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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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The author is grateful for the collaboration of Mr. Pedro Tejo.

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.

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

[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.

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, precrisis 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).

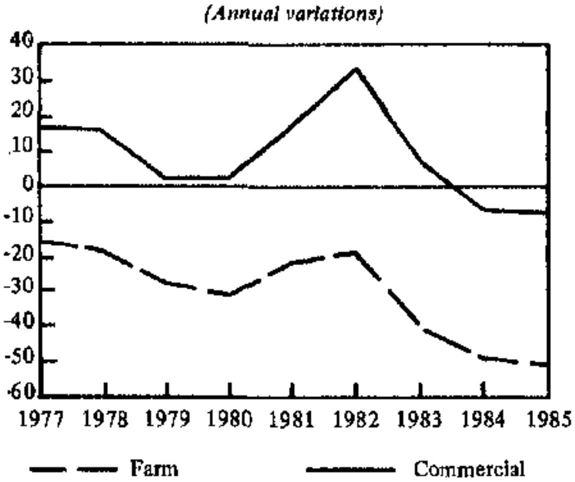
In contrast, in the countries where agriculture paid virtually the real interest rates as the rest of the economy, the cost of credit rose, and production costs rose with it. The reduction of international interest rates in 1985-1986 lowered financial costs in general and contributed to a relative recovery 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

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).

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.

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.

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.

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.

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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