total increase of 92%. In second place was food production, which received loans of 845 million in 1975 and 1 411 million in 1985, with a growth rate of 8.9% a year and 67% in total.

In contrast, lending by the Bank for export products fell at an annual rate of 10.3% between 1975 and 1985 as these products have access to a variety of sources of credit.

Lending for farm machinery increased from 258 million in 1979 to 436 million in 1985 in real terms, a growth rate of 9.2% a year.

In short, total lending by the Bank for agricultural activities increased from 2 400 to 3 800 million in 1975 sucres in the period 1979-1985, or in other terms, the overall increase was 60% at 8.2% a year.

Per hectare productivity performed very variably. For example, rice productivity increased in the 1970s and was maintained in the 1980s, with a downward trend, below 3 000 kilograms per hectare; in 1985 it fell 11.8% over 1980. The increase of 35.3% in the area under this crop bore no relationship to the growth in output of only 4.4% in the period.

Wheat maintained a productivity of 1 000 kilograms per hectare from 1978, while the area and the physical output continued to fall. Barley improved its yield from 600 kilograms per hectare in 1970 to 900 in the 1980s. Potatoes remained above 12 000 kg/ha between 1971 and 1976 and have been slightly over 11 000 kg/ha in the 1980s. The area under this crop increased 20.4%, its production 30.9% and its yield 8.2%, indicating that the increase came mainly from expansion of the area.

There was a noteworthy increase (32.8%) in the area under African palm both on the Coast and in the Amazon Region. The yield also improved (40.2%). Sizeable increases have also been achieved in the present decade by hard maize (54.1%) and soybeans (34.9%).

Cotton-growing depends on the rainfall pattern and market preferences. Its productivity was very variable: it was high in 1980, at 2 050 kg/ha, but it achieved barely 400 kg/ha in 1983 and 600 kg/ha in 1984.

The area under bananas varied considerably, falling from 190 000 hectares in 1970 to 70 000 in 1980 and 65 000 in 1985. Yields increased from 12 800 to 32 200 kg/ha in 1980, then fell slightly. Exports showed little change at between 1 400 and 1 600 million tons a year.

Coffee productivity was low (a little over 300 kg/ha) in several years of the 1970s and it fell in the 1980s. The area cultivated, in contrast, showed a considerable increase from 288 000 hectares in 1980 to 427 000 in 1985, and production rose with it. The expansion of the area was 48% and of output 74%, but unit yields improved only 17%.

Cocoa productivity was generally low. There was a large increase in the area cultivated in the 1970s (to 288 000 hectares in 1978) but it then remained unchanged. However, output was unstable, with large fluctuations; it amounted to 131 000 tons in 1985, a result which improved productivity by about 35%.

Increases were recorded in beans and legumes in general between 1980 and 1985, with 15% higher productivity; the same happened in the case of vegetables.

Livestock productivity was generally low, except in some herds in the Sierra. Average milk productivity was only 4.5 litres per day per cow. However, livestock production grew strongly, as did its derivatives; nevertheless, milk production is insufficient to supply the national requirements.

It is easy to see that a boost is needed for intensive livestock-raising. Milk consumption could be replaced in part by the steadily increasing production of crops with a high protein content, such as soybeans for example, which can be grown on a large scale on the Coast and in certain Amazonian areas.

In general terms the indices show a considerable growth in livestock production in the five years 1980-1985: beef production rose 28% and milk production 38%; stocks of poultry increased 25% and production of poultry meat 20%.

The 1970s saw a change in the composition and profile of demand in favour of "superior" foods such as foods of animal origin and those which use imported raw materials, such as bread and wheat. In the present circumstances of economic recession with increasing levels of unemployment or underemployment, consumption has fallen and livestock products have become luxury items with a limited demand.

This situation is reflected in the latest calculated malnutrition indices which show that 55.6% of children aged up to 60 months suffer from chronic malnutrition, and 9.7% of children aged from six to 36 months suffer from acute malnutrition.

b) *Other specific policies for the agricultural sector: recent trends*

As already pointed out, in the period under study there was a clear shift of emphasis in agrarian policy and its programmes of agrarian reform and settlement. In the two years 1979-1980 an average of 76 000 hectares a year was legally allocated under the agrarian reform programmes, to the benefit of 12 000 families in each year. This was the period in which work in the programmes was most vigorous. Between 1981 and 1985 the average area of allotments fell to 35 000 hectares a year and the number of recipient families to 4 000. In 1985 the total area allotted was only 28 000 hectares for a little over 3 000 families. In fact, in that year and in 1986 no new cases were opened by the Ecuadorian Institute of Agrarian Reform and Settlement (IERAC); the reform is at a standstill.

In recent years, however, there has been a clear preference for settlement, especially in the East. From 1973 to 1980 the annual average area of allotment was 133 000 hectares and 3 000 families benefitted, whereas in 1981-1985 this average rose to 183 000 hectares and 4 300 families.

This preference is consistent with the government's general policy of giving definite support to "modern" farming on a large and medium scale. As a result, no attention has been given either to the integrated rural development programmes, which have recently run into financial difficulties.

There is also a marked contrast between the prices and marketing policies of the present administration and those of its predecessor at the beginning of the decade. Under the Price Control and Quality Law, in the earlier period the policy was implemented by means of control of a small group of products for which, depending on their type, support (incentive) prices of maximum consumer prices were fixed. This policy was beset with administrative difficulties and had little effect, but it did help to some extent to counter inflationary pressures, although the administration of the support prices may not have been effective enough. The number of controlled products was sharply reduced in 1985, hardly any maximum consumer prices were fixed, and the emphasis was shifted to the control of incentive prices to the producer. Nevertheless, the inadequate control of the prices of agricultural inputs and the prices effectively paid by intermediaries and purchasing industries (mills, textiles industry, etc.) undermined the incentives policy and created difficult situations for producers of some important items such as rice.

Lastly, as it is the basic element in agricultural policies, we will now consider the evolution of expenditure on agricultural development in the State budget and the amounts of lending by the National Development Bank. In recent years credit has had even more importance than before as a tool of stimulus and guidance in view of the difference between the interest rates on the Bank's loans (18%) and those prevailing for other bank loans (over 30%).

As an enormous proportion of the State budget had to be allocated to service of the foreign debt (27.4% in 1984), all other items of expenditure were cut, except education and health. State expenditure grew even faster than in the period of the oil boom (8.2% a year in 1979-1985 as against 6.5% in 1970-1979), but this was due mainly to the need to service the debt which, however, continues to grow steadily.

State spending on agricultural development fell in both relative and absolute figures (in real terms) and this should have had a serious effect on the policy for the sector. Strictly speaking, it is not a question of choice of priorities but of the burden of an apparently inevitable general restriction.

However, this restriction did not exist in development lending, at least up to 1985. From 1983 to 1985 this lending grew rapidly and in 1985 it reached levels which, in real terms, exceeded those of 1975, the year of maximum volumes in the oil period. The allocation of this credit followed roughly the same patterns as in the past, except in the case of rice which, as in 1975, received clear preference. In contrast, cotton lost the importance it had in the past.

III

Some important changes in the structure of agricultural production in the period 1970-1985

There was a noteworthy change in the use of land during this period. The area under bananas for export and basic food crops declined, giving way to extensive livestock production, new crops for agro-industry (especially African palm oil) and agro-exports (hemp and prawns, for example).

For all basic foods, the cultivated area declined 32.5% or 258 000 hectares in absolute terms. The areas used for grains, legumes and tubers were hardest hit, yielding to farm production for industry which increased by 125% or 175 000 hectares. Grazing land underwent a spectacular expansion, in the order of 135%, with the incorporation of 2.5 million additional hectares.

As a result of the downward trend in food production, external dependence increased and food imports rose between 1968 and 1985, with their value increasing ten times from US$11.3 million to US$119 million in that period. The largest purchases were of sugar, grains (wheat and barley), edible oils and fats, and dairy products.

Finally, the main features of what happened in the period in question are summed up in the decline in the farming area in spite of population growth of 3.4% between 1964 and 1974 and 2.8% between 1974 and 1982; the persistently poor yields per unit of area; the small (and declining) proportion of the total farming area used for the production of basic foods, for out of 1.73 million hectares only 537 000 were used for this purpose, equal to 31% of the total; the expansion of grazing land, but with an animal per hectare/year ratio of 1.2 in 1972 and 0.84 in 1985, which reflects poor herd management; and a real per capita milk consumption of 231 cm^3 a year, below the recommendation of 350 cm^3 of the National Nutrition Institute.

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Mexico: study on the financial crisis, the adjustment policies and agricultural development

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This article reviews the development of the Mexican economy in general and the agricultural sector in particular from the Second World War to the 1982 crisis.

It underlines the important economic recovery of 1978-1981 which resulted from the oil boom, but points out that the increasing dependence on earnings from oil exports increased the country's real and financial vulnerability. Furthermore, the investment needs for the development of this activity produced a marked bias in the use of resources. The result was a sharp deterioration in the non-oil trade balance and explosive growth of the external debt which, in conjunction with the difficulties of the world economy, led to the economic crisis of 1982.

Agriculture performed well in relative terms during the crisis, for despite growing at lower rates than in the past, it managed to isolate itself from the acute recession affecting the economy as a whole. In this it demonstrated great inelasticity to shifts in aggregate demand which meant that it grew faster than the rest of the economy in periods of recession and slower in periods of general expansion. When this moderate growth is examined in greater detail, it is found to have originated in the performance of soybeans, wheat, rice and sorghum, which were the most dynamic crops, but this masks the sluggishness of maize and the large drop in beans, which are essentially peasant crops.

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I
The situation up to the 1970s

1. *Overall economic development*

Since the Second World War Mexico's development has been characterized by high annual growth rates (6% to 7%) in conjunction with exchange-rate stability and low inflation, close to the international levels. This situation was made possible by a framework of political and institutional stability which allowed the successful implementation of development strategies based on imports substitution industry, supported in turn by industrial protection policies, financing from the State development banks, and fiscal incentives.

The situation began to deteriorate in the 1970s with the economic recession of 1971 and two-digit inflation which caused the progressive revaluation of the exchange rate. A new recession occurred in 1976-1977, together with an exchange crisis, as a result of the rapid deterioration in the trade balance and public finances and the increasing flight of capital. The economic situation forced the introduction, for the first time since 1954, of an orthodox stabilization and adjustment plan.

The origin of the crisis lay in the decline in agricultural production since the mid-1970s and the rise in oil prices at a time when Mexico was a net importer.

The slowdown in the industrial sector was caused by exhaustion of the imports substitution process, loss of competitiveness as a result of the revaluation of the real exchange rate, and the slower growth rate of world demand from the mid-1970s.

The stagnation in agriculture, together with the sharp rise in international prices, accelerated the inflation and steadily reduced the positive balances of agricultural trade, one of the main domestic sources of financing of the external imbalances generated by the industrial development.

Accordingly, the role formerly played by the agricultural sector was gradually transferred to external borrowing: in 1961-1965 the sector's trade balance surplus financed more than half of the foreign trade deficit of industry, but in 1974 it covered barely 3% thereof. Conversely, external resources, which covered barely 7% of the industrial trade deficit became the main source of financing in this period.

The increased foreign borrowing for this purpose ended by causing an equivalent deficit in the balance of net income paid abroad. This rose from under 30% of the current account deficit in 1960-1964 to over 50% in 1974-1977. The dynamics of the borrowing determined by the deficit encountered limits which appeared for the first time in acute form with the economic and exchange-rate crisis of 1976-1977.

An oil-based economic recovery occurred in 1978-1981. Oil production rose at a rate of 19.4% a year and oil exports at 52.7% a year. The gross domestic product increased in turn by between 8% and 9% and the real national income between 9% and 10% a year.

However, the abundance of oil resources was not used to lay the foundations for the sustained growth of the industrial and agricultural sectors for when the boom ended. On the contrary, the growing dependence on earnings from oil exports led to a considerable increase in the country's real and financial vulnerability.

The investment needs of this activity caused a marked bias in the use of resources and higher demands. The result was a dramatic deterioration in the non-oil trade balance and explosive growth of the foreign debt which, together with the increasing instability of the international economy, led to the economic crisis of 1982.

2. *The development of the agricultural sector*

The agricultural sector recorded high growth rates (5% a year) between 1940 and 1965. This long period of expansion was driven forward by the agrarian reform, the large public investments in irrigation, the expansion of the cultivated area, and technological change (high-yield varieties, irrigation and fertilizers).

There were big differences of growth rate by subsector and product, with a high correspondence between the strength of consumption and production. The production structure adapted itself to the consumption pattern that emerged.

The sector developed within an agrarian structure which was sharply polarized between a large peasant sector supplying a weak domestic market and a business sector supplying a very vigorous domestic market and the external market.

Agricultural activities weakened from the mid-1960s (the growth rate fell to levels close to those of the population growth); at the same time there was a large increase in the relative importance of livestock and a decline in the importance of items of the basic consumer diet (and of cotton for external reasons). The drops were closely related to the reductions in the cultivated area.

Peasants and businessmen behaved very differently in their production decisions in the period after 1965; while the peasant showed great stability in the composition of their crops, with a firm attachment to maize and beans, the businessmen diversified their interests and production decisions. This is part of the reason for the strength of the domestic supply of items such as sorghum, soybeans, safflower and livestock and for the concomitant weakening of basic products.

These trends moved in close step with the long-term development of relative prices (which was affected by international trends and the type of interrelations which developed between the agricultural and industrial sectors) and with the different profit levels between and within each of these sectors.

An economic recovery took place towards the end of the 1970s during the oil boom (it was also promoted in the agricultural sector by SAM (*Sistema Alimentario Mexicano* - Mexican Food System)). Not only was this recovery brief (especially in the agricultural sector) but it also completely disregarded a number of very acute problems and defects in Mexico's economic and social structure:

— The concentration of income at one extreme and its effects on the other extreme reflected in poor diet, housing, services, etc. Much of the poverty and inequality clearly stemmed from rural backwardness and the duality and polarization of the agrarian structure;
— The vulnerability of the production structure and foreign trade, which originated mainly in the non-oil sector. In the countryside it also included increasing dependence on food imports;
— The increasingly shaky finances, given dramatic illustration in the foreign debt.

II

The adjustment policies

The first reaction to the imbalances was to introduce a number of adjustment policies which were frequently inconsistent with each other. As the situation became more difficult and awareness of its seriousness increased, better defined and integrated sets of measures began to be formulated and implemented. The following stages can be distinguished:

1. *Chaotic adjustment*

This was carried out by the government of President López Portillo in early 1982 and was based on fiscal cutbacks, devaluation (80%), and higher public tariffs. A wage increase was agreed in April that year which ranged from 30% to 20% and 10% depending on the level of earnings. There was a further devaluation in August, a dual exchange-rate system was established, and payment of the debt was suspended for 90 days. The banks were nationalized in September and a comprehensive system of exchange controls was introduced.

The situation was extremely complex in October and November, and the government decided to prepare and negotiate an adjustment programme with the International Monetary Fund.

2. *The 1983-1985 adjustment programme*

In this period the next government, of President de la Madrid, carried out the adjustment programme, which envisaged two separate stages. Firstly, shock treatment to re-establish the main balances, followed by a so-called gradualist stage in which the product was to begin to grow. Briefly, these were the stages:

a) *The shock treatment (1983)*

This consisted basically of a drastic reduction of the fiscal deficit (which was roughly equal to 50% of the gross domestic product) and an equally drastic cut in inflation (from 100% to 55% in 1983), reductions of the current account deficit of the balance of payments (from about US$2 000 million), and suspension of growth in 1983. These measures were accompanied by a very restrictive wages policy.

b) *The gradualist stage (1984-1985)*

It was thought that there ought to be a recovery of economic growth (from 5% to 6% from 1985 on) in accordance with a model of long-term structural change which would lead to the expansion of non-oil exports and assign greater importance to the private sector and the market.

3. *Main features of the policies adopted*

The policies can be placed in the following order, in accordance with their purpose:

To modify the price ratio of tradeable to non-tradeable goods:

- Exchange-rate changes in 1982 and 1983;
- Replacement of import taxes by tariffs.

To reduce the fiscal deficit:

- Increase of public tariffs;
- Reduction of subsidies;
- Two per cent increase in indirect taxes net of subsidies;
- Rationalization of the public trade and production apparatus, which led to the sale of 236 small and medium-sized enterprises;
- Drastic reduction of real salaries and wages in the public sector;
- Cutback of 32% in public investment, especially by public enterprises;
- Increase of public oil earnings via PEMEX as a result of the devaluation.

To create a structure of factor prices to facilitate efficient allocation of resources:

- Reduction of subsidies;
- Increase of real interest rates;
- Reduction of State intervention and greater participation by the private sector and market mechanisms.

To stimulate the participation of the private sector:

— Fiscal incentives for private investment and high rates of accelerated depreciation.

4. *The effects of the measures*

The following were the effects of the main policies carried out in the period under study:

a) *Fiscal policy*

The fiscal deficit fell between 1982 and 1983 to very close to the planned levels (from 17.9% to 8.5% of GDP). Where fiscal revenue was concerned, on the one hand the surpluses of public enterprises increased, but on the other hand tax revenue fell as a result of the inflation and delays in collection.

b) *Exchange-rate policy*

Between February and December 1982 there was a nominal devaluation of 450% in the free exchange rate and 250% in the controlled exchange rate. In January 1983 the real controlled exchange rate stood at almost half the January 1982 level and was almost 30% lower than in mid-1978.

The dual exchange-rate system was introduced in September 1982, and the black market at the United States border emerged in October-November that year.

December saw the introduction of daily minidevaluations, which were subsequently adjusted in January 1983. It was hoped that this would produce rates of devaluation compatible with the targets for reduction of inflation.

The management of exchange-rate policy was inconsistent owing to the conflict between the short-term and the long-term goals (control of inflation against structural changes) which was resolved in favour of the short-term goals in view of the improvement in the balance of payments, the better performance of non-oil exports and, too, the difficulty of regulating other key economic prices.

Non-oil exports weakened again in the last quarter of 1984 and speculation increased in expectation of much higher inflation and devaluation than was planned. This attitude was based on the worsening of the balance of payments and the fall in oil prices. In March 1985 the government increased the daily devaluation rates, but this measure proved insufficient to cope with the situation.

That year saw a collapse of the exchange market. The official exchange rate was again devalued (20%), the free exchange rate was legalized and a new exchange-rate system was finally introduced.

c) *Wages policy*

This policy was the cornerstone of the strategy to control inflation and modify the structure of relative prices. Wages fell sharply as a result of its implementation. A tripartite commission of government, business and labour was used to adjust wages and alter the prices structure to the detriment of real wages. These measures resulted in a slower inflation rate and an *ex post* drop in real wages, with increase in the other relative prices. The severe wage cuts prevented the outbreak of galloping inflation which occurred in other countries of Latin America.

The wages policy was relaxed a little in 1984, and the adjustments resumed their normal values.

d) *Foreign trade policy*

Import controls were reintroduced in 1981. This policy was continued in 1982 and part of 1983, for the agreements with the IMF allowed temporary non-tariffs controls.

Imports controls were eased slightly in 1984 and the existing permits were replaced by tariffs of 15% to 20% of the value of the goods.

The restrictions were reduced sharply in 1985 and the tariff structure was rationalized in the direction of greater uniformity. A trade agreement was also signed with the United States which liberalized foreign purchases and eliminated exports subsidies. Tariffs were adjusted to offset the adverse effects, and official prices were set at levels higher than they should have been. Lastly, exporters were given an incentive in the form of import rights (DIMEX) which enabled them to import without prior permission and with a very low tariff of 10% as against a general level of at least 30%.

III

The manifestations of the crisis and the adjustment policies

1. *Levels of activity, aggregate demand and total employment*

Total output fell 0.5% and 5.3% in 1982 and 1983 respectively; public investment was cut by 14.2% and 32.5%, while private investment fell even further. This was caused, on the one hand, by the contraction of the market and public investment and, on the other, by the drop in current and future profits caused by the higher prices of imported capital goods and the external business debt, which was in turn due to the drop in the real value of assets in the market owing to the massive flight of capital. This flight of capital was connected with the higher profits expected from external activities in comparison with domestic ones. The most seriously affected sectors were capital goods, construction and consumer durables.

There was a recovery in 1984 and 1985: the GDP grew at rates of 3.7% and 2.7% respectively, industry at 4.8% and 5.8%, and private investment at 9% and 13%. Furthermore, non-oil exports increased 18.4% in 1984 as a result of the economic recovery in the United States and the new agreement signed with that country.

This phenomenon was due to the higher level of employment by the central government (despite the reduction of the fiscal deficit), the lower inflation, and the incentives for private investment (accelerated depreciation). Other factors were the medium-term effects of the 1982-1983 devaluation and the short-term effects of the 1984-1985 revaluation. Private consumption slowed in 1982 and fell sharply in 1983 (7.5%). This included a fall in the consumption of durable goods but not of non-durables, in particular foodstuffs, which were not affected at all.

The increased exports were offset by imports growth of 19.7% in 1984. This growth came to a stop in 1985 as foreign exchange ran out.

The 1984 recovery was characterized by industrial expansion concentrated in the automobile industry, which grew 26.6% in that year. This was because private businesses took advantage of the investment incentives, i.e., the high rates of accelerated depreciation, to renew their fleets of vehicles. Private investment increased for the same reason. There was also a slow recovery in industries with idle capacity such as cement and steel; a similar development took place in the basic foods industry. It can thus be seen that this was a strange economic recovery: growth in the automobile industry with a simultaneous reduction of investment in machinery, equipment and plant, especially in public enterprises.

Agriculture performed well in relative terms, for despite lower growth rates than in the past, it managed to isolate itself from the severe recession affecting the economy as a whole. The total GDP rose at a rate of 0.1% between 1982 and 1985, but agriculture and livestock expanded by 0.6% and 1.9% respectively, thus contributing to the adjustment.

In this performance agriculture demonstrated great inelasticity to variations in aggregate demand, and this meant that it grew faster than the rest of the economy in periods of recession and slower in periods of general expansion.

2. *Foreign trade and the balance of payments*

The large devaluations and the economic contraction produced big changes in the external accounts: the current account of the balance of payments moved from a deficit of US$12 000 million in 1981 to a surplus of over US$5 000 million in 1983. This change was due mainly to imports (which fell 37.1% in 1982 and a further 41.7% in 1983), with capital goods falling by large amounts (42% in 1982 and 62% in 1983). Non-oil exports also contributed to the big rise in the exchange rate and the fall in home demand (they increased 16.7% in 1983).

Nevertheless the adjustment proved short term, for following the recovery which began in 1984 the current account surplus had already disappeared by 1985. This was due to two factors: the end of the boom in exports of manufactures towards the beginning of 1985; and the rise in imports during the brief recovery in 1984 and 1985 (which owed much to the automobile industry with its high imported component).

The farming sector made a moderate contribution to the external adjustment, mostly in 1984 and 1985, for output fell sharply in 1982 and this was reflected in a large increase in imports in 1983 which subsequently declined and then disappeared in 1985.

Farm exports rose by US$200 million between 1983 and 1984 and imports fell by about US$500 million, but this positive development was offset by the decline in livestock.

The increased exports were due to the favourable movements in the production and relative prices of cotton and tomatoes. Oil crops performed well in the domestic market, together with other basic foods such as maize and wheat, and this helped to reduce imports.

It is thought that the stagnation or decline of apparent consumption and the good output associated with good relative prices were the most important factors in agriculture's recovery.

3. *Inflation and food prices*

Inflation held a relatively stable rate in 1980 and 1981 and there were no major changes in relative prices. It speeded up between 1982 and mid-1983 owing to the continual devaluations and the higher public tariffs and direct taxes. In the first two cases the adjustments were higher than past inflation, and this produced the *ex post* result of a higher inflation rate.

The high inflation was checked to some extent in 1983 by a drastic reduction of wages. This was a stage in which relative prices shifted (real wages fell 20%, the real exchange rate was devalued by about 40%, and public tariffs rose by 90% over 1981). As a result, the annual inflation rate of 25% to 30% rose to 100-120% in the first half of 1983. It fell 55-60% between mid-1983 and the end of 1984 as a result of: unprecedented control of wages; minidevaluations determined by the expected inflation rate; and less drastic increases in public tariffs.

As a result of these measures the prices structure continued to change: between mid-1983 and the end of 1984 wages fell a further 13%, the real exchange rate was revalued from 16% to 19%, and public tariffs rose 30%.

A new phase began in 1985 with a new spurt in inflation caused by the wage rises and the further devaluations. This trend became more pronounced in 1986 owing to the sharp drop in oil earnings. The final outcome was an inflation rate of 115%.

In short, the following happened between 1981 and 1985: real wages fell 30%; the exchange rate was devalued by 30%; public tariffs increased 2.5 times; and there was a considerable acceleration of inflation.

During the crisis and the adjustment in 1982-1985 food prices were not a source of inflationary pressure. Despite the elimination of subsidies and the modification of the structure of relative prices in favour of tradeable goods —which include some foodstuffs— the prices of agricultural products fell between 1982 and 1985 in the middle of a period of large devaluations, and they improved, paradoxically, in 1984 in a period of revaluations.

This apparent paradox came about as a result of the sharp fall in support prices in 1982 and 1983 which prevented increases in relative consumer prices and at the same time reduced the subsidies for food marketing. There was thus a sizeable cut in the subsidy to the producer implicit in the difference between the domestic price and the external price; this had its greatest impact on basic grains (maize, wheat) and beans.

The main focus of the elimination of the subsidies was therefore the reduction of the difference between internal and external prices, a mechanism which made an important contribution to the containment of the inflationary pressures generated by the devaluations. Another factor was the reduction in 1982 of the external prices in foreign currency of many farm goods (this was repeated in 1985).

This policy of low support prices could not be maintained indefinitely and it was changed in 1984, with consequences for producer food prices and also therefore for consumer prices, which rose faster than inflation.

Support prices were thus used in an anticyclical policy to moderate the inflationary impact of the devaluations on the prices of tradeable farm goods. Such a policy was possible in a context of growth in agricultural output, for this prevented inflationary pressures on the domestic supply side.

4. *Income distribution, standards of living and food consumption*

The main features of Mexican society are its inequality and poverty. According to the available information, these features were more pronounced after the adjustment. The following were the main changes:

- Redistribution of wealth from the public sector —as it was a net debtor in foreign currency— to the external sector and the local private sector, for this latter sector had become a net creditor of the public sector through the intermediation of international banks. This was the reason for the increase of the external sector's share in GDP from 3.5% to 8.3% between 1981 and 1984.
- Transfer of resources from the private to the public sector since transfers abroad were made through the public sector as it was a net debtor. In 1983, the year of the main adjustments, the private sector's contribution to GDP fell more than five percentage points in relation to 1981.
- Redistribution of wage incomes in favour of non-wage incomes within the private and personal sectors. Between 1981 and 1984 the contribution of wages to GDP fell by about 10 percentage points to the lowest level since 1968.

Living standards deteriorated considerably owing to the sharp drop in formal employment which led to an increase of 3.4% in informal employment.

Peasant living standards were affected very differently by the adjustment. With good support prices in 1984 and 1985, for example, output was very high, suggesting an improvement in the property component in peasant family incomes. This is borne out by the large increase in maize production in the poorest peasant regions.

In contrast, the wages component in peasant incomes was affected very adversely; it is estimated that total farm wages fell by 32% between 1982 and 1984. This sharp reduction was a result of the large drop in average farm pay which was not made good by the slight increase in employment. This had a serious impact on a large number of poor peasants who depended mainly on their wage incomes.

The crisis and the adjustment also affected food and nutritional standards. Nevertheless, the available information does not indicate a problem of food supply nor any clear deterioration in the average diet. There was however a large drop in the consumption of maize, beans, beef and milk between 1978-1981 and 1982-1985. This was due to the fall in real incomes and was unconnected with output, which did not decline except in a few years owing to the weather, as we saw earlier.

According to surveys carried out in March and June 1983, most of the families in the poorest population groups in the capital saw their consumption of all foods decline, with the exception of maize tortillas, and there was a clear substitution of animal proteins by vegetable.

Another survey carried out between January and August 1985 produced similar results but with a lower percentage of families with lower food consumption. The sharp increase in the per capita cost of the minimum diet as a percentage of the minimum wage was one of the main causes of this situation.

IV

The adjustment policies and the agricultural sector

1. *Economic and farming policies up to 1981*

As a general rule, the traditional model of economic policy tended to favour urban-industrial development through its policies on foreign trade, exchange rate and public spending, and to discriminate against agriculture, at least in constant terms.

a) *Foreign trade policy*

The effective protection was much less for agriculture and in some cases negative (although Mexico was not the most serious case among the majority of developing countries). The foreign trade policy pushed farm prices below international prices (with exports quotas) and the sector's profits were cut by the relatively higher prices of inputs and industrial capital goods.

b) *Exchange-rate policy*

The revaluation of the exchange rate hurt agriculture by cutting the relative prices of its tradeable goods. This policy, together with industrial protection, accentuated the drop in farm profits by raising wages.

c) *Public expenditure policy*

Although considerable investment was made in irrigation infrastructure, most investment went into basic industries, urban infrastructure and external purchases for industrialization.

In short, rural producers subsidized urban consumers and farm exporters subsidized industrial importers of capital goods. But this situation was alleviated by specific compensatory policies.

Most of the support for the agricultural sector was provided by two instruments.

i) *Support prices.* This policy tended to push domestic prices above the international prices of the main imported goods but it had the opposite effect on certain export crops and on foodstuffs for the home market. But in general terms it did not sufficiently offset the effects of the overall economic policy: on average (25 products) domestic prices were lower than international prices in the 25 years between 1960 and 1985.

As part of this policy there was an important State presence in (internal and external) trade through the National Basic Commodity Corporation (CONASUPO).

ii) *Input subsidies.* The most important of these subsidies were the financial ones (such as foreign credit and insurance) and the subsidies for physical inputs (fertilizers, seeds, water and fuel). The government's action was important in both cases, but the result was increased support for the business sector (except for the great importance of subsidized lending for maize in 1973-1981).

Overall economic policy tended to discriminate increasingly against agriculture in the 1970s. However, the compensatory policies had the reverse bias of offsetting the previous effect, sometimes totally, with a high point in 1980 and 1981 during the implementation of the Mexican Food System (SAM), which fully corrected the deterioration in its terms of trade which agriculture had suffered since the 1960s, improving them almost to international levels.

2. *Economic and farming policies in 1982-1985*

The trends were reversed in this period (of adjustment): the anti-farming bias of overall economic policy was reduced (especially trade and exchange-rate policies) together with the compensatory role of the specific agricultural support policies.

a) *Foreign trade policy*

This policy changed with the liberalization of July 1985. There was extensive derestriction of imports for manufacturing and, indeed, of final goods competing with manufactures, but the liberalization was much less in the case of agriculture.

b) *Exchange-rate policy*

It was not to be that the enormous devaluation of the real exchange rate should be passed on to the benefit of agriculture's relative prices, for economic policy was used to reduce the ratio of domestic to external prices (and moreover the relative international prices of the main products of Mexican agriculture fell between 1981 and 1985). But this did not mean lower profits for the agricultural sector despite the worsening of its terms of trade in the period, because the large drop in real salaries offset that effect, and there was an increase in the proportion of operating surplus in agricultural output (although it is clear that this increase was limited to the agribusiness sector).

c) *Public spending policy*

The policy of reducing the public deficit and public spending had a greater impact on expenditure on the agricultural sector than on total public expenditure. The same is true of public investment in the sector in relation to the average decline in total public investment. This was certainly one of the reasons for the stagnation of the area sown between 1981 and 1985 and for the slow growth of the irrigated area.

The effects of the compensatory support policies were reversed at the same time. The most important change was the partial abandonment of the SAM farming and food policies.

d) *Prices and marketing policies*

The ratio of internal to external prices worsened considerably in 1982 and 1983 following the large devaluations, a deterioration determined by changes in support prices; the decline was reversed only partially in 1984 and 1985. This prices policy was used to contain inflationary pressures, but it is probable that the effects were also due to underestimation of future inflation. In any event, it altered the price ratios between crops: against peasant crops (maize and beans) and in favour of oil crops, cotton and sorghum in the first years after 1981; a relative price structure similar to that of 1980-1981 was restored towards 1985.

The participation of CONASUPO in the marketing of basic products was sharply reduced in the crisis period: in 1982 33 products were marketed, but in 1986 only eight.

e) *Policies on credit and production subsidies*

The fiscal adjustment policy reduced subsidies in general, including the financial ones. The subsidies for the farming sector depended on the *level of the preferential rates* and the *volume* of lending to the sector. Interest rates for farm credit increased steadily from 1982 in nominal terms, as did the ratio of interest rates to the average percentage cost of attracting the resources, to the point that the financial subsidy implicit in the difference between these two rates disappeared in early 1986.

The volume of lending to the sector fell sharply in 1982 and 1983; it then recovered but by 1985 had not returned to the 1981 levels. The cutback was more severe than in the other production sectors, and seasonal agriculture was hit hardest. The most seriously affected crops were maize, beans and rice; wheat, sorghum and oil crops suffered much less and recorded real increases in their borrowing from Banrural in 1982-1985.

Only approximate trends can be indicated in the case of input subsidies for agricultural production: the overall index of the relative prices of these inputs showed a large rise between 1981 and 1985 (changing the 1970-1981 trend) and this contributed to the worsening of the sector's terms of trade. But input prices in particular moved very differently: it seems clear that the adverse effects on the profitability of farm production were concentrated in the most technologically advanced segment.

3. *The global impact of the policies on agriculture*

Two periods must be distinguished in the development of economic policy and its probable effects on agriculture. The impact of the real devaluations of the exchange rate in 1982-1983 was offset by the prices policies and there were also sharp cuts in public investment and real lending to the sector, and the main adjustments were the main in the prices of agricultural inputs. The slippage in relative farm prices was partly corrected in 1984-1985, the volume of credit improved (especially from Banrural in 1985) and public investment and expenditure were not subject to any further major reductions.

What were the probable effects of these developments in economic policy? In the first two years of the adjustment, both in the production slowdown in 1982 and in the recovery in 1983, the decisive factor was the performance of seasonal peasant crops (maize and beans), which were hit hard by the weather. Sorghum and rice were also seriously affected in 1982. Wheat (one of the main irrigated crops) and export crops, in contrast, performed anticyclically.

Farm output recovered with the good weather in 1984 and 1985, although it did not grow at the rates of 1983 or of 1980 and 1981. Wheat, soybeans, rice and sorghum (agribusiness crops) performed very strongly in this period, while maize and beans played a smaller part in the recovery.

The moderate growth of total farm output throughout the period 1982-1985 was due to the combined effect of the strength of the four crops mentioned above, the stagnation of maize and the decline of beans and export crops, except tomatoes.

The most dynamic output in the period thus belonged to agribusiness crops, profits from which were enhanced by the drop in real wages and, in the case of sorghum and rice, by the relative prices policy. The cutback in lending affected these crops less. Peasant crops did not benefit from the fall in real wages, and the effects of the devaluation were offset by the prices policy. In addition, they received very little financial support. Export crops (mainly agribusiness) were in an intermediate position. The positive effects of the devaluation and the drop in real wages were partially offset by the domestic prices policy or international price trends, depending on the case. The only exception was tomatoes, which clearly performed strongly in the period.

What was the sum of these effects of economic policy on agricultural output? It has already been pointed out that with respect to agriculture general economic policy moved, with the adjustment, into a transitional period characterized by a weakening of the anti-farming bias of overall economic policy and by a reduction of the compensatory role of the specific support policies for agriculture. Up to the present the results of this transition (and with the sole possible exception of what happened in 1985) have been clearly negative for maize and beans production, the peasant crops of greatest importance in total output and domestic food consumption; whereas the few "benefits" of the adjustment process —resulting from the drop in real wages and its effect on profits— were heavily concentrated in agribusiness producing wheat, oils and animal feeds.

The good performance of total agricultural output compared with the rest of the economy during the adjustment period was therefore determined by its great inelasticity to changes in aggregate demand, a feature which distinguished it from most other production sectors and meant that agricultural growth should be comparatively high in periods of recession and relatively low in periods of general economic expansion.

On the other hand, the changes in economic policy do not seem to have had positive effects on the recent performance of agriculture as a whole, for two reasons. Firstly, because the transition to a new model of economic policy was immediately preceded not by the traditional anti-farming scenario but nevertheless by a traditional scenario in which —owing to the predominance of the goals of food self-sufficiency— compensatory action and support for peasant agriculture perhaps reached their all-time highs in 1980 and 1981. The second reason was the priority given to the goals and methods of orthodox macroeconomic stabilization during the recent period. The subordination of support policies for the farming sector to those goals —exemplified in the management of the policies on price support, credit and public investment— had the result of offsetting the positive effect of the reduction of the anti-farming bias in overall economic policy.

V

Restrictions and determinants in agricultural development

The agricultural sector showed an improvement in late 1985 with the recovery of lending to agriculture by commercial and development banks and the rise in relative prices which encouraged maize and beans production, for all of this had the effect of improving the terms of trade.

Unlike other countries, in Mexico the structure of land ownership has not imposed restrictions on the sector's growth; the same is true of the potential usable area. The main problems lay elsewhere: for example, the limited introduction of technical inputs to increase output, for use of these inputs was concentrated in agribusiness. A new problem emerged with the economic crisis: the contraction of domestic demand which affected mainly industrial products. It is unlikely that any major change took place in export products, for the world market was determined by international prices and by the protectionist policies of the developed countries.

In view of the concentration of wealth, the contraction of domestic demand as a result of the drop in real wages, the links between agriculture and industry, and the consumption trends described above, the conclusion is that agriculture will possibly grow below its potential in the future as a result of the greater increase of livestock and therefore the increased use of farming land for livestock inputs.

VI

Agriculture in the context of global future economic developments

1. *Prospects*

At the beginning of 1986 the Mexican economy was hit hard by the fall in the prices of oil, its main export product, which exacerbated the recession which had begun in the second half of 1985. This development, combined with higher prices and public tariffs, lower subsidies and steady devaluation, led to faster inflation, to a level of about 100% as against the 60% of 1985.

This situation imposed very difficult conditions of recovery in the short term, for absorption of the impact of the oil crisis, in the absence of additional external financing or reduction of interest payments on the foreign debt, entailed very high economic and social costs.

Studies of this situation show, according to various assumptions about economic policy, that the production capacity, the per capita product and real wages will reach in 1990 levels similar to those of 1985. With a low investment rate and rapid growth of the labour force, the unemployment rate will tend to rise for the rest of the decade.

2. *Contributions of agriculture to economic recovery*

The role which agriculture might play in overall economic development is in the generation of foreign exchange and increase of rural incomes, on the basis of the following assumptions and projections:

- A cultivated area of 29.2 million ha by 1995, of which nine million are irrigated and 20.2 million seasonal;
- Average annual improvement of 1.9% in per hectare yields;
- Domestic consumption of farm products based on the following assumptions:
  a) The GDP and real national income grow at an annual rate of 3% between 1986 and 1990 and 4% between 1990 and 1995;
  b) Population growth of 1.8% between 1985 and 1990 and 1.6% between 1990 and 1995;
  c) The elasticity of the per capita consumption of farm products with respect to per capita income is 0.68 (average elasticity in the period 1966-1979);
- Relative prices, both internal and external, of farm products remain constant at the 1985 level.

On these assumptions, a favourable farm trade balance of US$1 200 million at 1985 prices is projected for 1990 and almost double this amount for 1995. The growth rate of per capita rural incomes might be between 5% and 6% during the decade, improving the living standards of the rural population.

Mention must be made of the important role that the agro-industrial sector can play in determining the standard of living of the rural sector, in improving the diet of the whole population and in easing the external restrictions, both through increased production and, above all, through the local integration of the agro-industrial production chain.

CEPAL REVIEW No. 33

Peru: agriculture, crisis and macroeconomic policy

*Javier Iguiñiz**

This article considers nine selected products which account for 50% of the gross value of output and also have a clear regional differentiation. The period analysed is from 1970 to 1985.

The results of the analysis show that developments in the farming sector depend to a large extent on international factors and on the policies introduced to adjust the country's external accounts. The situation of each product is different in the medium and short terms, depending on the effects of the general and specific policies. In a longer-term perspective, the visible trends in production are due to great strength in rice —the main product of Peru's agriculture which is cultivated mainly on the coast— and to a similar strength in the cultivation of hard yellow maize and the production of poultry meat and beef. The first three products show the influence of sustained policies for imports substitution and modification of consumption patterns. Cotton and coffee show an upward linear trend despite the exchange-rate slippage and the falls in their internal and external prices, while the decisive factor in sugar cane seems to be the availability of water for its cultivation. The situation of the traditional mountains crops is different; potatoes show a downward trend and starch maize follows a consistent linear trend independent of the adjustment policies introduced.

The impact of exchange rate, monetary and wages policies have different effects on agricultural output in different regions. On the coast, producers of poultry meat and some rice producers seem to have been hurt by the austerity policies, which at the same time seem to have benefitted producers of sugar cane, cotton and hard yellow maize, and some rice producers. Lastly, the situation is unclear in the forest regions. The cutback in lending has had adverse effects on production of rice and hard yellow maize, yet this last product has been benefitted by the real exchange rate.

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I

Background and aspects of overall development

The Peruvian economy is under the influence of a long-term crisis which has shown considerable fluctuation. There is a consensus to the effect that the economy was at its most dynamic in the mid-1960s. Since then it has experienced the 1967-1968 crisis, a period of stagnation up to 1972, a brief expansion in 1973-1975 based on foreign borrowing, and from 1975 to 1985 a series of serious crises interrupted by periods of stagnation.

In 1985 the per capita gross domestic product was much the same as in 1965. Average real wages in 1984 were 22% lower than in 1957 and salaries 47% lower. Wage incomes amounted to 38.7% of the national income in 1950 and 46.5% in 1976 before the present crisis began. The sacrifice during the expansion was made by independent workers, particularly farmers, who saw their share in the national income fall from 21.5 to 9.1% between those two years. In the 1980s, in contrast, the recession concentrated its greatest relative impact on urban wage-earners.

The pre-crisis period was characterized by a process of industrialization in a situation of abundant foreign exchange which facilitated the establishment of an assembly industry and an agroindustry based on the processing of imported foodstuffs. This caused considerable internal dislocation.

The stagnation of industrial productivity caused by the lack of technological innovation led to an increasing loss of relative competitiveness and an increasing trade deficit. The main features of Peruvian industry in this period were the lower level of internal integration and the low productivity.

The most important development in agriculture in the period leading up to the crisis was the agrarian reform, a process which since the mid-1950s had been a major political football, to the detriment of the sector's progress and investment in agriculture and livestock in particular.

Various reforms were introduced from the early 1960s, culminating in the 1969 reform, the most radical and decisive of all. The crisis and the adjustment occurred when the structure of land ownership and tenancy had just undergone radical change.

Accordingly, the agricultural sector was in a very shaky technological and administrative condition owing to the withdrawal of some of its most experienced technicians and the establishment of the new institutions.

The change of government in 1976, which coincided with the onset of the crisis, reduced even further the political weight of farm producers in the modern sector co-operativized by the agrarian reform. The new official policy was more broadly favourable to privately and individually owned businesses. However, the fact that the reform was part of the justification of the military take-over, together with other factors, meant that the process of anti-associative institutional change was initially slow.

1. *Regional features of agriculture*

The land resource is scarce in Peru. Only 5.9% of the country's area is suitable for crops, i.e., roughly 7.6 million hectares, of which some 2.9 million are actually cultivated. Of this total, about 750 000 hectares are at the Coast, 1.7 million in the Sierra and 400 000 in the Selva (forest).

The Coast has 26% of the arable land and contributes about 50% of the sector's gross domestic product. It has irrigated land of very good quality. It has a great future potential for increased productivity and expansion of the irrigated area. The main crops are cotton, rice and sugar; poultry farming is also concentrated in this region.

The Sierra is the least productive region; it has half the cultivated land but contributes only 25% of the sectoral product. Its agriculture is basically unirrigated and there is little possibility of extending the frontier. Its main crop is potatoes, but its beef is among the most important of the country's farm products.

The Selva, lastly, is the most extensive region but it is extremely fragile from the ecological standpoint. Nevertheless, it has the greatest potential for expansion of the cultivated area. Coffee, hard yellow maize and rice are the main crops.

2. *Agricultural and overall production*

Agriculture's contribution to the national economy has been steadily declining in recent decades. In 1970 the sector contributed 14.6% of the gross domestic product, a proportion which fell to 10.8% in 1980. In the period 1982-1984, which corresponds to the second recessionary adjustment, for the first time in a long time agriculture increased its contribution to the national total, delivering 13% of what was produced in the country.

In the 1970s the importance of agricultural production for the external market declined and, according to the available information, production was reoriented towards the domestic market.

In the midst of the crisis the shortage of foreign exchange and the devaluation of the currency invested the Sierra with increased importance, although it is the least productive zone. The transformation of Peru into a net importer of food since the end of the 1970s has placed the problem of the agricultural backwardness of the Andean region at the centre of the debate about development strategies. However, it is probable that cultural factors are more influential than the actual possibilities of making the Sierra the axis of the country's agriculture.

II

The adjustment policies

There have been two periods of stringent adjustment in the last 10 years: 1976-1978 and 1982-1983. The principal method was devaluation with inflation and a closed economy, which meant that the anti-inflation goals were secondary to those of external balance. In other words, the inflation policy was used to attain this balance at a lower level of domestic production activity.

The following were the main features of the adjustment policy:

1. *Exchange-rate policy*

A close relationship has been established between variations in the real exchange rate and the level of overall economic activity. The policy of raising the exchange rate was the commonest way of influencing the external imbalances and the level of domestic activity. This was the case in 1976-1978. The effectiveness of devaluation in raising the real exchange rate was relatively less in 1982-1983 because domestic prices increased independently of the devaluation owing to incidental factors such as the floods, droughts and avalanches.

At the end of the 1970s and in the early 1980s a ready supply of foreign exchange was provided by the increased exports and the unblocking of the World Bank loans. As a result the real exchange rate underwent a sizeable decline.

At the end of 1981 the devaluation speeded up under the impact of the worsening of the terms of trade, and inflation did likewise. This development continued until mid-1983, briefly interrupted for nine months but then moving ahead again until the change of government in 1985.

In brief, during the decade of crisis the basic exchange-rate policy had two periods of rising rates and an intermediate period in which the slippage was used as an anti-inflation tool.

The record of the impact of the variations in the exchange rate on inflation shows that the prices of the categories of product classified as "tradeable" by the Central Reserve Bank (BCR) reacted with a lag of two quarters, while the prices of "non-tradeables" reacted immediately.

These results indicate that in Peru's institutional context, particularly in its labour market, exchange-rate policy was one of the fundamental means of causing domestic inflation to rise or fall, aggregate demand to decline or increase, and imports to contract or expand.

2. *Prices policy*

The increase in public tariffs and prices controlled by the State was also a decisive tool in reducing the fiscal deficit and aggregate demand, especially from 1981.

The ratio of the indices of controlled prices to the overall consumer index was 0.55 in 1981, but it rose to 1.37 in 1982 and then remained above unity until 1984. It was 1.06 in 1982, 1.28 in 1983 and 1.16 in 1984.

With respect to specific increases of controlled prices in this period, the price of gasoline always moved faster than inflation, while the relative prices of controlled foods rose in 1981 and 1983 and public tariffs in 1981, 1982 and 1984.

3. *Tariff policy and protection*

These policies were not so important in generating recessions. Three periods can be distinguished:

- The period 1976-1978: tariffs were not changed but domestic production was given greater protection by the rising exchange rate. The final net result was an increase of 70% in protection, in spite of which output fell as a result of the drop in incomes caused by the increased inflation.
- The period 1979-1981: the domestic market was opened up, tariffs were reduced, and the exchange-rate slippage resulting from the great expansion of exports increased the effectiveness of the liberalization measures.

These exports came from the investment projects started in the first half of the decade and they were also a response to higher international prices. The lowest average tariff level of 32% was achieved in 1981, with the maximum tariff, without surcharge, falling from 155 to 60%. The main tool of the liberation policy was the elimination of bans. Between the end of 1978 and the end of 1979 the number of prohibited import items fell from 1 852 to only nine and the number of free import items rose from 1 753 to 3 745. This process did not last long but long enough to renew and build up stocks of domestic consumer durables, imported automobiles, etc. The level of protection in 1981, including the effect of the exchange rate, was again similar to the pre-crisis level, i.e., between 40 and 50% of the maximum level of 1978.

— The period 1982-1983: tariffs were increased when the fall in international prices persisted and imports soared —US$1 668 million in 1978 and US$3 802 million in 1981. A surcharge of 15% *ad valorem* was established in 1982, a further surcharge of 10% on CIF value in 1983 and another of 17% in 1984, which considerably increased the level of protection. The renewed upward movement of the exchange rate at the same time increased the protection of domestic production.

The domestic market was thus closed and a return was made to the method of securing adjustment by reducing the general level of domestic activity by lowering the aggregate demand. This method is demonstrably effective in reducing imports and freeing foreign exchange for payment of creditors, or for retention in State hands, instead of providing it to importers.

4. *Income and public spending policies*

In 1978, the most critical year of the first adjustment, the income of the central government was 3% higher than in 1975. This came about owing to the increase of 372% in the fuel tax and the commencement of new mining exports subject to taxes and despite the drop of 38.8% in the income tax.

Against the background of crisis, transfers of capital from the government to public enterprises were reduced, the gross formation of capital by the central government was maintained, pay fell, and there were increases in the payment of interest and principal on the foreign debt and to a lesser extent in defence spending. In these circumstances public enterprises made sizeable cutbacks in their investment expenditure by terminating the most expensive projects.

In the 1980s, during the second adjustment, the central government's real income fell sharply (29.3%) in 1981-1983. The income tax was cut (-38.3%), as were taxes on foreign trade (39.3%). The fuel tax was raised 32.4%, but this was not sufficient to offset the other declines.

Accordingly, all items of expenditure were cut in real terms in 1982, except for foreign debt and defence payments. Defence spending was also cut back in 1983, but the total amount of these two items was nevertheless maintained in global terms owing to the increased payments abroad.

5. *Monetary and credit policies*

Monetary policy contributed to the decline in nominal incomes and domestic demand and thus to the recessionary adjustment. In 1981-1983 it moved from a first stage (1981-1982), in which the goal was to support growth through credit and liquidity, to a second stage (1982-1983), in which the priority was protection of the level of reserves, with the level of domestic activity bearing the burden of the cost of the external obligations and the drop in international prices.

The goal of protecting the reserves was in fact re-established in September 1982. Lending to the public sector was cut and public enterprises were encouraged to borrow abroad in the short term, while domestic lending to the private sector was increased. Reserves increased as a result of the inflow of foreign loans due to the availability of World Bank loans after a decade of blockage.

The monetary restriction was intensified in the first half of 1983 but relaxed in the second, for the Central Bank had to help the central government with its serious arrears of payment. At this time it was still not possible to protect the level of reserves by recourse to short-term borrowing.

In these circumstances the effective average level of cash reserves did not decline despite the measures taken. Furthermore, interest rates proved to have very little impact in the adjustments. They were consistently negative in real terms. The most important feature of monetary policy was the intense dollarization resulting from the greater profitability of dollar deposits.

As to the institutional framework, with a view to promoting the development of the financial system a policy of institutional liberalization was introduced during the government which came to office in 1980; this policy envisaged:

- Unification of the ceiling of passive interest rates at 55%;
- Reduction to zero of the marginal reserve requirement on national currency deposits;
- De-restriction of the period of capitalization of interest;
- Authorization for financial bodies to carry out short-term operations and for the country's commercial and foreign banks to make loans of one to five years.

The results of this experiment were disappointing. Almost no progress was made in attracting deposits or in financial intermediation.

6. *Results*

From the simplified standpoint of the indicators which have the best systematic interrelationship, a systematic negative ratio is observed between the real exchange rate and the gross domestic product.

Reserves recovered rapidly after the first adjustment programme in 1978, but this was due not so much to the domestic contraction as to the completion of big mining and petroleum projects started in the first half of the decade. In 1983, in contrast, the level of reserves was maintained at the cost of a heavy cutback in productive economic activities.

The devaluations had an important impact on the reduction of imports but not on the increase of exports. This meant that the trade balance problems could not be resolved by this means. It has been established that exports were affected more by the big investment projects, as happened in 1979 and to some extent in 1984. In fact, the investment in big projects coincided with times of expanding output and therefore with the disbursement of external financing unconnected with refinancing of the debt. However, it is not easy to relate the expansion of the domestic market to the inflow of this capital. The multiplier effect ought not to have had very much impact as most of the investment was imported.

This demonstrates that external financing had a considerable effect on imports. The income elasticity of imports is much less when imports financed by long-term loans are discounted. Accordingly, the increased imports which coincided with increases in the gross domestic product were not entirely attributable to industry, just as the cutbacks were not due entirely to the austerity policies.

There is no statistical association between the movement of the gross domestic product and the performance of the balance of payments, or between this balance and the debt service; the debt service remained stable regardless of what was happening in the country.

The drop in imports as a result of the devaluations was closely linked with the declines or slowdowns in the gross domestic product.

The policy of higher real exchange rates was clearly associated with the reduction of real wages and vice versa. In the long term, however, the ratio between these two variables was positive. Factors in this were the increased exports, the exchange-rate slippage in 1979-1980 to neutralize the corresponding monetary impact, and the renewed access to external loans in the first years of the last decade.

Nevertheless, the negative impact of the devaluations on wages was greater than the positive impact of the exchange-rate slippage. This was because the abundant foreign exchange was used only marginally to improve wages and domestic demand. It was actually used by preference to:

- Service the foreign debt, including advance payments;
- Increase imports of consumer and capital goods, many of which were consumer durables;
- Make good the international reserves deficits resulting from the continuation of economic expansion up to 1977.

In view of this policy, it is understandable that the country's output should have fallen so far during the last decade despite the fact that exports tripled in value in the middle of the period.

The cutback in liquidity was due to two factors: the monetary policy and the incentives for saving in foreign currency. Furthermore, the lag in nominal incomes caused by the devaluation and inflation meant that liquidity also declined, and in addition to this the monetary policy made the lag in wage rises more effective and lasting.

The money supply thus helped to ensure that the reduced demand for liquidity was balanced at a lower level or that the increase in nominal incomes took longer, thus maintaining the higher exchange rate which had been achieved.

The available information indicates that the movement of liquidity in relation to the gross domestic product was very similar to that of wages, but there was a much weaker relationship between these income and production variables and the total liquidity; this would indicate that the dollarization policy converged with the austerity programme.

Public expenditure has been held responsible for generating excess demand and therefore inflation. However, if only domestic income and expenditure is considered, there is a surplus; and if interest payments on the debt but not the government's imports are eliminated from the calculation, the resulting deficit is much smaller than the official estimates. Accordingly, the demand-generating and in the long term inflationary impact of public spending, even in the worst of cases, was smaller than asserted. This shows that the aim of fiscal policy was to increase the domestic surplus and use it to finance the servicing of the foreign debt.

Lastly, in order to fill out very briefly the economic policy developments described in earlier paragraphs, we must record some of the many indicators of the people's living standards. The per capita gross domestic product fell sharply but wages fell even further. According to certain health indicators, poverty increased dramatically and was reflected in the incidence of transmissible and respiratory diseases and poliomyelitis and in the percentage of undernourished children. Morbidity increased enormously during the crisis (between 1974 and 1983). The incidence of transmissible diseases notified in 1983 was 431.3% higher than the incidence notified in the national health system during 1974. The increase was 1 184% for acute respiratory diseases.

As for income distribution, wages amounted to 46.9% of the national income in 1974, 40.1% in 1980 and only 33.9% in 1984. In real terms, wages were 27.4% lower in 1984 than in 1974, while business profits were 51.9% higher and the urban per capita gross domestic product 19.7% lower than in 1961 despite the drop in the migration rate.

III

Agriculture and the adjustment policies

The approach taken in this article to evaluate the impact of economic policy on agricultural development is to make an analysis by products, for in Peru they have a clearly regional association. The nine main products are considered for this purpose, representing about 50% of the gross value of agricultural output. This method is based on the assumption of great heterogeneity in Peruvian agriculture.

The analysis which follows is based on individual study of the trends throughout the period 1970-1985 and fluctuations around these trends. The main justification for this method lies in the existence of distinct factors of economic policy and temporary or cyclical movements in the economy as a whole in the long term, which in this case is taken to be 15 years. In this study a statistical relationship is considered to be positive and strong when the long-term trends follow a similar curve and there is a strong statistical relationship between the fluctuations around these trends. In this case we consider that the impact of one variable on another is "structural", i.e., it affects both the immediate and the long-term curve of the trend. When this is the case the impact of the policy is very great, for it continues over a long period and affects, throughout the 15 years, the long-term trajectory prior to the crisis and accordingly the middle levels around which future fluctuations will occur. This power has precisely the effect of causing very rapid changes in the long-term path of the variables. The study does not take into account the long-term effects which will be visible only in that long term and which will probably be of great importance in some respects, such as technology. The relationships between variables are not so strong when, for example, the trends are similar but the fluctuations are not related; we then conclude that the similarity is due to factors beyond the scope of the study. On the other hand, if the trends are not similar but the fluctuations in the variables have a statistically significant relationship, we conclude that the influence of one variable on another is very short term and does not have a "structural" impact on it. In this summary we present only some of the graphic or statistical evidence, so that it should indeed be a summary. We have preferred to establish very simple equations in the regressions even though their explanatory level is low.

1. *Potatoes*

Potatoes are the main product of the Sierra and in the long term their output shows a downward trend, the linear path of which is not affected by the long-term variations in the country's total output and in wages or in its own price relative to the general consumer price index. The short-term variations fluctuated around this linear path. Nor did the weather or credit affect the long-term production levels. In fact, during the 15 years of the period under study the long-term trend of credit was linear and upward while, as pointed out, the output trend was linear and downward. The credit curve indicates that the macroeconomic adjustment policy did not affect the trend before the crisis. Potato production thus seems to have been unaffected by the national economic crisis; it proceeds with its own crisis.

The picture was different in the short term since, to begin with, a clear inverse ratio was established between prices and quantities, and the weather clearly had an impact on the movement of these two variables. It appears that variations in the amount of rainfall determined variations in the areas sown and harvested and the harvest determined the market price. This is because we are dealing here with unirrigated agriculture.

It has been established that another short-term factor was the amount of credit granted by the Agrarian Bank in the sowing season, which is in the calendar year preceding the harvest year. It must be stressed that in view of the restriction of lending, the loans were concentrated on the most efficient production units. However, the inverse ratio between the trend paths of the two variables raises questions about the impact of lending on output. It is clear that, although the credit obtained each year generally varied in the same direction as output, as the years passed an increasing volume of credit was obtained per ton produced and that the loans grew steadily less effective.

The short-term variation in real producer incomes, measured by the gross real value of potato production, depended on the variation in relative prices. As these were affected by the variation in the quantities produced, it might be expected that the main determinant of the incomes of peasant potato farmers was the amount produced. However, setting this factor against the impact of the real exchange rate of the previous year, we find that the latter dominated the former and that this typical adjustment factor in Peru is the most probable explanation for the variation in peasant incomes. Apparently the close relationship between the real exchange rate of the previous year and the gross real value of potato production was due to a very powerful substitution effect between potatoes and wheat. Potatoes thus behaved as a kind of tradeable good. The influence of demand fell to the point at which there was no significant relationship between the variation in relative prices and the variation in real wages.

2. *Rice*

Rice is the main product of Peruvian agriculture; it is based on the Coast and is increasing most strongly in the Selva. In the case of this product there was a weak relationship between the long-term paths of its output and its relative price and the path of the macroeconomic variables. One important reason for this was the permanent priority assigned to this crop and the support policies which were maintained in the midst of the crisis. The trend of credit for this activity rose in the 1980s when the economy was undergoing its main crisis.

The variations in the gross real value of output were due more to variation in the quantity than in the price. The fluctuations of credit followed output fluctuations very closely, with a year's lag. Therefore, the adjustment policies which temporarily restricted the growth of credit affected the incomes of rice producers, but the decline was offset to some extent by selected subsidies.

Since the domestic price of rice in the husk was influenced primarily by movements in the international prices of husked rice and secondly by movements in the real interest rate, we consider this product to be a tradeable good although it is intended for the domestic market.

3. *Sugar cane*

Long-term *sugar cane* output depended to a large extent on the flow of the Coast rivers in the previous year. Prices followed a similar path to real wages and international sugar prices.

The gross real value of output depended in both long and short terms on the variation of prices rather than on the amounts produced. The variation of the real exchange rate and real wages in the previous year together explain the fluctuation in the value produced. This is one of the few examples of a farm product in which the demand seems to play a powerful role in determining the value through its impact on the quantity produced. However, it is difficult to understand why in each year means of production should adapt to the demand of the previous year even though the sugar actually came almost entirely onto the domestic market.

Since prices and quantities are determined independently, the adjustment policy, with higher real exchange rates and lower real earnings, will have had a double effect on the real incomes of cane producers. On the one hand, a positive effect via higher product prices; on the other hand, a negative effect via reduction of quantities owing to lower demand. The information obtained seems to indicate that the positive effects were more important.

4. *Cotton*

Despite the downward trend of domestic prices as a result of the behaviour of the international price and the long-term exchange rate slippage, *cotton* output maintained a linear and upward trend during the 15 years in question. Variations in the national economy do not seem to have affected this path.

The fluctuations in the relative price show a close connection with international prices in harvest periods and also with the real exchange rate of the previous year. This is apparently due to the forms of payment to the producers, which take into account the international price at the moment of delivery of the product.

The short-term variation in the quantity produced depended primarily on the variation of profits in the previous year. Furthermore, since prices depended on the real exchange rate and international prices, the gross real value of output ought to have risen in both price and quantity with the implementation of the adjustment policies. The most powerful determinant variable was therefore the real exchange rate of the previous period.

5. *Coffee*

Coffee output and its gross value showed an upward linear trend despite the downward movement of prices from 1979.

In the short term the gross value of output was associated with variations in the domestic price, which was based on the international price, and in the exchange rate in the previous period. This product is intended primarily for the external market and its supply depends basically on its profitability.

Accordingly, coffee producers were benefitted in the long and short terms both by higher international prices and by the adjustment policies which raised the real exchange rate.

6. *Hard yellow maize*

The price trend of *hard yellow maize* moved roughly in step with the international price up to the middle of the period under analysis. The paths then diverged: the domestic price fell while the international price rose. The production trend turned downward at the beginning of the crisis but it has risen considerably in the 1980s. As in the case of rice, movements in maize output reflected a specific incentives policy. The aim was imports substitution. The specific policy offset any long-term effects of the crisis and the adjustment policy.

Fluctuations in the short-term price of maize depended on variations in the international price and the real exchange rate. This is the product which was subject to greatest competition from imports. Variations in the quantities produced had the greatest effect on the gross value of output and they apparently depended heavily on the availability of credit in the same year. This being the case, the stabilization policies will have affected maize production. Nevertheless, real incomes do not seem to have been affected.

On the other hand, demand had a clear impact on imports. Variations in real wages also affected the supply and therefore the amount to be imported, but not the price or the output in the following year.

7. *Starch maize*

Starch maize, a mountain product and therefore of peasant origin, showed a constant linear production trend unconnected with the adjustment policies. This is a similar case to potatoes, another mountain product. The long-term trajectory of the relative price was also similar to that of potatoes, i.e., ascending quadratic before the crisis and descending throughout the crisis.

The short-term price was also inversely related to the quantity produced. Wages in the previous year, unlike the case of potatoes, seem to have influenced output; this would indicate that output increased in expectation of increased demand. However, a more formal analysis is needed to evaluate the actual likelihood of such planning in peasant production.

The adjustment policies which reduced real wages and therefore the production of this type of maize do not necessarily seem to have impaired the gross value of output, for prices offset this effect. The higher real exchange rate, on the other hand, caused a production cutback but also a price increase. The final outcome seems to have been favourable to this product. The corresponding regression with the real exchange rate was positive but not significant.

8. *Poultry meat*

In the long term, output of *poultry meat,* the main livestock product, showed a linear and upward trend, which was due to the heavy substitution of consumption in favour of this item. There was also a parallel downward trend in prices. The crises and the adjustments had no effect on these long-term trends. Recently, as in the case of rice and hard maize, the specific policies have offset the usual effects of the recession.

In the short term, fluctuations in quantities had a greater effect than other variables on prices, with an inverse ratio. A direct association can also be seen between real wages and output, and so demand factors seem to have dominated in the short term. This is the statistically most reliable and officially clearest case of the impact of restrictive demand policies. The odd thing is that the main impact was on the quantity produced and not on prices. This is in fact consistent with the earlier account which established a direct connection between variations in the real exchange rate and variations in poultry meat prices, but this effect acted through a recessive impact on demand and the impact of demand on the quantities produced, which in turn influenced the prices. The improvement of prices in a recession was not offset by the negative effect of the variations in quantities. Apparently, in the definition of the short term used in this study, which corresponds for poultry meat to the short cycle of the economy's dynamics, the criteria of the theory which assumes supply inelasticity do not apply, even if they appear to do so.

9. *Beef*

The long-term output trends and the gross value of the output of *beef* showed an upward curve. Prices, however, followed a typical quadratic path, first rising and then falling. In the short term, output was associated positively with real wages in the previous year and negatively with rainfall in Puno, the main livestock area. Prices were inversely related to the quantities produced.

The gross value of output in the short term also depended more on prices than on quantities. The negative impact of the crisis through lower demand was therefore not clear, since the effects of price and quantity on the gross value of output cancelled each other out. Accordingly, the adjustment policies did not affect the real incomes of livestock farmers. Once again, as in the case of hard maize, wages affected the volumes imported and not the prices.

10. *An attempt at aggregation and synthesis*

From the standpoint of the long-term trends, i.e., the trends during the period 1970-1985, it can be asserted that the adjustment policies had a less immediate impact on the quantity produced. In the case of the "traditional" products such as potatoes, starch maize and beef, output followed paths which were not altered by the crisis. The reasons for the trends seem to have little to do with the main national production cycle created by the crisis or with the adjustment policies. Nor was the production trend affected by the crisis in the case of the most vigorous products, such as rice and poultry meat. The cause lay in the power of the specific policies on imports substitution or consumption patterns. In third place were the products for which the prices and quantities produced were directly affected by relative prices, which also depended directly on international prices. This was true of cotton and coffee. The production trend of both these crops was also independent of the domestic cycle. Lastly, sugar cane and hard maize followed cubic long-term paths and not quadratic ones like national output and demand as a whole. Sugar production was affected mainly by the availability of water and hard maize by the vigour of the substitution policy.

The long-term trend of relative agricultural prices was universal. All the prices followed a quadratic curve first rising and then falling during the crisis. This movement was consistent with that of relative international prices and, apparently, with the traditional deterioration of the terms of trade of commodities in recessions. Only poultry meat and its input, maize, were exceptions to this trend. In the long term, the path followed by relative prices did not coincide with that of the real exchange rate even in the case of the products whose price fluctuations were closely linked to the exchange rate in the short term.

An analysis now follows of the short-term performance; the products will first be classified into tradeable and non-tradeable in the light of the formation of their prices. They will then be grouped in terms of the impact of real wages, credit or international prices and real exchange rates on the quantities produced.

First we have those products for which international prices and the real exchange rate were decisive in the formation of their prices. These products are coffee, cotton, sugar cane, rice and hard yellow maize. The effect of the real exchange rate was dominant in the short term, for its variation accounted for 67% of the weighted index of relative prices of these products. In the long-term, as already pointed out, their movement suggests that international prices were the most important factor. It might also be argued that the transnational pattern was repeated within each country, thus internalizing the explanation.

Coffee and cotton can be considered the most typical tradeable products, for their prices were determined almost exclusively by the two variables mentioned above. The quantities produced also depended on relative prices and on the real exchange rate of an earlier period. The other products must have been affected by other less important factors which offer a better explanation of the determination of short-term fluctuations. Several of them, such as rice, hard maize and sugar cane, were affected by factors which offset the benefit obtained on the price side. The statistical relationship found with wages or with credit, depending on the case, suggests a negative impact.

In another group of products the variations in the quantities produced were the main reason for the variations in prices, with an inverse ratio. Furthermore, the output was intended exclusively for the domestic market. The products in this group are potatoes, starch maize and the two livestock products, poultry meat and beef. The quantities produced seem to have fluctuated in all cases, except for potatoes, in a similar way to wages in the earlier period. Wages were responsible for 36% of the short-term variations in the quantities produced.

In the case of potatoes, rice and hard maize the short-term variation in the quantity produced was more closely connected with the credit received than with other policy variables. The problem, especially in the case of potatoes, is that it is difficult to view credit as an independent variable when there was also a close relationship between it and the amount of rainfall. Nevertheless it must be remembered that the trend of real lending to agriculture indicates a credit restriction. As this restriction was not observed in most of the chosen products, its impact must have been on others. To sum up, the impact of exchange-rate, monetary and wages policies on agricultural production differed according to the type of product. From the regional standpoint, it is hard to establish from the available information that there were different impact. On the Coast, producers of poultry meat and some rice producers were hurt by the austerity policies, but these policies seem to have worked to the benefit of producers of sugar cane, cotton and hard yellow maize, and of some rice producers as well. In the Sierra, in contrast, potato producers benefitted, but producers of beef and starch maize suffered. Lastly, the situation was unclear in the Selva; the credit restriction had negative effects on production of rice and hard yellow maize, and the real exchange rate had positive effects on production of hard maize.

As to the type of producer, sugar co-operatives and more so cotton co-operatives benefitted from the adjustment policies. Medium-sized producers of rice were probably slightly hurt, and producers of hard maize benefitted. On the other hand, small and medium-sized producers of potatoes were favoured by the adjustment, but the opposite was true of beef producers. Lastly, and still in the short term, large and medium-sized producers of poultry meat suffered.

The main conclusion is that a suitable framework for agricultural development requires both a high real exchange rate and increased credit and wages. It is also necessary to establish a floor for producers of goods whose prices are very sensitive to output variations. This implies real heterodoxy in economic management and would entail drastic redistribution of capital to waged labour.

The formal equation which comes closest to the empirical findings is:

$$\hat{p} = \hat{P}a^{*} + \widehat{E/Pi}$$

where $\hat{p}$ is the relative price of the tradeable products, $\hat{P}a^{*}$ is the dollar price of their counterparts in the international market, E is the nominal exchange rate, and Pi the index of non-farm prices (in our case these prices are assumed to vary in step with the consumer price index). A simpler formula is sufficient for the other type of goods:

$$\hat{p} = \hat{X}a$$

where $\hat{X}a$ is the variation in the production of the same product.

In turn, the variation in the quantity produced is connected, in the case of several products, with the variation in demand in a previous period, so that we can express it as follows:

$$\hat{X}a = (\widehat{WLi/Pi}) - 1$$

where WLi is the nominal level of earnings.

Lastly, in the case of export products, the quantity produced is related to the profits in the previous period which, in turn, are determined by the relative prices. It can be expressed as:

$$\hat{X}a = (\hat{p}) - 1$$

The formula for those products whose fluctuation is connected with access to credit is:

$$\hat{X}a = (\hat{C}) - 1$$

The validity of this equation cannot be questioned empirically for both in the long term and in its fluctuations the aggregate agricultural output follows a curve very close to that of aggregate credit. Our reluctance to give it greater weight in the product studies is because the results are not as conclusive as in the aggregate analysis.

However, many of the earlier conclusions refer to the effect of only a few variables on the short-term variations in agricultural output and prices. It may have happened that the beneficial effects revealed did not offset the long-term damage caused by the deterioration in international prices. This can be seen in the contrast between the downward trends of the real exchange rate and relative international prices. On the other hand, the specific policies may have altered the effect of the general policies. Lastly, it must be remembered that the variable chosen to represent real peasant incomes does not take into account changes in production costs. The uncertainty about the value of the respective figures directed us towards the gross real value of output used in this study. We will end this summary with a brief review of the specific policies.

IV

The specific policies

A new interest has been taken in agriculture but it has not led to specific and coherent measures for capitalization of farming. The minimum institutional bases do not exist for the stable implementation of specific policies on landholding, regional priorities and institutional frameworks, and the role assigned to the State has undergone major changes. Accordingly, the specific policies have not had a widespread impact on agriculture.

The exceptions in terms of continuity are the policies on incentives for rice and poultry meat, on production in the Selva, on subsidies for imported foods and fertilizers, and on the priority to be given to agriculture in development lending.

1. *The institutional aspects*

The economic crisis occurred at the end of the process of agrarian reform which had altered the system of ownership of the large production units, both modern and traditional. The main concern during the reform was with institutions and not directly with development. The crisis period was marked by the reversal of this new institutional framework. The adjustment policy was introduced, obviously, in circumstances of acute institutional instability which did not encourage long-term investment. The economic crisis affected the reformed structure of collective ownership by destroying a large part of the co-operative system which had been created and replacing it with individual smallholdings. Out of 618 co-operatives in existence in 1985, 108 had received approval for this change in mode of operation, 69 were in the process of making the change, and 101 had actually parcelled out the land. Various factors contributed to this development, including: the difficult weather conditions in the last decade, when there were serious droughts and floods; the lack of clarity in the operational structure of the co-operatives, which had no goals of accumulation and rationalization of production; management difficulties and corruption, which undermined the confidence of the members in the reformed enterprises; the lack of proper retirement arrangements, which reduced the incentive to retire from individual ownership; and the hostility of the last two governments to the co-operative model.

Marketing was the other area in which an important reversal of the institutional framework took place. For example, a food marketing network had been established during the agrarian reform which delivered food to the consumer through a chain of supermarkets. The deregulation, intensified by the government of President Belaunde, destroyed this system and with it the possibility of price regulation.

2. *The policy of imports subsidies*

The main foreign trade policy was to subsidize imported foodstuffs to satisfy the massive urban consumption. In the long term, imports of wheat and maize-sorghum tended to increase, and there was a general rise in the imported component in the basket of consumer goods. The long-term trend was not altered by the economic crisis, but natural disasters did have a visible impact. Imports rose on these occasions and subsequently maintained their higher level. The establishment of new patterns was encouraged by the policy of subsidies for already subsidized imports.

In 1977 the annual subsidies for these items amounted to 96.6% of the imported value. In 1978, under the austerity policy, they were reduced to 15.7% but then climbed back to 62.3% in 1979. The most obvious example was that of inputs for production of poultry meat, which became cheaper in comparison with beef, pork and lamb.

In short, and in accordance with the available information, the prices of food products with a high imported component were adversely affected by the adjustment policies. This was due to the overall policy of devaluation and the specific policy of reducing imports subsidies. In the long term, however, the imports subsidies were a factor in the systematic fall in the prices of imported products in relation to those of domestic products and an incentive for their increased consumption.

3. *Prices policy and the agricultural crisis*

Producers' profits fell. During the 1970s, in particular in the second half of the decade, the input-product terms of trade were clearly negative for cotton, sugar cane, yellow maize and potatoes. The increases in the cost of inputs, labour and machine hours were larger than the price increases. During the period of macroeconomic adjustment the machine-hours cost increased the most, followed by day wages. The fertilizer subsidy was a compensatory factor in the case of inputs. These results are important because they illustrate the progress made in the basic labour force. However, it is difficult to obtain reliable figures on the movement of costs during the past 15 years.

The end result of this deterioration in the terms of trade was decapitalization of modern agriculture in favour of industry. Rice was the product which best resisted the crisis as its prices rose faster than its costs between 1975 and 1978, which was not the case for the other crops.

In the 1980s the priority products were the only ones whose costs rose less than their prices: in rice owing to the movement of controlled prices; and in yellow maize owing to higher productivity and prices. In the case of potatoes, the production increases resulting from better weather conditions were reflected in an enormous drop in prices. In cotton and sugar cane, products not covered by a specific policy, costs rose more than prices.

4. *Financial policy*

In 1975 agriculture received barely 3% of the total allocation of credit in the country, industry 38%, trade 26%, and construction 12%. Of this small amount, private banks lent only 5%, and the Agrarian Bank was the institution which supported the sector.

Loans were received by barely 7% of the production units, representing 19% of the cultivated area. Rice, cotton, potatoes and maize received 78% of the loans in 1975. The main beneficiaries of the lending were the large collective enterprises, and those who received least were the Andean peasants.

The following changes have taken place in recent years: rice has made a major advance; cotton has declined; preference has been given to lending to individual producers; and the amount of credit has fallen as a result of the recession.

Analysis of the impact of credit on output shows that there was a real increase in the credit/product and credit/hectare ratios in the long term; however, aggregate output fell. As pointed out earlier with respect to certain products, it would seem that credit had no positive influence on output in the long term.

Another very important point is that, despite the negative real interest rates, the financial costs of the farms rose enormously. The decapitalization of agriculture is clearly reflected in the financial situation of the modern farms. The proportion of financial costs in total costs rose from 8.3% in 1978 to 30.2% in 1983 for potatoes, from 13.1 to 48.6% for cotton, from 7.3 to 30.2% for yellow maize, and from 6.9 to 30.2% for rice. In these products, as may be imagined, bad debts increased owing to the fall in profits caused by the deterioration in relative prices.

5. *Summary*

To sum up, the specific policies are of great importance in the determination of the final results of the crisis in Peru's agriculture. A more detailed study than the present one is therefore needed. It can be said that in general terms the macroeconomic policy was not backed up by a coherent set of specific policies. Prices policy served to protect agriculture from external competition but it also increased costs. The supply of the massive urban market required a degree of continuity in the production incentives for poultry meat and rice. In institutional terms, the main goal was to reverse the agrarian reform and the State marketing system. With respect to the regionalization of agriculture, the regional emphasis varied with the successive governments. Production in the Selva has been given a particular boost in recent years. Lastly, the crisis seems to have affected the already fragile process of capitalization. The financial problems, the cutback in the research work financed by the public sector, the institutional instability and the growing shortage of experienced agricultural professionals, in addition to the recurrence of very destructive weather conditions, have all contributed to this outcome which will have its greatest effects in the years to come.

ILPES in its twenty-fifth year

Excerpt of the address delivered by the Director-General of ILPES, Alfredo Costa-Filho, at the ECLAC ceremony in commemoration of United Nations Day and of the twenty-fifth anniversary of the Institute, Santiago, Chile, 23 October 1987

The vigorous conceptual, methodological and technical retooling of public policy planning and co-ordination being carried forward by the Latin American and Caribbean Institute for Economic and Social Planning (ILPES) has involved a greater concentration on market economies, which are in the majority in the region. I shall confine myself here to discussing some of the considerations which the Institute has brought to the attention of the governments in various forums during the past three years, rather than dwelling on some of the more traditional criticisms of planning. My aim in presenting this admittedly incomplete overview is to draw attention to the main concerns of the Institute as it reaches both its twenty-fifth anniversary and a turning point in its history. Throughout these 25 years, the analysis and interpretation of the region's development carried out by ECLAC has invariably provided the backdrop for the work of the Institute. I shall now briefly review these considerations, which I have grouped into six categories.

The first of these considerations relates to the concept of planning itself. Let us grant the fact, first, that the real economy in which we all live is a mixed economy and that it would be idle to insist upon either of the two doctrines of planning and the market to the exclusion of the other. With due recognition of each country's separate identity, this issue needs to be approached in terms of a pragmatic search for ways of combining the two decision-making processes: one reflecting some degree of overall articulation legitimized by the greatest possible collective consensus, and the other based on the price system. In keeping with this line of thought, planning would ideally form part of an unconventional sort of public right: the right of each national society to be aware of the courses which its future development is most likely to take and to make them subject to a given scale of priorities.

The second is a theoretical consideration and relates to the essentially new nature of the economic and social dynamics of the world today. As the allocation of resources for the expansion of scientific and technological knowledge has increasingly been oriented towards its industrial potential, the strategy of world production has changed. On the one hand, having control over this new information has become a key factor in minimizing the risks of any undertaking; on the other hand, the accelerated differentiation of processes and products, coupled with the explosive growth of labour specialization, has become the pivotal element of profit maximization. As a result, the societies of the region have become more and more complex, both in terms of their structural elements and their relations with one another. If this construct is a valid one, then the orientation of future development, viewed as a national undertaking, is a collective task which cannot be discharged solely by one or another ministry.

The third consideration, which is connected to the preceding one, concerns the new international role of the region's economies. For more than three years now the Institute has been arguing that in order for any national reactivation and development strategy to be implemented, more favourable terms will have to be obtained in the renegotiation of the external debt. Since any dynamic production activity requires an intensive use of capital, any plan by the countries of the region for achieving a sustained recovery of production and employment levels is foredoomed to failure if the countries continue to be caught up in the historical paradox of being net exporters of capital.

The fourth consideration involves what is virtually a corollary of the preceding two: the strengthening of intra-regional co-operation is a *sine qua non* for securing a better position in the world economy of the future and, indeed, for recovering the internal freedom, which the countries lost during the crisis, to design and implement their own economic and social policies. The regulatory institutions which were created in the 1940s to ensure world economic and financial stability have, in the 1980s, virtually ceased to function as a means of articulating such stabilization schemes with the promotion of development in Latin America and the Caribbean. Long-term development planning presupposes the establishment of a new and more favourable international regulatory framework; the creation of such a framework —a delicate task of diplomatic negotiation with the North— will be hampered, however, if the countries of the region do not formulate plans which will strengthen their platform of consensus on this subject. This is undeniably a collective task of extreme complexity, inasmuch as it involves strengthening the multilateral system of trade, restructuring world monetary and financial mechanisms and, especially, making feasible greater access to scientific and technological development.

The fifth consideration focuses on the internal dynamics of the countries of the region. I would like to draw attention to just one of the ideas in this regard which the Institute has stressed time and again: this is, simply, that if the market economies of the region are to be reactivated, the energies of private enterprise must be given full play. If this is to be done, then planning needs to overcome its initial resistance to accepting the important role of entrepreneurial gain as a legitimate tool of development. The Institute has gathered a considerable amount of data in the region which indicate that the present curb on profits is not primarily due to resistance from labour. Indeed, in many cases an unopposed deterioration in real wages is to be observed, along with a decline in levels of employment. Erratic exchange rate fluctuations, high interest rates, external credits squeezes and obstacles to technological refitting often act as greater contraints on long-term development. This is why, when a call is made for deregulation, the Institute is alert to the need to make a distinction between the international context and the domestic framework of each country: on a world scale, the less multilateral regulation there is, the more limited the opportunities for the development of private enterprise in the region will be.

The sixth and final consideration requires a brief reference to some institutional aspects of planning. While the Institute shares the view that the State should become more efficient, it also feels that it is important to distinguish between the State as a bureaucratic structure and the State as an instance of interaction among social agents, which thus provides the political representation for each national collectivity. The combination of these two facets of the State forms an institutional complex which poses the main obstacle to an outright internationalization of the region's economies. The Institute is convinced that in just a few years time such internationalization —if undertaken indiscriminately— would, from the perspective of productive development, wipe out the borders of the economic map of the region and, from an historical perspective, efface the individual features of the countries' very identities. One lesson to be learned from the experience of today's developed countries is that the State has always played a vital role in promoting private initiative. The Institute is concerned that the artificial miniaturization of the State may lead to the formation of a tiny and weak national entrepreneurial sector or one which is concentrated in the hands of a few, thus giving rise to a larger informal sector and to social exclusion. This idea is the starting point for one of the Institute's most emphatic proposals: the technocratic tendencies of planning must be overcome so that it may be converted into an unstinting exercise in concerted social action. Entrepreneurs, just as all other organized social agents (since the State should give direct consideration to the weakest and otherwise unrepresented sectors), should not be called upon only to implement the "indicative" aspects of a type of planning in which normative decisions are made on high and then passed down to those below. On the contrary, they should take part in each one of the stages involved in formulating, orchestrating, implementing and legitimizing each national development policy.

I would like to conclude by underscoring three final points. The first is that no one model can provide a country with all it needs in order to devise its own planning procedures and tools. I believe that my previous comments clearly imply that planning, when understood as a process of collective decision-making, has a marked political content and involves much more than just problems of economic programming. The second point I would like to make is that the success of planning in the market economies of the region also depends on how this vast social learning process —a State-co-ordinated process leading to the promotion of participation and the formation of consensus— is brought about and sustained. This is the only way in which the countries' systems of social co-existence can be bettered, through the replacement of conflict and confrontation with a spirit of co-operation and solidarity. The third and final point that I would like to make is that, with the maturity which its 25 years brings, ILPES is also concerned by approaches that dehumanize the understanding and orientation of development in the market economies of the region, especially because one of the major challenges facing civilization as we near the end of the century is that of creating a new type of person, one who is able to live harmoniously with others and to achieve personal fulfilment in situations marked by swift technological change. The Institute is disquieted by the idea that on 31 December 1999, as the twenty-first century is ushered in, most of the region's peoples may be walking the streets, perhaps with "bread in hand", but surely still "counting on their fingers", to recall the words of the poet César Vallejo. This moves the Institute to re-think development and to consider the new responsibilities to be shouldered by planning and public policy-making.

Recent ECLAC publications

Raúl Prebisch; un aporte al estudio de su pensamiento (Raúl Prebisch: towards an analysis of his thinking) (LC/G.1461), Santiago, Chile, 1987, 146 pp.

This publication opens with the words spoken by Norberto González, Executive Secretary of ECLAC, at the tribute to Dr. Prebisch which was organized by the Institute of International Studies of the University of Chile at ECLAC headquarters in November 1986. During his talk the Executive Secretary touched upon some outstanding features of this eminent figure's personality and discussed a number of the ideas which shaped his thinking and which continue to be fully and particularly relevant to present circumstances. In this connection, mention was made of his concept of the centre and the periphery, industrialization, capital formation, marginality and poverty, and the links between the State and the market. The Executive Secretary placed special emphasis on the fact that, rather than making Prebisch's thinking the object of a static interpretation, the concepts he developed should be approached with the same curiosity and discernment with which Prebisch himself appraised the ideas of others.

The next section of the publication is devoted to an article written by Dr. Prebisch in 1982 for presentation at a World Bank seminar on the thinking of the "pioneers of development". In this article Dr. Prebisch provided an overview of how his theories about development evolved from the time he began his career as a public official in Argentina during the 1930s until his later years as Director of the *CEPAL Review*.

Just a few days before his death, Dr. Prebisch delivered an address at the twenty-first session of ECLAC which was to be his last public statement. Because it was his last, and because of the force with which he spoke on that occasion, this text is also included in the publication.

The most valuable part of this book for students of Dr. Prebisch's thinking is undoubtedly the bibliography prepared by the joint ECLAC/ILPES library, for which a number of other bibliographies were used as references. At the time they were compiled, these reference works represented a noteworthy effort, but they contain various gaps which the new bibliography attempts to fill. As part of this task, the collections of a number of other libraries, in addition to the ECLAC/ILPES library, and the records section of ECLAC were examined.

The works cited in this bibliography include books, reports, papers, articles from periodicals, lectures, speeches, etc. These are presented in chronological order and, within that structure, have been arranged alphabetically by title and have been assigned consecutive numbers.

Economic Survey of Latin America and the Caribbean, 1985 (LC/G.1466), Santiago, Chile, May 1987. One volume (660 pp.)

The volume is divided into two parts. Part One examines the evolution of the Latin American economy in 1985, while Part Two contains separate analyses of each country's economy.

The section concerning the regional economy as a whole begins with an analysis of its main trends, including the slowdown of the region's economic recovery and the spread of inflation, as well as the deterioration of the external sector. The second section of Part One focuses on the regional product, the rate and structure of economic growth, total supply and demand and the domestic availability of goods and services. The study then turns to the subjects of employment and unemployment and prices and wages, to conclude with an analysis of the external sector, with special attention being devoted to external trade, the balance of payments and the external debt.

Latin American and Caribbean development: obstacles, requirements and options (LC/G.1440-P), Cuadernos de la CEPAL series No. 55, 1987, 184 pp.

The Economic Commission for Latin America and the Caribbean held its twenty-first session in Mexico City from 17 to 25 April 1986. At the opening ceremony of the ministerial level of that session the President of Mexico, Miguel de la Madrid Hurtado, invited the Commission to once more take up "its historical legacy and the great tradition of clear, independent thinking it has developed in the course of its history and provide an up-to-date conceptual framework that is appropriate to the problems of the region". The President called for this process of "analytical renovation" in view of the "complexity, magnitude and relative novelty of the problems we are jointly facing".

He identified four specific topics of special relevance for the countries of the region: economic stabilization schemes, the interrelationship between the external debt and the international financial system, the adjustment of national production processes to new circumstances, and the role of intra-regional co-operation.

In fulfilment of the above mandate, the Secretariat has prepared this study, which presents its views concerning possibilities for taking action to deal with the subjects outlined by President de la Madrid. On a broader level, it also sets forth some lines of thinking concerning the development of the Latin American and Caribbean countries within the context of the obstacles which have held it back in recent years, as well as the outlook for the future. In preparing this study consideration was given to the views of a considerable number of government authorities and scholars of the region who were brought together expressly for this purpose at a series of seminars held between September and November 1986. Its aim is to contribute to the debate on how to overcome the crisis and achieve development from an action-oriented Latin American and Caribbean perspective and, on that basis, to arrive at a synthesis of the two main interrelated topics on which the concern of nations and governments is focused: how to achieve economic development and also consolidate and expand democratic and participatory processes.

Los bancos transnacionales y el endeudamiento externo en la Argentina (Transnational banks and foreign borrowing in Argentina) (LC/G.1483-P), Cuadernos de la CEPAL series No. 56, Santiago, Chile, 1987, 112 pp.

This study analyses the process of external borrowing by Argentina since 1976 and the role of the transnational banking system in this process.

Chapter I provides background information and discusses how Argentina's indebtedness is linked to the international crisis and to the indebtedness of the Latin American countries as a whole. It includes an examination of the origin, causes and consequences of such borrowing, the recessionary policies which have gone along with the resulting indebtedness, the negotiations conducted within the framework of the Cartagena Consensus and some guidelines for the utilization of these credits.

Chapter II takes a look at the actors involved and, in so doing, groups them into unconventional categories: on the one hand, the conglomerate made up of the transnational banking system and its clients in the country, and, on the other hand, the vast majority of the people in Argentina. This discussion brings out the fact that each of these groups turned to the major political bodies for institutional support: the International Monetary Fund, the governments of the developed countries and the governments of the debtor countries. Particular attention is devoted to the actions of the transnational banks in Argentina and to some of the basic characteristics of the country's economy during the time of the military government.

Chapter III deals with a variety of subjects: the economic policy of foreign borrowing; the main features of Argentina's external debt and the nature and terms of foreign loans; the various rounds of negotiations and their dynamics, including the terms and conditions of the refinancing of the debt and the country's negotiations with the International Monetary Fund; and some of its legal policies concerning external borrowing.

Chapter IV explores some of the possible outcomes of this situation, taking into consideration the relationships between the financial system and foreign borrowing, the national and international economic policies which may be implemented, and the overall development model that is ultimately adopted. The study concludes that, in the future, the transnational banking system in Argentina may serve as the care element for a model of dependent development, may lose its influence within a model of autonomous development, or, if the solutions found fall between these two extremes, may occupy some sort of intermediate position.

Las empresas transnacionales en la economía del Paraguay (Transnational corporataions in the Paraguayan economy) (LC/G.1434), Estudios e Informes de la CEPAL series No. 61, Santiago, Chile, 1987, 115 pp.

This study focuses on the presence and repercussions of transnational corporations in the Paraguayan economy from the 1970s onwards.

The first chapter provides a brief description of the historical background of direct foreign investment in Paraguay. The second chapter opens with an examination of such investments from the 1970s onwards and presents a summary analysis of the general features of the economic cycle which began in the early years of that decade. The discussion then turns to the serious shortcomings in the official statistics on direct foreign investment which pose an obstacle to a thorough study of this subject. This is followed by a general discussion of the main economic activities in which external capital has been invested and a more detailed look at the main source countries of direct foreign investment. The third chapter describes the major transnational corporations which have invested in the manufacturing industry, while the fourth chapter focuses on those in the agricultural and forestry production sector and on other economic activities in which transnational corporations are involved. The fifth chapter deals with transnational banking corporations in Paraguay, and the sixth chapter analyses the extent of transnational corporations' involvement in the exportation of the country's main products. Finally, a summary of the principal effects of these corporations' presence in the country is given, as are some general conclusions.

International economic relations and regional co-operation in Latin America and the Caribbean (LC/G.1422), Estudios e Informes de la CEPAL series No. 63, 1987, 267 pp.

The first part of this document is devoted to an analysis of the international economic relations of Latin America and the Caribbean. The main ways in which such relations have evolved in recent years are discussed, as are factors having a bearing on the course they may take in the future and certain policy options that are open to the region in relation to these trends and prospects.

Part One has five chapters. Chapter I, which is an introductory discussion, examines the evolution of the world economy, particularly since the 1970s, and its main effects on Latin America and the Caribbean. Consideration is also given to various indications of what the economic behaviour of the main industrialized countries is likely to be in the near future. On that basis, possible action alternatives for Latin America and the Caribbean on the regional and international levels are explored.

The second chapter provides a more detailed description of trends in the external relations of Latin America and the Caribbean.

Chapter III reviews some of the main features of the exportation of goods from Latin America and the Caribbean.

Chapter IV is devoted to a discussion of trade in services in Latin America and the Caribbean and, in particular, of the international initiatives taken in this connection in various multilateral forums. Some of the basic aspects of the possible insertion of the region in world production and international trade in services are also analysed. The chapter ends with a few suggestions concerning the formulation of policies in Latin America and the Caribbean in this field.

The fifth and final chapter of Part One deals with problems relating to external financing and debt in Latin

America and the Caribbean. Consideration is given to the financial trends and prospects in the region, the latter being based on projections covering the period up to the mid-1990s. The origin and nature of the external debt of Latin America and the Caribbean are also analysed. The chapter closes with a number of suggestions concerning possible approaches with respect to regional action for dealing with the external debt and its servicing.

Part Two of the document, which concerns regional integration and co-operation, contains three chapters. These deal, respectively, with negotiations and instruments for revitalizing regional trade, the search for ways in which integration and co-operation can be made to converge, and the services sector in intra-regional trade.

La industria farmacéutica y la farmoquímica; desarrollo histórico y posibilidades futuras. Brasil, Argentina y Mexico (The pharmaceutical industry: its past development and future possibilities. Brazil, Argentina and Mexico) (LC/G.1470-P), Estudios e Informes de la CEPAL series No. 65, 1987, 177 pp.

This study analyses the present state of the Ibero-American pharmaceutical industry and explores possible forms of bilateral or multilateral industrial, scientific and technological co-operation which could help lead to the formation of a larger market and the achievement of economies of scale both in the field of science and technology and in the production of pharmaceutical raw materials.

Obviously, not all the countries of Ibero-America have reached the same level of development in the field of pharmaceutical chemistry. This study identifies at least four different developmental stages in this respect within Ibero-America and classifies various countries of the region within this framework. "Developmental stage I" corresponds to the industrialized countries. "Developmental stage II" is characterized by the existence of a local industry capable of formulating and synthesizing a large percentage of the variety of active drugs normally used in the processing of final or specialized pharmaceutical products.

The basic chemical industry does not possess the degree of integration or efficiency usually observed in countries which have reached "developmental stage I", and this fact gives rise to a series of problems which must be resolved by any medium- and long-term programme for expanding the pharmaceutical sector.

Virtually all of the final or specialized pharmaceutical products consumed in the "developmental stage II" countries are produced locally. A number of European nations, including Spain, as well as Argentina, Brazil, Mexico, Israel and India fall into this second group. Clearly, however, major differences exist among them which should be taken into account when designing specific public policy tools for use in any particular situation. "Developmental stage III" includes countries whose pharmaceutical industries have achieved some capability for formulating specific products but which operate at a more rudimentary level than in the preceding case. Within the Ibero-American region Colombia, Chile and Peru, among others, fall into this category. Finally, "developmental stage IV" covers the small countries in the Ibero-American region in which no local pharmaceutical production takes place and which must therefore import the whole of the supply needed for the domestic market. The countries in this group do not produce basic drugs either.

The countries at each of these four developmental stages are faced with different problems and need to implement relatively different public policy measures. The basic outlines of the public policies called for in each of the four types of situations identified in the study are examined in chapter four. Beginning with the fifth chapter, the study leaves the sphere of theory and speculation behind and embarks upon a more indepth analysis of public-sector initiatives which might be taken in three particular countries at developmental stage II —Argentina, Brazil and Mexico— in order to speed the future development of the pharmaceutical sector in these societies. The outlines of a possible production complementarity and specialization agreement are set forth and the conditions under which such an agreement could function are examined. Within the framework of ALADI, a partial-scope trade agreement is already in existence in which entrepreneurs take an active part. Although a considerable number of products have already been the subject of negotiations, such trade is still only beginning. Moreover, the little that has been done so far in this regard primarily benefits the multinational corporations which, because they have subsidiaries in the various countries that have signed the agreement, are better able to take advantage of trade "triangulation" mechanisms. Meanwhile, private domestic-capital companies find it more difficult to operate both because they lack the multinational production infrastructures they would need in order to "triangulate" their activity and specialize their production at each location and because of the great difficulty they have in making sales to local subsidiaries of transnational corporations, which generally buy only from their respective parent companies or from firms having mutual licensing agreements with them. Thus, even if local producers were to have supplies of these products to offer, it would be unlikely that they would be able to sell these raw materials to transnational corporations.

Dos estudios sobre América Latina y el Caribe y la economía internacional (Two studies on Latin America and the Caribbean and the international economy) (LC/G.1478-P), Estudios e Informes de la CEPAL series No. 66, 1987, 125 pp.

This publication presents two studies on the links between trends in the international economy and the economic and social behaviour of the Latin American and Caribbean countries. The first study analyses the trends and prospects of the region's foreign trade up to 1981 and the impact which the crisis has had upon it. A number of perspectives and options are set forth in the concluding portion of the study. In this latter connection, an annex is also provided which puts forward proposals concerning various subjects.

The second study deals with international economic relations, with special emphasis on the part which Latin America plays in them. The final section of the study contains a discussion of a possible programme of international relations and sets out a number of elements for a regional action plan in this field.

América Latina: índices del comercio exterior, 1970-1984 (Latin America: foreign trade indexes, 1970-1984) (LC/G.1450), Cuadernos Estadísticos de la CEPAL series No. 12, Santiago, Chile, 1987, 255 pp.

Ever since its creation, ECLAC has made a constant effort to improve the quantitative bases of its analyses. The difficulties it encountered during the early stages of its work in this connection stemmed from both its resource limitations and the unsophisticated methods used for compiling and processing statistics in the countries of the region.

With the introduction of modern electronic computing equipment in most of the countries, some of these problems are being overcome, particularly in regard to data processing. Nonetheless, a number of well-known constraints continue to affect the processing of foreign trade statistics and indicators for use in economic analysis. Part of the difficulty is that the countries' original export and import records continue to be customs documents which are used primarily for tax purposes. Consequently, even though the use of computers expedites data collection and processing, once these purposes have been fulfilled many countries attribute only secondary importance to other factors which might contribute to greater accuracy as regards prices, units of measurement, the types of products traded, the point in the process at which their value is determined, international classifications, the placement of goods in tax-free zones, etc. Furthermore, it is not always possible to reconcile apparently basic elements, such as the matching of trade flows between two countries, inasmuch as they often record different amounts of exports and imports, respectively.

The available information on the prices of exported and imported goods is particularly inadequate. This has led to the use of approximations such as "unit values", which have come to be essential inputs for analyses of foreign trade flows and of their links with trade volumes and with real changes in supply and demand components, as well as for the study of price mechanisms and of conditions affecting competitiveness in international markets.

The foreign trade indicators used in this issue of the *Cuadernos Estadísticos* series are primarily based on the current values and "unit value indexes" of merchandise exports and imports. They have been calculated for the 11 countries of the Latin American Integration Association (ALADI) and the five member countries of the Central American Common Market (CACM).

The methodological aspects of these indices, as well as the experience gained in the process of their calculation, are discussed in the first part of this issue, which also includes some technical notes on the characteristics and properties of foreign trade index numbers, in order to provide users with some additional tools for assessing the significance of the various indexes.

The second part includes a series of tables showing indexes, values and structures covering the period 1970-1984. Eleven such tables are given for each country and for the 16 countries as a group. Four figures per country are also presented. Summary tables on merchandise exports and imports by SITC section are provided for the following: unit value indexes, quantum indexes and export and import structures at 1980 prices (including the total values in millions of 1980 dollars) and at current prices. Indexes are also given for the terms of trade and the purchasing power of exports based on the UNCTAD product classification. The figures, for their part, show indexes of the unit value of exports and imports and the terms of trade, indexes of export and import quantums and the purchasing power of exports, and the foreign trade structure by SITC section.

A list of ECLAC publications

PERIODIC PUBLICATIONS

CEPAL Review

CEPAL Review first appeared in 1976 as part of the Publications Programme of the Economic Commission for Latin America and the Caribbean, its aim being to make a contribution to the study of the economic and social development problems of the region. The views expressed in signed articles, including those by Secretariat staff members, are those of the authors and therefore do not necessarily reflect the point of view of the Organization.

CEPAL Review is published in Spanish and English versions three times a year.

Annual subscription costs for 1988 are US$ 16 for the Spanish version and US$ 18 for the English version. The price of single issues is US$ 6 in both cases.

Economic Survey of Latin America and the Caribbean

1980, 664 pp.
1980, 629 pp.
1981, 863 pp.
1981, 837 pp.
1982, vol. I 693 pp.
1982, vol. I 658 pp.
1982, vol. II 199 pp.
1982, vol. II 186 pp.
1983, vol. I 694 pp.
1983, vol. I 686 pp.
1983, vol. II 179 pp.
1983, vol. II 166 pp.
1984, vol. I 702 pp.
1984, vol. I 685 pp.
1984, vol. II 233 pp.
1984, vol. II 216 pp.
1985, 672 pp.
1985, 660 pp.

(Issues for previous years also available)

Statistical Yearbook for Latin America and the Caribbean (bilingual)

1980, 617 pp.
1981, 727 pp.
1983, (1982/1983) 749 pp.
1984, 761 pp.
1985, 792 pp.
1986, 782 pp.

(Issues for previous years also available)

ECLAC Books

1 *Manual de proyectos de desarrollo económico,* 1958, 5ª ed. 1980, 264 pp.

1 ***Manual on economic development projects,*** 1958, 2nd. ed. 1972, 242 pp.

2 *América Latina en el umbral de los años ochenta,* 1979, 2ª ed. 1980, 203 pp.

3 *Agua, desarrollo y medio ambiente en América Latina,* 1980, 443 pp.

4 *Los bancos transnacionales y el financiamiento externo de América Latina. La experiencia del Perú. 1965-1976,* por Robert Devlin, 1980, 265 pp.

4 ***Transnational banks and the external finance of Latin America: the experience of Peru,*** 1985, 342 pp.

5 *La dimensión ambiental en los estilos de desarrollo de América Latina,* por Osvaldo Sunkel, 1981, 2ª ed. 1984, 136 pp.

6 ***Women and development: guidelines for programme and project planning,*** 1982, 3rd. ed. 1984, 123 pp.

6 *La mujer y el desarrollo: guía para la planificación de programas y proyectos,* 1984, 115 pp.

7 *África y América Latina: perspectivas de la cooperación interregional,* 1983, 286 pp.

8 *Sobrevivencia campesina en ecosistemas de altura,* vols. I y II, 1983, 720 pp.

9 *La mujer en el sector popular urbano. América Latina y el Caribe,* 1984, 349 pp.

10 *Avances en la interpretación ambiental del desarrollo agrícola de América Latina,* 1985, 236 pp.

11 *El decenio de la mujer en el escenario latinoamericano,* 1985, 216 pp.

11 ***The decade for women in Latin America and the Caribbean: background and prospects,*** 1987 215 pp.

12 *América Latina: sistema monetario internacional y financiamiento externo,* 1986, 416 pp.

12 ***Latin America: international monetary system and external financing,*** 1986, 405 pp.

13 *Raúl Prebisch: Un aporte al estudio de su pensamiento,* 1987, 146 pp.

MONOGRAPH SERIES

Cuadernos de la C E P A L

1 *América Latina: el nuevo escenario regional y mundial/**Latin America: the new regional and world setting,*** (bilingüe), 1975, 2ª ed. 1985, 103 pp.
2 *Las evoluciones regionales de la estrategia internacional del desarrollo,* 1975, 2ª ed. 1984, 73 pp.
2 ***Regional appraisals of the international development strategy,*** 1975, 2nd. ed. 1985, 82 pp.
3 *Desarrollo humano, cambio social y crecimiento en América Latina,* 1975, 2ª ed. 1984, 103 pp.
4 *Relaciones comerciales, crisis monetaria e integración económica en América Latina,* 1975, 85 pp.
5 *Síntesis de la segunda evaluación regional de la estrategia internacional del desarrollo,* 1975, 72 pp.
6 *Dinero de valor constante. Concepto, problemas y experiencias,* por Jorge Rose, 1975, 2ª ed. 1984, 43 pp.

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s/n ***Canada and the foreign firm,*** D. Pollock, 1976, 43 pp.
10 *Reactivación del mercado común centroamericano,* 1976, 2ª ed. 1984, 149 pp.
11 *Integración y cooperación entre países en desarrollo en el ámbito agrícola,* por Germánico Salgado, 1976, 2ª ed. 1985, 52 pp.
12 *Temas del nuevo orden económico internacional,* 1976, 2ª ed. 1984, 85 pp.
13 *En torno a las ideas de la CEPAL: desarrollo, industrialización y comercio exterior,* 1977, 2ª ed. 1985, 57 pp.
14 *En torno a las ideas de la CEPAL: problemas de la industrialización en América Latina,* 1977, 2ª ed. 1984, 46 pp.
15 *Los recursos hidráulicos de América Latina. Informe regional,* 1977, 2ª ed. 1984, 75 pp.
15 ***The water resources of Latin America. Regional report,*** 1977, 2nd. ed. 1985, 79 pp.
16 *Desarrollo y cambio social en América Latina,* 1977, 2ª ed. 1984, 59 pp.
17 *Estrategia internacional de desarrollo y establecimiento de un nuevo orden económico internacional,* 1977, 3ª ed. 1984, 59 pp.
17 ***International development strategy and establishment of a new international economic order,*** 1977, 3rd. ed. 1985, 70 pp.
18 *Raíces históricas de las estructuras distributivas de América Latina,* por A. di Filippo, 1977, 2ª ed. 1983, 64 pp.
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