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SUSTAINABLE AGRICULTURAL DEVELOPMENT: THE ROLE OF INTERNATIONAL COOPERATION

PROCEEDINGS
OF THE
TWENTY-FIRST
INTERNATIONAL CONFERENCE
OF AGRICULTURAL ECONOMISTS

Held at Tokyo, Japan
22–29 August 1991

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INTERNATIONAL ASSOCIATION OF
AGRICULTURAL ECONOMISTS
QUEEN ELIZABETH HOUSE
UNIVERSITY OF OXFORD

1992

Dartmouth

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Impact of Policy Reforms on the Agricultural Sector in Chile

INTRODUCTION

Chile is a country about which much has been said and written over the last decades, partly as a result of the abrupt political changes which it underwent in the early 1970s, but more so because of the successful fundamental economic reforms introduced during the early years of the military regime, which later on became the conventional policy prescriptions of international financial organizations.

During the last six years, the country has been able to achieve economic growth at rates surpassing those of the last two decades, while maintaining moderate rates of inflation. This is a most unusual situation in the area at a time when most Latin American nations have been shaken by recession and widespread inflation. The new democratic government that assumed power in March 1990 has indicated its wish to maintain the overall economic policies inherited from the previous regime, with the additional incorporation of measures which will improve the country's social conditions. No major changes have been introduced so far in terms of agricultural policies, except for the expressed goal to strengthen the support afforded to small farmers.

The purpose of this paper is to describe the most significant policy reforms in Chile since the military coup and the impact these have had on the agricultural sector. Special attention will be afforded to the sequence and timing of the reforms and to the lags which took place in the adjustment process.

BACKGROUND

As in many other Latin American countries, successive governments in Chile intervened increasingly in the economy from the time of the Great Depression of 1930, seeking to isolate the country from external shocks, and to reduce the constant crises in the balance of payments. Instead, except for very short successful periods, the record was extremely poor, with sluggish growth, high rates of inflation, and continued balance of payment problems. The first systematic set of measures to increase farm production and productivity was introduced by the Frei Administration (1965–9), based on improving relative agricultural prices and on agrarian reform. However, higher food prices con-

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flicted with the goal of reducing inflation and with raising real urban wages. Under the Allende regime (1970–3), economic policies were radically changed. The government, in its efforts to achieve socialism, led the country to economic chaos, with rampant inflation, proliferation of black markets, a fiscal deficit of about 24 per cent of GDP in 1973, and with legal and illegal takeover of industries and farms. The outcome was a coup in September 1973, which placed a military junta in power.

The military administration quickly made it known that its main goal was to establish a new economic, political and social order, and inclined itself towards the neo-liberal school of economic thought, under the influence of a group of economists trained in the United States (see Fontaine, 1988). Unlike the typical populist economic policies of other authoritarian systems, the emphasis was placed on trade liberalization, reliance upon market mechanisms, and the adoption of the 'principle of subsidiarity', meaning that government actions were to be restricted to areas where private sector performance was insufficient, or to correct market imperfections and to relieve extreme poverty.

ECONOMY-WIDE POLICY REFORMS SINCE 1974

Amidst a situation of economic turmoil, government took prompt action to lift price controls and subsidies, providing a clear indication of its will to reinvigorate the capitalist economic system. The process of price liberalization was somewhat slower in the case of basic agricultural products. A basic pillar of government policy was to warrant the right to private property, seriously shaken during the preceding years, particularly in the countryside, as a result of a long and profound land reform programme.

The most drastic episode of trade and price liberalization was implemented shortly after the change of government. In order to improve the country's trade position, exchange rates were unified, the peso was devalued, the crawling peg system was re-established and the external debt renegotiated. A progressive reduction of tariffs was implemented according to a planned schedule, culminating with a uniform *ad valorem* tariff of 10 per cent in 1979, with very few exceptions. More important, perhaps, was the elimination of non-tariff barriers to trade and prior deposits on imports, which had been in the past even more restrictive for trade.

In terms of monetary policy, the liberalization of interest rates culminated in May 1975, when it became effective throughout the financial system. Real interest rates became positive, to stimulate savings and capital inflows, unlike the previous decades when negative real rates prevailed. Economic stabilization was achieved by the elimination of the fiscal deficit, reducing public expenditure, privatizing firms and increasing taxes. The austerity of the fiscal policy was such that, beyond its success in eliminating one of the secular sources of inflation, it caused in 1975–6 a serious recession, only to be surpassed in its negative impact on production and employment by the economic crisis of 1982–3.

In terms of labour legislation, until 1978, the government continued to determine minimum wages and salaries on a periodical basis, making functional

rather than sectoral distinctions, with rural wages including payments in kind of some significance. Minimum wages continued for some time to be automatically indexed to inflation, which increased the real cost of labour. Subsequently, the policy was modified as a reaction to the observed increasing levels of unemployment, seeking first to keep real wages constant, and later on to reduce them, by de-indexing nominal wages. This led to a systematic decrease of real wages, until 1986. Since then, real wages have increased over time as a consequence of economic growth.

During 1976-80, following the initial recession and later the liberalization process, the Chilean economy experienced high rates of GDP growth (see Table 1), which led to the belief that the development strategy chosen would permit continuous growth, alleviation of poverty and full employment by the mid-1980s. But during 1982–3, Chile went through its worst experience in 50 years. A depression, brought about by the combination of an abrupt ending of foreign financing due to a world recession, coupled with errors in government policies, particularly from pegging the exchange rate while opening the capital account to capital inflows, affected the design of economic policies of the 1980s. There were drastic changes in the exchange rate and monetary policies, including the introduction of important regulation of capital markets. But these modifications left the basic resource allocation mechanisms, implemented by the structural reforms of the late 1970s, untouched (Morande,1990). In spite of the pressures to abandon the neo-liberal model, the government introduced only some marginal counter-reforms, particularly in the agricultural sector, as will be described below. In the case of trade policy, tariffs were transitorily increased after the recession, reaching a maximum of 35 per cent for a brief period, subsequently reduced in several steps, down to 15 per cent since 1987. It is important to indicate that quantitative restrictions were not reintroduced, neither was the size and role of the state changed.

POLICIES TOWARDS AGRICULTURE

During the period 1964–73, the agricultural sector had been the battleground for the social and economic transformation of Chile into a socialist country: 'revolution in freedom' first and 'the Chilean road to socialism', next (Silva, 1982). In 1967, the government initiated a vast programme of agrarian reform, which was intensified during the Allende administration in a way that disrupted production. Over the period 1965 to 1973, about 48 per cent of the country's agricultural land was expropriated. Farm prices and the marketing process were closely controlled. At the same time, the government sought to lower production costs of farmers by fixing output prices and maximum marketing margins and by subsidizing the prices of fertilizers and pesticides.

However, agricultural policy after 1973 and until the economic crisis of 1982–3 had almost no specific elements that would apply to agriculture and not to the other sectors, the only exceptions being the unsuccessful application, for a short period of time, of price bands for a few traditional crops, a forest subsidy programme from 1974, and since 1977 an anti-dumping policy for milk

and its derivatives. Agricultural input prices were also liberalized, while marketing activities were progressively handed over to the private sector.

The recession of 1982 did not spare the agricultural sector – the decline in international and therefore domestic prices for agricultural commodities and the appreciation of the exchange rate resulted in an influx of food imports and in low incentives to production. Agricultural GDP fell for two consecutive years and open agricultural unemployment reached levels not known before in the country (see Table 1). The economic authorities responded to the crisis with several agricultural policies of a more interventionist nature, in addition to the trade and macro-economic adjustments mentioned earlier. The most important modification was the introduction of price band mechanisms for three essential commodities:wheat, sugar and oilseed. These price bands were designed to attenuate the adverse impact of short-run fluctuations in international prices on domestic production, while preserving the signals of frontier prices over the medium term for the allocation of resources. Only in the case

TABLE 1 *Evolution of total and agricultural GDP, agricultural labour force and unemployment*

Year	Annual growth rate total GDP (%) (1)	Agricultural sector's GDP participation (%) (2)	Annual growth rate agric. GDP (%)	Agricultural labour force participation (%) (3)	Agricultural sector unemployment rate (%) (4)
1974	1.0	8.2	26.7	n.a.	n.a.
1975	–12.9	9.9	4.8	17.3	4.1
1976	3.5	9.3	–2.9	16.5	4.8
1977	9.9	9.3	10.4	17.2	5.4
1978	8.2	8.2	–4.9	16.4	6.7
1979	8.3	8.0	5.6	15.6	7.3
1980	7.8	7.7	3.6	15.3	5.0
1981	5.5	7.5	2.7	14.7	6.2
1982	–14.1	8.5	–2.1	14.4	9.4
1983	–0.7	8.3	–3.6	14.4	5.8
1984	6.3	8.3	7.1	15.0	5.5
1985	2.4	8.6	5.6	15.3	4.9
1986	5.7	8.8	8.7	19.3	2.5
1987	5.7	8.7	4.5	19.8	3.3
1988	7.4	8.6	5.7	19.4	3.0
1989	10.0	8.1	3.1	19.5	2.3
1990	2.1	8.3	4.8	19.0	2.4

Notes: (1) original figures at constant prices were expressed in millions of 1977 Chilean pesos.
(2) includes forestry, which over the period accounts for about 4–6 per cent of agricultural GDP.
(3) includes forestry and fisheries; the latter contributes about 2 per cent.
(4) the data for 1986–9 are not comparable to those for 1974–85 owing to differences in methodology.
n.a. = not available.

Source: Central Bank of Chile and National Institute of Statistics.

of wheat, which is the most important single crop in the country, was the price stabilization scheme supplemented by the operations of a public procurement agency (see Muchnik and Allue, 1991).

In terms of taxation, policy reforms during the 1970s and 1980s did not introduce major changes. Agriculture continued to be taxed according to presumptive income of unimproved land. The amount of taxes paid by farmers evolved as a function of the fiscal values determined by the authorities for agricultural land; these had been increasingly under-valued between 1966 and 1973, but were rapidly adjusted thereafter. Simulation of the tax burden which would have taken place, had a progressive tax on actual income been applied, suggests that the prevailing system implicitly subsidized the highly profitable export activities such as fruit orchards, but not the less profitable traditional annual crops.

Regarding land tenure, expropriations were stopped at the outset of the Pinochet Administration and expropriated land was redistributed in the form of individual parcels. The combined effect of land reform and subsequent land transactions led to a restructuring of land ownership. The most striking changes, comparing 1965 and 1979,were the significant increase in the proportion of irrigated land held by farmers with less than 20 equivalent irrigated hectares, from 22.4 per cent to 52.7 per cent, and a decrease from 55 per cent to 21 per cent for farmers with over 80 equivalent irrigated hectares (Jarvis,1985). Land was distributed to only a fraction of the rural poor. Moreover, the lack of managerial experience of the new landowners in a hostile environment of free competition led many of them to sell their newly acquired properties. Thus the outcome of the land reform process was far from the expectations that had fuelled the previous reform effort. On the other hand, it can be argued that it had a positive unexpected spin-off: an active market for land was created which did not exist before to any significant extent, giving access to land to a new class of medium-sized entrepreneurs willing to introduce modern technology to the countryside. It also gave farmers the possibility of seeking optimum farm sizes in order to realize economies of scale, and thus achieve an efficient allocation of resources.

In terms of agricultural extension and technical assistance, the country had a well-financed extension programme during the land reform period of 1965–73, but technicians concentrated principally on organizing agricultural workers rather than on teaching modern farming techniques (Jarvis, 1985). It is perhaps for this reason that some major changes were introduced during the first years of the policy reform, including a drastic reduction of personnel. Next, in 1977, an innovative programme, based on the incorporation of private firms for the provision of technical assistance to small farmers, was put into effect. About 70 per cent of the cost of the service was covered with public funds,with the expectation that, after a few years, farmers would appreciate the benefits of technical assistance and be prepared to bear the entire cost. This original scheme, seeking to include a private component in the system, did not work out; it was not attactive to farmers or to the providers of assistance, probably because of under-estimation of the true costs involved.

In synthesis, the government played a very minor role, offering a neutral pattern of incentives, letting private agents take the lead. Government expen-

ditures in agriculture decreased, but focused on 'public goods' such as roads, port facilities or agricultural research.

EFFECTS ON AGRICULTURE

Agricultural growth has been affected both by macro-economic policies and by sector specific agricultural policies. The following is a description of the evolution in agricultural output, agricultural trade, technological change, employment and unemployment since the structural reforms of the mid-1970s.

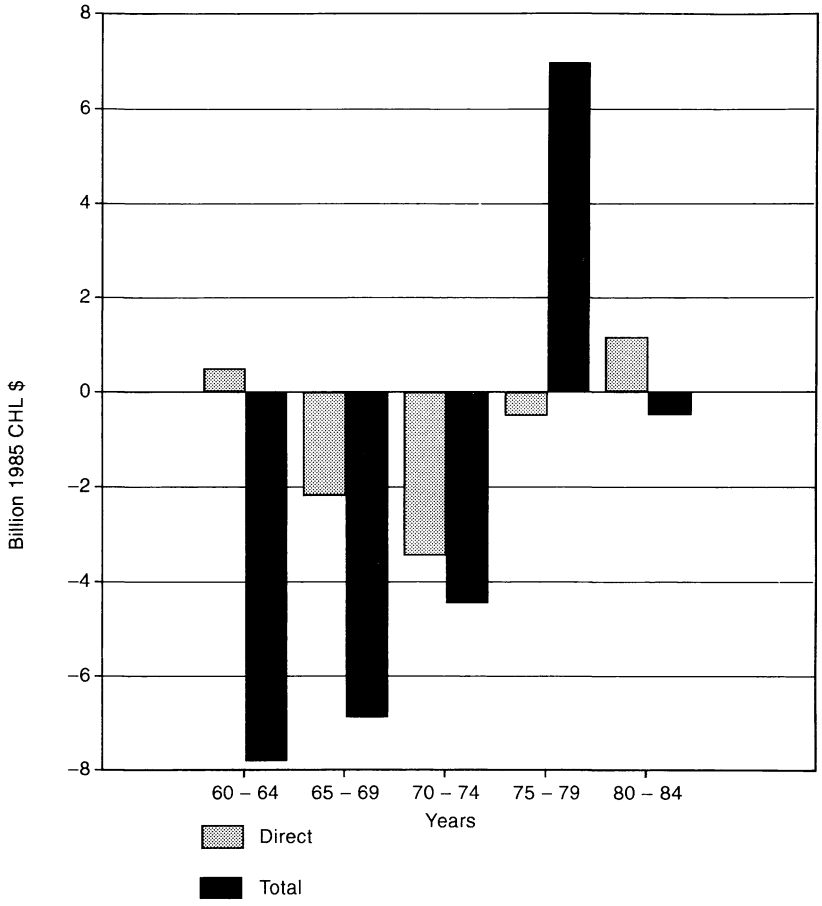
Agricultural growth

A World Bank study by Hurtado, Valdés and Muchnik (1989) of the impact of macro-economic and sectoral policies on incentives to agriculture provides estimates of the effects during the period 1960–3 that these have had on the flow of resources into and out of agriculture. Figure 1 summarizes the estimated flow of resources due to 'direct' price interventions and to total, that is 'direct plus indirect' interventions. This study concluded that both direct price interventions (that is sector-specific) and indirect price interventions (economy-wide policies) prior to 1974, particularly the exchange rate policies and protection to manufactures, had a negative impact on agriculture. On the other hand, policy reforms introduced since 1974 helped to increase agricultural prices relative to non-agricultural prices, particularly as a result of the liberalization programme on the rest of the economy.

The lower level of import protection applied after 1974 decreased the relative prices of non-agricultural import competing activities and also increased the real exchange rate. The latter increased even further, as shown in Table 2, owing to a decline at the time in Chile's terms of trade.This had a positive impact on agricultural prices, considering the relatively high component of tradable commodities within agriculture (see Figure 2).

The substantial improvement in agricultural price incentives,which lasted until 1980, found a poor response in terms of the sector's GDP during that period, as shown in Table 1. Barahona and Quiroz (1989) have suggested three reasons for the relatively poor performance of agriculture during these first years immediately following the economic reforms: land reform had placed an important fraction of the best lands in the hands of inexperienced small farmers, who also lacked capital resources and access to credit; the liberalization of the capital market in the face of scarce foreign savings and the resulting increase in real interest rates negatively affected the traditional crop sector; and finally, the hypothesis that farmers probably considered these incentives to agriculture as transitory.

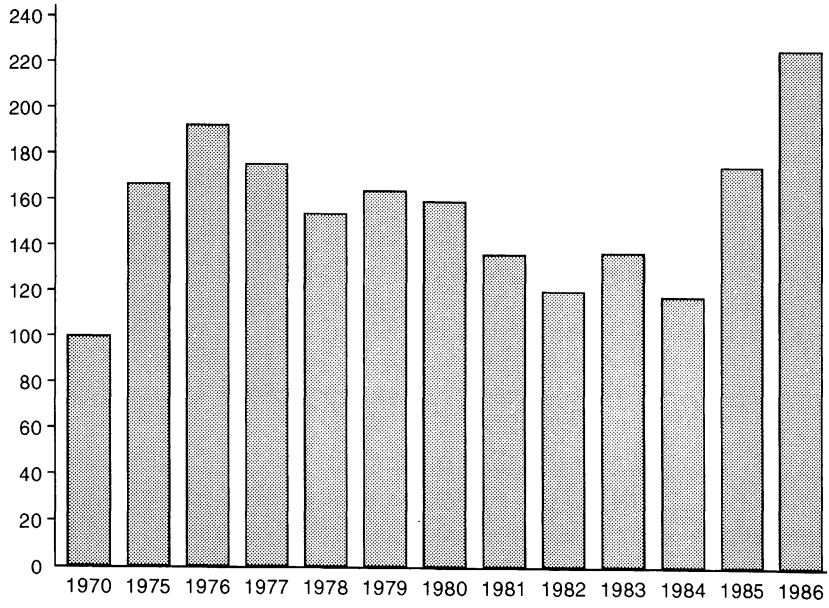
Another explanation for the lag in output response of agriculture to policy reform can be found in the work of Coeymans and Mundlak (1991). The authors have developed a multisectoral model of the Chilean economy, which provides empirical evidence on the aggregate supply response of Chilean



Source: Hurtado, Valdés and Muchnik (1989).

FIGURE 1 *Resource transfer in and out of agriculture*

agriculture to increases in relative agricultural prices. It indicates that the output response is sizable but slow, and this is related to the behaviour of labour and capital, whose sectoral allocation is based on intertemporal considerations and whose adjustment is subject to costs. In their simulation of an increase of 10 per cent in agricultural prices, output increased by only 3.2 per cent in the first three years, but by as much as 10.2 per cent after ten years. A low output response should be expected in the short run due to the impossibility of instantaneous factor mobility across sectors. The long-run response is quite different and emphasizes the importance of persistence in economic policy.



Source: Barahona and Quiroz (1989).

FIGURE 2 *Domestic agricultural/non-agricultural prices, Chile, 1970–86*

The response of the agricultural sector to the substantive policy reforms of the 1970s finally showed itself after 1983, as a result of the serious disruption created in 1981 and 1982 by the economy-wide recession. It was only after the correction of specific policies at the macro level, and the introduction of selected sectoral policies, that agriculture finally experienced the expected sustained rates of high economic growth. Since 1983, agricultural GDP has grown at a record average annual compounded rate of more than 6 per cent (Table 1). Retrospectively, it would have been very difficult to have predicted the changes in output mix which actually took place, including the introduction of exportable crops and fruit trees in regions where they were previously not found.

Agricultural trade

Agricultural exports (including forest products), which had remained stagnant during the previous decade and a half, experienced, from the outset of reforms, a most impressive growth. While all Chilean exports grew 3.9 times between 1974 and 1990 agricultural exports grew 11 times in the same period (see

TABLE 2 *Evolution of trade and real exchange rates (Millions of US$)*

	Total exports	Agricultural exports Value (1)	Participation (%)	Agricultural imports (2)	Sector balance of trade (1) – (2)	Exports of fresh fruits	Real exchange rate index (1978=100)
1974	2 151	189	9	603	–414	18.9	78
1975	1 590	266	17	510	–244	40.0	101
1976	2 116	311	15	428	–117	50.9	91
1977	2 185	410	19	435	–25	63.3	82
1978	2 460	491	20	498	–7	100.1	99
1979	3 835	716	19	579	137	122.8	100
1980	4 705	974	21	788	186	167.7	88
1981	3 836	798	21	766	32	197.1	75
1982	3 706	712	19	565	147	230.4	86
1983	3 831	656	17	511	146	219.2	104
1984	3 651	813	22	463	350	291.7	108
1985	3 804	837	22	250	587	355.7	134
1986	4 199	1 102	26	178	924	477.0	147
1987	5 223	1 360	26	217	1 143	527.4	153
1988	7 052	1 637	23	280	1 357	582.3	162
1989	8 080	1 781	22	269	1 512	552.6	157
1990	8 310	2 123	26	375*	1 748	747.5	153

Notes: (1) also includes paper and paper pulp (except printed paper).
(2) include food and non-food products of agricultural origin.
* corresponds to a new definition of agricultural imports.

Source: Central Bank of Chile and Ministry of Agriculture.

Table 2). This determined that the participation of the sector in total exports increased from 9 per cent to 26 per cent during the same period.

The most dynamic sub-sector in terms of export growth has been fruit orchards, for which the country enjoys natural comparative advantages due to the extended growing periods which are opposite of those of the northern hemisphere. Fresh fruit exports have increased more than 30 times, going from less than 20 million dollars in 1974 to over 747 million in 1990 (Table 2). However, it is important to underscore the dynamism shown by other sub-sectors, such as processed fruits, fresh and processed vegetables, and paper and pulp. At the same time, agricultural imports have steadily declined (except during the economic crisis of 1982) so that, since 1979, there has been an agricultural trade surplus. Perhaps equally important is the diversification which has taken place in terms of number of products exported and number of markets of destination. The former increased from 102 to 374 during the period, although 12 of them still represent 71.6 per cent of the total value of agricultural exports (Ministerio de Agricultura de Chile, 1989). The number of markets of destination increased from 41 in 1973 to 85 in 1988. The above figures illustrate the fact that structural adjustment of the sort implemented in Chile can tremendously improve the capacity of agriculture to generate export surpluses.

Modernization of agriculture

It has been suggested (Hojman, 1990) that the intra-sectoral pattern of development has been very uneven, so that, while those sub-sectors oriented to exportables, such as fresh fruits, show an accelerated growth, high levels of technology and specialization, other sub-sectors mainly oriented to domestic consumption have shown signs of stagnation and have represented sources of poverty and insecurity. A simple comparison of average yields of annual crops for the periods 1974–83 and 1984–8 does not support this hypothesis. In fact, there have been important improvements in farming technology and productivity concerning traditional crops, produced by both small and large farmers. The data in Table 3 show that there has been a remarkable increase of average yields in most annual crops, particularly in the case of corn and wheat. Another example of spectacular increases in productivity and output are poultry and pork production, both of which are mainly oriented to the domestic market (CORFO, 1989).

The observed improvements in yields seem to be due mostly to the adoption of technological innovations, affecting the quality and quantity of agricultural inputs in general. This has also been the case for ancillary inputs such as services, communications and transportation. Fundacion Chile (1989), a leading institution in the introduction of new technologies in agriculture, forestry, fisheries and agro-industry in Chile, suggests that there has been a significant interaction between the liberalization reforms and the above-mentioned transformations. An open economy can rapidly absorb innovations developed elsewhere through the usual market mechanisms because of the permanent need to remain competitive in a rapidly changing and increasingly uncertain economic environment.

Agricultural labour

Agriculture has been able since 1984 to reverse a long-standing trend of a steady decrease in the participation of the agricultural labour force in the total workforce and of the typical rural–urban migration process (see Table 1). This is due to the rapid expansion of activities that produce jobs, particularly the export fruit sub-sector, which is the major employer of agricultural workers. But it took almost a decade after policy reform to reduce unemployment rates within the sector to the levels observed prior to 1974. In fact, since 1975 and until 1982, unemployment rates within agriculture grew from 4.1 per cent to 9.4 per cent, while national unemployment increased from 14.9 per cent to 19.6 per cent. The opposite trend could be observed after the economic crisis, with unemployment in agriculture declining faster than in the remaining sectors, reaching only 2.3 per cent in 1989 (Table 1).

An overall trend in agricultural employment has been a shift from permanent to temporary labour, a trend which in fact began much earlier, as had already become apparent in the agricultural census of 1975–6. The main reasons for this transformation are several and are related to the changes in land tenure patterns, to labour legislation introduced in the late 1960s and to

TABLE 3 *Chile: average yields of annual crops for periods 1965–9, 1974–83 and 1984–8 (metric tons/hectare)*

Crop	Average yield 1965–9	Average yield 1974–83	Average yield 1984–8	Percentage change (84–8/74–83)
Corn	3.3	3.6	6.5	+82
Wheat	1.6	1.6	2.6	+60
Barley	2.1	2.0	2.8	+44
Rice	2.5	3.3	4.1	+24
Beans	1.1	1.0	1.1	+8
Potatoes	8.9	10.3	14.0	+36
Rape-seed	1.2	1.4	1.7	+23
Sunflower	1.3	1.4	1.8	+30
Sugar-beet	39.1	37.1	44.5	+20

Source: National Institute of Statistics.

the induced changes in output composition and in the types of technologies encouraged by the policy reforms. The main concern about temporary workers is that they generally earn lower wages than permanent workers (defined on a yearly basis); they are not covered by the labour laws in the absence of signed contracts, and are exposed to inadequate living conditions. In the more delicate and skilled work of fruit packing for export and other agro-industrial activities, an important fraction of these temporary workers are female, who are generally paid less than men.

CONCLUSIONS

Structural reforms implemented in Chile since the 1970s have had a major influence on the successful performance of agriculture. Exports have provided the engine of growth, led by fruits and vegetables, forest and fish products, while food imports have been reduced to a minimum value. The fear that neutral incentives for agriculture could be regressive in terms of income distribution is not supported by the evidence. Moreover, rural to urban migration has been reversed and agriculture has become a dynamic source of employment and investment opportunities. However, this has not provided a solution for all of Chile's economic and social problems. Small farmers are yet to be incorporated into the modern sector. Transaction costs in markets for inputs and output, lower levels of education, and problems of access to credit and appropriate technology make them less competitive. The solution will require the transfer of appropriate technologies to economically viable farmers, and special programmes to improve the quality of life of the rural poor.

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DISCUSSION OPENING – PAULO F. CIDADE DE ARAÚJO*

The paper is an overview of the agricultural policy reforms implemented in Chile since the military coup. Special emphasis is given to the sequence and timing of the policy changes, and to the lags which occurred in the adjustment process from 1974 to 1990.

The need for fundamental adjustment in the economic system of many Latin American countries became generally accepted by policy makers, politicians and economic analysts during the 1980s. This need arose out of the external debt crisis and the accelerating inflation which affected countries such as Brazil, Argentina, Peru and Mexico.

The dominant view regarding adjustment favours a move towards (1) reducing the size and increasing efficiency of the public sector through fiscal reform, and (2) implementing trade liberalization through greater reliance on market mechanisms. A major problem in implementing adjustments is that recognition of the need for them only occurs when economic and social conditions have deteriorated to such an extent that demand for public goods and services and government intervention, and therefore for public resources, becomes very strong. In general, the need for unpopular corrective measures becomes very clear only when policy makers have tried many other policy alternatives, which end up driving the economy to deep recession and/or accelerating inflation.

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The second key difficulty concerns the time-lag involved from the moment changes are implemented until the effective desired results occur, in the form of increased production and employment as well as reduced inflation. The reasons for this apparently unavoidable time-lag are the relatively low degree of short-run factor mobility and the fact that economic agents only react fully to policy changes when they become convinced they are permanent. The time-lag, which may last for a decade or even longer, makes it politically very difficult to sustain adjustment measures in the absence of immediate desirable effects.

These two difficulties suggest that the implementation of necessary, but unpopular, economic measures is a much more complicated matter when it takes place under a democratic regime than under an authoritarian one. I do not mean to suggest that it is impossible to implement democratic reform, but a stronger political willingness and, possibly, a longer period of time will be necessary before a consistent set of corrective measures are put into place. As the Chilean experience teaches us, agricultural production increased only after several years of high agricultural relative prices with de-indexed wages.

Agricultural growth in Chile was made possible, to a great extent, by success in export markets. It is rather impressive that growth took place in the late 1980s, when international markets were dominated by strong protectionism. The reason was that the fresh fruit market was not severely affected. Countries such as Brazil and Argentina, whose exports are heavily dependent on foodgrains and meats, have not been so fortunate. Their chances of securing economic stabilization and preparing for economic growth is more dependent on international cooperation in opening, and stabilizing, external markets. Multilateral effort, rather than internal willingness to implement domestic adjustments, will determine the degree to which stabilization and economic growth are reached. The policy implementation lag is certainly more troublesome in their cases.

As a final consideration, I would like to stress the challenge posed by the conclusions of the paper. In spite of the positive economic aspects of the performance of Chilean agriculture in the second half of the 1980s, direct action has been needed to alleviate major structural and social problems of the rural population. As the author emphasizes, there are at least two ways to secure the welfare of agricultural areas. One is to transfer appropriate technology to economically viable farmers; the other is to increase public expenditure to improve the quality of life of the rural poor. Choice between the two is a difficult one, requiring knowledge of the extent of rural poverty and the degree to which it can be alleviated by the alternative policies available.