

AGRICULTURAL REFORMS IN CHILE AND NEW ZEALAND: A REVIEW¹

Alberto Valdes²

ABSTRACT - Comparisons and contrasts of agricultural reforms during distinct periods in Chile and New Zealand center around four questions: (a) what were the prior conditions that led to significant reforms; b) what kind of reforms; c) what were their consequences for the economy as a whole and agriculture in particular; and (d) what lessons can be drawn from the Chilean and New Zealand experiences? While the strategic element in their reform processes towards a more dynamic and competitive supply system pertains to the real exchange rate, key government supporting management roles refer to the sequencing and depth in the management of fiscal policy, internal deregulations on land, labor, marketing and services, as well as trade liberalization. The comprehensive economic reforms were undertaken with reductions in public sector expenditures in agriculture.

RESUMO - Comparações e contrastes de reformas agrícolas no Chile e Nova Zelândia durante períodos distintos se concentram ao redor de quatro questões: a) quais foram as condições prévias que provocaram as reformas expressivas; b) que tipos de reformas; c) quais foram os efeitos das reformas na economia como um todo e na agricultura especificamente; e d) quais as lições que as experiências do Chile e Nova Zelândia apresentam. O elemento estratégico de seus processos de reforma para um sistema de oferta mais dinâmico e competitivo refere-se à taxa de câmbio efetiva. Por outro lado, papéis-chave de apoio pelo governo incluem o manejo, inclusive a seqüência e profundidade da política fiscal, desregulamentações de terra, mão-de-obra, comercialização e serviços, bem como liberalização do comércio. As amplas reformas econômicas foram empreendidas com reduções de despesas pelo setor público na agricultura.

¹ This paper was presented at Agricultural Economics Society Annual Conference New College, Oxford, March 31 - April 3, 1993.

² World Bank.

INTRODUCTION

Once committed to economywide reforms - stabilization, adjustment, and trade liberalization - and companion reforms of institutions, how do governments best proceed? With what reforms and in what mix, sequence, strength, and speed? For agriculture, specifically, this paper takes a close look at which reforms, or aspects of their implementation, can accelerate or slow down private investment and aggregate supply response.

How Parallel are the Experiences?

Economic reforms in Chile and New Zealand were arguably the most comprehensive changes adopted by any country during the 1970s and 1980s. Several years have passed since the initiation of reforms, so lessons of experience are emerging. The fact that both are relatively small, opens economies dependent on exports of primary goods, creates many parallels with LDCs and some of the former socialist economies. They specially share a history of state intervention in economic policy. Nowhere is the parallel more marked than with policies of import-substituting industrialization.

In both countries, reforms centered on stabilization to correct macroeconomic imbalances, structural adjustment to eliminate distortions in incentives, as well as liberalization and deregulation to enhance the role of market forces and improve microeconomic efficiency. Throughout the analysis, the continuous interface of macroeconomic and sectoral processes is apparent. The starting point in both countries was the recognition that poor economic performance was largely a consequence of domestic policies, rather than inflicted by external forces.

In both cases, it was recognized from the outset that the tradable sector would be central to the restoration of economic growth. A highly protected manufacturing sector, and, in New Zealand, an agriculture sector buffered by

1 Background material for this study is found in the case studies for Chile, by Dominique Hachette, and on New Zealand, by John Janssen, Grant M. Scobie, and John Gibson, commissioned by the World Bank in 1991. Part of this study was presented in *Agricultural Economics*, special issue, 1993. Comments from Steve Wiggins are gratefully acknowledged.

public subsidies could not be the base of recovery. Furthermore, high domestic inflation and large public sector deficits put heavy demands on macroeconomic policy.

Also in both economies, the level of the real exchange rate was seen as an important strategic element. Given its central importance in determining the structure of incentives facing the trade sector - agriculture being highly tradable in both - the exchange rate became the focal point for discussions of reforms and consequences. In analyzing sector performance, we assume an open-economy model in which goods are either tradable or non-tradable. Competitiveness of agriculture is strongly influenced by the relative price of tradables to non-tradables. This price is referred to as the real exchange rate. The dichotomy, however, ignores linkages between them. In order for agriculture to compete externally, non-tradable support (distribution, transport, finance, communication) must be competitive. Thus, two questions are fundamental to the analysis: how broad is the reform and what is the optimal sequencing of the reforms?

Prior Conditions

In both Chile and New Zealand prior to reforms, overall economic and agricultural growth was low. Both governments followed an inward-looking strategy favoring the industrial sector, with high rates of protection and direct intervention in agricultural products and input markets. Each economy was highly regulated: with controls on interest rates, wages, and the exchange rate; a trade regime dominated by quantitative controls and trading monopolies on the most important agricultural products; and a relatively large public sector that exercised highly selective and discretionary powers. These were clearly not the conditions under which the private sector could be the main engine of growth. Against this background, reforms in economic policy were seen as potentially favorable to agriculture in both countries.

On the other hand, there were important differences in the initial conditions pertaining to Chile and New Zealand, aside from a higher level of development in New Zealand. Chile was suffering from a substantial macroeconomic imbalance in 1972-1973, reflected in the acute breakdown of public finances (fiscal deficit equal to 25 percent of GDP), which had led to accelerating inflation and widespread price controls and rationing. Furthermore, agrarian reform between 1965-1973, including land expropriations with partial compensation, had created substantial uncertainty for private investors.

Moreover, in contrast to New Zealand, Chile had experimented for three

decades with a development strategy that transferred significant income from agriculture to the rest of the economy, without tangible gains in terms of higher growth in the non-farm sector. Income transfer from agriculture ranged between 12 and 60 percent of agricultural GDP per annum during 1960-1973, net of input subsidies and public investment, largely as the result of exchange rate misalignment and industrial protection (Hurtado, Valdes and Muchnik, 1990). Chile's agricultural performance was poor for decades, starting in the 1930s. During the 1960s and 1970s, the average annual growth rate of agriculture's value added was less than one percent, representing a declining share of total GDP (fluctuating between 6.3 percent and 10.0 percent) and of overall employment which declined from 30 percent in the 1960s to 16.5 percent in 1973.

In New Zealand, while trade policies protected manufacturing, imposing high invisible costs on agriculture, government compensated agriculture through direct input subsidies, tax and interest concessions and other transfers, which amounted to about 34 percent of the value of output before reforms in 1984. In 1983, the economy was regulated at almost war levels: wages and prices had been frozen, interest and exchange rates were controlled, and assistance to agriculture was close to 10 percent of total public expenditure. Then, following national elections, three major reforms were introduced in 1984: stabilization measures to correct severe imbalances; structural adjustment to eliminate distortions in incentives across sectors; and liberalization and deregulation to enhance market forces and improve economic efficiency. The reforms were the most sweeping in New Zealand's economy since the 1930s.

Chilean agriculture initiated reforms in the context of disrupted production and tenurial relations, enormous inefficiencies in the state-controlled operation of input and output markets, a private sector woefully undercapitalized, and with government finances in shambles. Few countries face worse economic conditions at the starts of economic reforms.

What Kind of Reforms?

Several reforms in both countries are worth highlighting: reduction of the public sector's size, the opening to international trade, reform of the financial sector, freeing interest rates and removing rate concessions and favorable credit allocation to agriculture; reduction of regulations on economic activity; reform of public enterprises with a concerted effort to improve efficiency and restricting them to the provision of "public goods"; and recognition that macroeconomic and trade policies constitute a critical framework for reform, as part of a

development strategy that restores market-oriented resource allocation and the private sector as the principal player.

However, the sequence and magnitude of some reforms were incorrect and the lags involved in reforming each economy proved longer than expected.

In Chile, reform occurred over two phases, namely between 1973-83 and 1984-90. During the earlier phase, general economic reforms were put into effect quickly and fine-tuning of sector-specific reforms was deferred. The urgent need to correct imbalances in fundamental economic parameters (price stabilization, fiscal deficit and external accounts) and the desire to achieve credibility for the reform process were key considerations. A bold trade liberalization program was implemented early. All foreign trade prohibitions were eliminated. All quantitative restrictions were removed. Tariffs were reduced from a range of 0-750 percent in 1974 to a uniform tariff of 10 percent in 1979 (Hachette and de la-Cuadra, 1991). Most price controls and all multiple exchange rates were also eliminated early, and a progressive elimination of ceilings on interest rates and credit allocations was implemented.

More particular reforms in agriculture involved the land market, a drastic scale-down in public sector services, privatization of input and product markets, as well as trade and price reform.

The simultaneity of the rapid reduction in public expenditures, high real interest rates (50 percent during 1976/78), the elimination of credit and input subsidies, and decline in the real exchange rate during 1978-82 hit agriculture hard. Getting inflation under control took longer than anticipated and concerns about stabilization submerged attention to major institutional changes. Several delays in eliminating price controls, implementing reforms in the land and water right markets, and in labor market reforms (wage indexation and port reforms) harmed agriculture.

The necessary conditions to stimulate private on-farm investment were still not in place. These problems, and particularly the clear cut realization among farmers that they could not compete with imports at the prevailing exchange rate, created considerable tension and political resistance against trade liberalization in the late 1970s. What was not visible, however, was that the culprit was largely an appreciation of the real exchange rate: early on (1974-1976), reduced trade barriers had stimulated a real depreciation; but subsequently (1979-1982) it appreciated, owing mainly to an inflow of capital and adjustments in the labor market.

Following a deep recession, in 1984, the government aggressively adjusted, with periodic nominal devaluations and supportive fiscal and monetary policies,

to achieve real devaluation. As the result of earlier basic reforms, the tradable sector's efficiency had improved considerably and agriculture was ready for a vigorous recovery, which continues today.

The old issue of whether agriculture is a special case, and if so, whether it should receive special treatment, began to re-emerge during the economic squeeze of 1979-83. Farm lobbies sought selective protection, and also in 1984, government responded in two ways. First, it reinstated some price stabilization interventions, including a price band scheme for wheat, sugar, and oil seeds to be sustained by variable levies (Quiroz and Valdes, 1993, and Muchnik and Allue, 1991), and a scheme of minimum customs valuation for milk and derivatives. Second, more symbolic than effective, it recognized the financial stress of agriculture, examined the issue of debt overhang, and encouraged commercial banks to reschedule some farm debt.

New Zealand's experience of farming without subsidies since the latter part of the 1980's is revealing of the strong influence that macroeconomic conditions have on agriculture's performance after economic reform. In New Zealand, the sequencing of stabilization and liberalization contributed to a real appreciation of the currency, incompatible with stimulating output growth in tradable goods (including most of agriculture). Furthermore, agriculture faced rapid removal of its nominal subsidies (Table 1), but industrial protection remained high, and substantial fiscal deficits emerged, adversely affecting the performance of traded goods. It is estimated that New Zealand's agriculture presently faces an 11 percent implicit tax due to the delay in the reduction of industrial protection (Janssen, Scobie and Gibson, 1992).

Although the big story comes at the economy wide level, there were two sector specific reforms of outstanding significance for agriculture. See Johnson (1991) for a succinct description of policies related to agriculture.

As described by Scobie (personal communication, 1992), "in a short space of time the subsidies to the traditional pastoral component of agriculture were removed. This reversed the net protection which the sector had enjoyed for a brief period. The subsidies had more than compensated for the costs of protection to the manufacturing sector which had been imposed on the agricultural sector. This was the most sudden and rapid sector specific policy change affecting agriculture. In addition, and as part of the adjustment, there were some significant write-offs of accumulated debt through the marketing boards. Borrowing by the meat and dairy boards from the government was simply written off, a windfall gain to the agricultural sector from the process of liberalization".

The combined removal of most government assistance (see Table 1), high

interest rates, and devaluation of rural assets worsened farmers' ability to service debt (as in Chile in 1981-82). Although government facilitated a program of debt restructuring for farmers with viable businesses, the heavy debt still overburdened much of New Zealand's rural sector, at least until early 1992. The Rural Bank of New Zealand has been privatized, and the now-private financial sector will have to deal with farmers unable to service their debt. Public sector reform has continued to affect agriculture in the area of inspection, extension and science services. Inspection and extension are now on a full cost recovery bases. Science is in the process of being completely reformed.

The internal competitiveness of agriculture (tradables vis-a-vis home good) continued to deteriorate throughout the liberalization process. Unemployment levels are still high in New Zealand (at the end of 1991), a political liability that could undermine support for continued reforms. Pressures may mount to further slow the rate of tariff removal in an attempt to stem job losses in manufacturing, thus weakening the recovery of agriculture. Unfortunately, a positive outcome has not yet emerged for New Zealand's agriculture.

What Consequences for the Economy and Agriculture?

Did agriculture in Chile or New Zealand gain from liberalization? Did liberalization improve agriculture's incentives? What were the consequences in terms of aggregate agricultural output, trade and rural employment? The outcomes to date are different. Why? But first a note of caution. As discussed by Scobie and Janssen (1993), the evaluation of any particular policy reform is faced with the problem of the counter-factual. What would have happened had the liberalization not taken place? For New Zealand, they conclude that doing nothing was not an option. By 1984 there were serious imbalances in the economy.

The overall outcome for **Chilean** agriculture has been quite positive, as shown in Table 2 on changes in agricultural output, exports, and land productivity. Previously a stagnant sector, Chilean agriculture has become dynamic, with average growth in agricultural value-added above four percent per annum from 1974 through 1990, rapid growth of non-traditional exports, and substantial increases in land productivity and rural employment. Institutional reform has led to innovations in technology generation and extension, credit, export and import marketing, water rights management, and price stabilization schemes. Perhaps the most difficult issue after 15 years of reform is how to address the needs of small farmers, who are geographically scattered, usually located in disadvantaged areas, and who have been marginal to the sector's

newly found dynamism. An additional challenge is the continuing pressure from farm lobbies for protection of some importables in Chile, such as wheat, sugar, milk and oilseeds (discussed below in postscript).

A profile of the rates of protection in Chilean agriculture is presented in Table 3. Aside from the reduction of the indirect taxation resulting from the exchange rate misalignment and industrial protection captured in the "total" rates of protection (the right side of Table 3), the evolution of the "direct" rates of protection after the economic reforms indicates that a) price intervention on exportables were eliminated during the reforms (nominal rates equal to zero for apples and grapes), which reflects the removal of export subsidies, b) exportables were subject to low but negative effective rates, as result of the uniform tariff on tradable inputs, c) there is no discernible pattern of change in the rates of protection for importables (wheat, cattle, and milk) since the reform, and d) nominal and effective rates have been higher than the uniform tariff on importables, the result of special treatment for wheat and milk through price bands and minimum import prices, respectively. Hence, the main story on price interventions came from the exchange rate, a reduction in industrial protection, and from the elimination of export subsidies.

New Zealand's agricultural performance was poor immediately after the reforms³. Three years after the initiation of reform, farm income declined and land values had fallen. As the sector lost high levels of support, agricultural competitiveness declined; mainly as a result of high interest rates and currency appreciation between 1985 and 1988 (see Table 4 on indicators of "true" protection for agriculture and Table 5 on key economic indicators during 1982-1991). Agriculture suffered a fall in its domestic terms of trade from 1984 onwards, while farm incomes fell sharply by 1986, but then recovered to a level slightly over the pre-reform period (Table 5). Land values fell in line with farm income and higher interest rates, resulting in substantial farm indebtedness relative to equity, and farm bankruptcies rose sharply. Within agriculture, the sheep and beef subsectors experienced the greatest reduction in revenues.

In addition to unfavorable exogenous factors such as the decline in world prices for wool and dairy products in the late 1980s and some years of bad

³. Johson's (1991) analysis indicates that gross agricultural output in real terms has continued to increase since 1981-1982 with an average of 1.1 percent per year. In the same period, there has been an average decline in the level of real inputs of 1.8 percent per year with marked reductions of input investment in 1985-1986 and 1990-1991. This is reflected in an increase of 40 percent in the ratio of real output to real intermediate input (e.g., real agricultural GOP has increased by 5.4 percent per year over the period).

weather, agricultural competitiveness declined. Jansen, Scobie and Gibson (1992) attribute this decline to incomplete reforms and improper sequencing across sectors. The cost agriculture, of protection elsewhere in the economy, remains an issue. Farmers are stressing the need for more rapid reduction in protection for import-competing manufactured goods.

There is, however, also the issue of what should be anticipated in terms of the sector's growth response to adjustments. According to Sandrey and Reynolds (1990), the lengthy lags in adjustments of land ownership and in the capital structure of farm business had largely been unanticipated. With heavy debt burdens, lower farm income and land values, incentives to adjust were reduced. The size of rural debt and the burden of non-performing loans (as land values decline) borne by farmers has become an important reform issue. More recently land prices recovered by a moderate amount, improving farm equity. As increased volume of sales is permitting more private adjustment of debt and consolidation of holdings (Johnson 1991).

Although the process of reform in New Zealand is far from complete, important structural reforms have taken place. Labor markets are more flexible, state trading activities have been largely privatized or converted to state agencies operating as commercial enterprises, the economic environment is freer of regulation and state intervention, inflation has been reduced dramatically, real interest rates have been lowered, and the real exchange rate is starting to depreciate. Recent assessments suggest that the reforms are bringing about a smaller, yet a more competitive agricultural sector than has existed previously.

Lessons of Experience

Which reforms were the most critical during the transition to the success of overall reforms, in slowing down or accelerating private investment and the supply response of agriculture?

Issues concerning the real exchange rate underlie much of the concern about sectoral competitiveness during and after the main reforms. The most fundamental issue arising from reform in both Chile and New Zealand is that agriculture, comprised largely of tradable goods, is highly sensitive to shifts in trade and macroeconomic policies. The key elements are sound fiscal policy and exchange rate management. The level and stability of the real exchange rate in both countries were strategic. A real appreciation of the currency is not conducive to stimulating agricultural output. It can also create considerable resistance to trade liberalization and strong pressure for special treatment after

reforms from farm lobbies.

One should recognize, however, that the real exchange rate (RER) is not a variable a government can directly manage (unlike the nominal rate), although it can indirectly influence its direction of change. The RER is endogenous to the prevailing set of macroeconomic and trade policies, and is influenced by exogenous changes in terms of trade and world interest rates. What the government can control is the policy consistency of its reform program. Where appropriate, the reform program should start with a substantial real depreciation, which seems to be a requirement for successful trade reform (Papageorgiou, Choksi, and Michaely, 1990). The ways in which government can achieve real depreciation is thus a critical issue. A nominal devaluation is almost a necessary condition at the early stage, but if the macroeconomic disequilibrium is not solved, the real devaluation will erode rapidly and the trade reform will not have the expected positive impact. An unstable macroeconomic background can endanger the sustainability of the reform program.

Nevertheless, a bold trade liberalization program early in the reform process provides a stimulus to raise the real exchange rate and, at least in Chile, was important in giving credibility to the reforms. In New Zealand, significant financial reform worked to establish such credibility. However, in Chile, getting inflation under control took longer than anticipated, and concerns about stabilization diverted attention from necessary institutional changes. This delay was costly.

How broad the reform is, of course, a fundamental question. The answer varies by country, although common requirements are evident - reduction of the public sector's size, exposing tradables to international competition, reforming the financial sector and labor market, deregulation, and streamlining public enterprises. A good illustration of the complementarity among reforms between foreign trade and internal deregulation is the labor reforms enacted in the ports of Chile, which substantially reduced loading costs of fruits for export. Acting quickly to deregulate services (transport, communications, insurance) and to privatize agricultural input sectors were beneficial for agriculture, particularly non-traditional exports. Early privatization in the reform process in Chile resulted in a relatively smooth and quick transition to a more competitive and dynamic supply system. Closing down state agencies contributed to credibility and accelerated private investment.

In Chile, security of property rights, achieved by land market reforms, was crucial. Even the best trade and macroeconomic policies would not have had much impact on private investment, had it not been for an explicit legal

commitment to secure property rights and a legal framework for adjustments in farm size and tenurial arrangements. Parallel to these actions, an innovative system for creating a market in water rights, as well as reform in the financial sector facilitated changes in output and its composition and in the capital structure of farm business in Chile.

Early trade and price reforms were important in Chile, providing transparency to the structure of incentives, removing the anti-export bias, anticipating bottlenecks and revealing potential growth areas. The early elimination of most price controls and the removal of quantitative restrictions, accompanied by an explicit plan of tariff reduction and elimination of export taxes and controls, were essential ingredients.

Effective trade and price reform goes beyond the border measures. Price reforms include the elimination of domestic interventions such as direct price controls, state monopoly procurement, bans on exports of particular goods, compulsory procurement, discrimination against private traders on the use of railway services and storage facilities, distorted seasonal pricing, and others. Such reforms are often more difficult to implement quickly, because they involve both federal and state agencies, and require a piece-meal approach developing a new regulatory framework affecting various activities.

But often the question is raised as to whether agricultural trade and price reforms are appropriate if the non-price related reforms (such as restrictions on land and labor markets) are not taking place and have been postponed. This is, I believe, a false dichotomy. True, the positive impact of trade and price reform on aggregate supply response will be less if the internal deregulation on land, labor, and marketing does not take place simultaneously. For example, bottlenecks in the delivery of inputs owing to transport and marketing inefficiencies will of course slow down the output response. Ideally, domestic reforms should be initiated early in the process. But if that is not the case, bold trade and price reform early in the process should eloquently expose those inefficiencies in domestic markets and induce more political support for accelerating the non-price related reforms.

Trade reform in Chile was accompanied by fiscal reform, so that the motivation to raise revenue through trade taxes diminished. In New Zealand, trade policy reform of manufacturing only removed quantitative restrictions, while high levels of protection continued. From 1986 onwards, as farm subsidies were withdrawn, agriculture was substantially taxed by that protection on manufacturing, effectively a tax on agricultural exports. Consequently, a strong anti-export bias persists.

Radical economic reform, as implemented in Chile and New Zealand, involved no increase in public sector expenditures in agriculture. In fact, they were drastically reduced in New Zealand. In Chile, public sector expenditures on agriculture declined in real terms and as a percent of agricultural GDP. The private sector can respond rapidly in the provision of input and output marketing for agriculture.

In Chile and New Zealand, acting quickly to deregulate services (internal and external transport and communications) and rapid privatization of input delivery systems were beneficial to agriculture and did not create transitional disruptions in supplies.

The potential financial stress imposed by reforms on agriculture is important to consider. With hindsight, Chile's experience with farm debt during the early 1980s, five to six years into reform, shared some elements with New Zealand. As a percentage of agricultural GDP, Chilean agricultural debt, since reforms, has been much higher, rising from 11,6 percent during 1965-73 to 79.8 percent between 1983-90. Like New Zealand, not all the debt overhang can be attributed to the reforms, given the considerable accumulation of debt during an earlier period of subsidized interest rates. With substantial appreciation of land values in Chile, roughly since 1985, farm debt has ceased to be a major issue.

Chile has, however, maintained some lines of farm credit (at market rates), to serve small and medium-size farmers in areas not covered by commercial banks. Similarly, **extension and supervised credit** programs are exclusively directed to small farmers. Special lines of credit for commercial farmers are not necessary. In New Zealand, agricultural extension and research services were put on a user-fee basis, and the government provides research funds through a system of competitive funding involving public and private suppliers.

Chile's post-reform institutional set-up for agricultural exports was privatized, without quality control or government promotion. Sales are solely on consignment, however risky, with no averaging of export prices for individual farmers. The only mandatory controls cover sanitary and phytosanitary requirements. New Zealand, by contrast, has maintained marketing boards for major exports, although government is not the majority representative. In Chile, food imports are handled directly by private agencies, following the demise of the state agency ECA as the result of reform. Removal of licenses and quotas on imports and deregulation to allow free entry into Chile fundamentally reduced the risk of monopoly in domestic marketing of basic staples.

Poverty alleviation in rural areas requires an overall trade strategy that generates more rural employment and investment in rural infrastructure and

social programs to offset the disadvantages of rural areas - lack of transportation, schooling, and public health facilities. Considerable differences have arisen between institutions serving commercial farms and small-farm sector in Chile. The relative non-competitiveness of part of the small farm sector requires special emphasis via credit and extensive services.

A main lesson from Chile's resurgent agriculture sector is that reforms can have unexpected but fortuitous consequences. The tremendous change in Chile's agricultural mix was not foretold. Following public investment in basic infrastructure (physical and human capital), and reforms in the policy and economic framework that freed up private initiative, the economy and sector responded broadly and with versatility, developing unforeseen niches for each.

Postscript

An important emerging issue is the declining competitiveness of Chilean agriculture since approximately 1989. After several years of continuous and robust sector-wide growth, Chilean agriculture has fallen behind the rest of the economy.

World prices for traditional crops are well below expected trend levels. While they may recover to trend levels there is no reason to believe that they will go above that for any sustained period, barring a worldwide catastrophe, as the world's food production system is highly diversified and therefore highly buffered against uncertainty.

Adding to these microeconomic problems are those that are peculiar to the sector itself. Firstly, there is the problem of duality. Alongside a very productive component of the farming community there is still a large number of smallholders who have not modernized, a proportion of whom may never have the capacity to adjust to the demands of a modern economy. There are also certain agro-ecological regions which are having productivity problems and for which there exist fewer production alternatives. In many of these areas, the first problem overlaps with the second, namely, an unmodernized subsector inserted into an agro-ecological area with productivity problems.

The proposed trade agreement with Argentina aggravates this problem since the latter country has the same product mix as the areas mentioned, i.e., wheat, rice, oilseeds, etc., and is perceived to be more competitive. Extending trade preferences to farm products under the integration agreement with Argentina would force Chile, a small residual market for Argentine agricultural exports, to face low and very unstable border prices. Further anxiety in the sector

has been generated by the substitution of agricultural land in the 9th Region by forestry, which has led to rural-urban migration.

While there is a consensus that the decline in competitiveness is most acute in traditional crops, there is also the potential risk of disinvestment in the fruit subsector, if the above trends continue. Job losses would result. It is estimated that the fruit subsector employs about 200,000 people, which accounts for 28 percent of sector employment.

In conclusion, it is a common phenomenon of economies that have sustained high growth rates over several years that economic competitive pressures build up and result in a decline in the competitiveness of subsectors within agriculture, leading to intensive pressure for protection for such subsectors. However, the experiences of Europe, Japan and other countries indicate that intervention in the product market fails to provide longterm prosperous and viable agriculture. Despite their enormous cost to consumers and taxpayers, farm incomes have continued to decline.

A better option is to assist in the inevitable structural adjustment by intervening in the factor market, by increasing the productivity of labor and land in the most affected regions. A complementary element is compensation (not price support) for those small farmers located in areas without access to non-farm jobs nearby.

There is now evidence that the New Zealand economy has moved out of the recent recession in 1991. Since the economy bottomed out in mid-1991, there have been four successive quarters of real growth largely emanating from the export sector. New Zealand now has low inflation, greater efficiency, and accountability in ports, telecommunication services, and higher labor productivity. Labor and financial markets have been deregulated and the tax system reformed. The reorientation of the economy away from the inward looking growth strategy of the last 50 years has indeed occurred (Scobie and Janssen, 1993). The agricultural sector is a major beneficiary of this. There is, however, much unfinished business. In the absence of more severe cuts to public expenditures or increased tax rates, the fiscal outlook is fragile. This would restrict growth, private investment and employment.

REFERENCES

- Hacchette, Dominique and Sergio de la Cuadra (1991). "the Experience of Argentina, Chile and Uruguay" "in **Liberalizing Foreign Trade** edited by D. Papageorgiou, M. Michaely, and A. Choksi (Blackwell: Oxford).
- Hurtado, Hernan, Alberto Valdes and Eugenia Muchnik (1990). "Trade, Exchange Rate, and Agricultural Pricing Policies in Chile". "World Bank Comparative Studies, vol. 1 (Washington, D.C.: The World Bank).
- Janssen, John, Grant Scobie and John Gibson (1991). "Liberalization in the New Zealand Economy: Reforms, Consequences and Lesson", The University of Waikato, New Zealand, for the World Bank, Dec. 91.
- Johnson, R. W. (1991). "Current Changes in New Zealand Agriculture: a Review". in **Review of Marketing and Agricultural Economics**. Vol. 59, n° 2, August 1991.
- Muchnik, Eugenia and Marcela Allue (1991). "The Chilean Experience with Agricultural Price Bands", **Food Policy**, vol. 16 n° 1, Feb. 91, pp. 67-73.
- OECD (1992), "Committee for Agriculture, Farm Employment and Structural Adjustmen in the OECD: Case Study - New Zealand" (Draft).
- Quiroz, Jorge and Alberto Valdes (1993), "Price Bands for Agrcultural Price Stabilization: the Chilean Experience", World Bank, LATAD.
- Papageorgiou, Demetrios, Armeane Choksi, and Michael Michaely (1990), "Liberalizing Foreign Trade in Developing Countries: The Lessons of Experience", World Bank.
- Sandrey, Ron and Russel Reynolds, eds. (1990) **Farming Without Subsidies**. MAF Policy Services Project (New Zealand: GP Books).
- Scobie, Grant M. and John Janseen (1993), "Liberalization of the New Zealand Economy: Rehabilitation and Recovery". Department of Economics, University of Waikato, April 1993.
- Valdes, Alberto (1992). "Domestic Surveillance for Transparency in Agricultural Price and Trade Policies", LATAG, World Bank.

Table 1 - Public Expenditure on Agricultural Assistance in New Zealand, 1970-90.

Year ended March	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NZ\$ milhões													
ASSISTANCE ON OUTPUTS													
Dairy Board Stabilization	-16	102	116	-23	49	81	0	0	0	0	0	0	0
Meat Industry Stabilization Account	0	0	-44	26	99	270	274	337	176	2	0	0	0
Supplementary Minimum Prices (SMP)	0	28	17	1	245	438	348	215	65	0	0	0	0
Other	3	11	47	49	64	74	74	78	82	82	42	35	35
TOTAL	-13	141	138	53	457	863	694	630	323	84	42	35	35
ASSISTANCE ON INPUTS													
Fertilizer Subsidies	5	30	62	52	48	44	41	35	12	6	0	0	0
Other	4	3	17	20	26	27	32	22	11	13	14	14	18
TOTAL	9	33	79	72	74	71	73	57	23	19	14	14	18
ASSISTANCE TO VALUE-ADDED FACTORS													
Interest Concessions	5	14	45	63	75	92	119	152	242	207	226	92	26
Taxation Concessions	13	25	78	76	79	67	104	96	168	22	17	13	10
Other	9	20	66	77	91	99	103	100	107	87	244	130	117
TOTAL	27	59	189	216	245	258	326	348	517	416	487	235	153
TOTAL ASSISTANCE	23	233	404	341	776	1192	1093	1035	863	519	543	284	206
Total Government Expenditure	1350	3462	7586	9132	11196	12672	14250	15317	17673	20941	23238	23740	24979
Expenditure Share	2%	7%	5%	4%	7%	9%	8%	7%	5%	2%	2%	1%	1%
Total Value of Agricultural Output	722	960	2621	2766	3165	3540	3631	4577	3831	3967	4575	5407	6148
Producer Subsidy Equivalent (PSE)	3	24	16	12	25	34	30	23	23	13	12	5	3

Source: Adapted from Tyler and Lattimore (1990), Tables 4.1 & 4.2, pp. 72-75. Government Expenditure data from Reserve Bank.

Table 2: Changes in Agricultural Output, Productivity and Exports, Chile 1960-90.

	Pre-Reform	Economic Reform	
	1960-73	1974-83	1983-90
A. PRODUCTION (%)*			
Exportables			
Table Grapes	-	63.3	642.6
Apples	-	69.2	352.5
Sawnwood	-	62.8	136.2
Others	-	-	-
Importables			
Corn	-	59	198.7
Rice	-	32.4	89.2
Wheat	-	-20.4	24.9
Sunflower	-	25	250
Sugarbeet	-	44.7	171.7
Beef	-	23.6	32.7
Milk	-	27.6	37
Agric. Value Added (annual growth rate)	0.2	4.8	4.5
B. PRODUCTIVITY (tons/ha)			
Exportables			
Table Grapes	11.8	8.5	8.1
Apples	11.3	13.7	25
Importables			
Corn	2.9	3.4	6.6
Rice	2.7	3.2	4.1
Wheat	1.6	1.7	2.6
Sunflower	1.3	1.4	1.9
Sugarbeet	36.5	39.9	50.4
C. EXPORTS (average annual rate of growth)			
Fresh Fruits (volume in boxes)	5	25.7	21.5
Value:	2	42.5	13.9
Agriculture	4.3	36	15.3
Livestock	3.3	41.4	8.3
Forestry	13.5	64.5	16.1

* Percentage change over the 1960-73 level

Table 3. Average Annual Direct and Indirect Price Interventions to Agricultural Producers in Chile, 1960-84.

Year	Nominal Rate of Protection									
	Direct					Total				
	Wheat	Cattle	Milk	Apple	Grapes	Wheat	Cattle	Milk	Apple	Grapes
1960-64	0.05	-0.1	1.86	0.11	0.12	-0.41	-0.49	0.61	-0.37	-0.37
1965-69	0.13	-0.26	0.39	0.27	0.28	-0.17	-0.45	0.02	-0.04	-0.04
1970-74	-0.11	-0.24	0.16	0.42	0.44	-0.28	-0.38	-0.04	0.14	0.16
1975-79	0.09	0.05	0.28	0.00	0.01	0.33	0.27	0.56	0.22	0.23
1980-84	0.15	0.08	0.16	0.00	0.00	0.02	-0.05	0.02	-0.07	-0.07
Effective Rate of Protection										
1960-64	0.25	-0.09	0.96	0.23	0.21	-0.37	-0.54	0.00	-0.36	-0.37
1965-69	0.17	-0.31	-0.23	0.34	0.24	-0.14	-0.47	-0.42	0.03	-0.05
1970-74	1.35	-0.3	-0.23	0.56	0.53	0.93	-0.33	-0.25	0.39	0.47
1975-79	0.2	-0.03	0.22	-0.11	-0.01	0.77	-0.16	0.28	0.32	0.47
1980-84	0.18	0.06	0.01	-0.25	-0.03	0.02	0.03	0.01	-0.2	-0.1

Source: Hurtado, Valdes and Muchnik, 1990, vol. 1, pp. 106.

Note: Direct price interventions represent sectorial trade and price interventions without adjustments for exchange rate misalignment. Total price interventions corrects for exchange rate misalignment.

Table 4 - Trade Macroeconomic Policy Impacts on New Zealand Agriculture, 1982-90.

	1982	1983	1984	1985	1986	1987	1988	1989	1990
Benefit to Agriculture of Removing Manufacturing Protection and Compensating Subsidies (NZ\$ mil)	52		-102		85		216		270
True Effective Rate of Assistance to Agriculture (%)	-3		6		-4		-11		-14
Real Exchange Rate (1982 = 100)	100	104	108	105	83	79	74	84	82
Nominal Interest Rate (%)	15.8	17	16	14.7	18.5	18.6	19.7	16	15

Notes:

Benefit to Agriculture measured in 1986-87 NZ\$ using a three sector general equilibrium model of exportables (agriculture), importables (manufacturing and home goods). Where agriculture consists of a farm sector, and an off-farm (processing) sector, which effects the farm sector via derived demand. True Effective Rate is the monetary cost of trade policy relative to the free-trade value-added in agriculture. Real Exchange Rate is the price of agricultural output relative to the price of home goods.

Source: Janssen, Scobie and Gibson (1991).

TABLE 5. New Zealand: Key Economic Indicators 1982-1991.

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
Overall Economy										
1 Real GNP (%)	4.9	0.4	2.9	5	1.2	2.6	0.5	-1.3	1.4	-1.3
2 Unemployment	3.5	5.6	5.7	4.7	3.8	4	4.3	6.2	7.1	8.4
3 Consumer Price Inflation	15.8	12.7	3.5	13.2	13	18.3	9	4	7	4.5
4 Real Exchange Rate	101.2	97.9	101.6	112.6	106	107.4	94.2	94.2	98.2	104
5 Real Interest Rate	0.3	1.6	10.9	6.1	3.2	5.9	4.3	10.8	8.6	9.4
Agriculture										
6 Producer Subsidy Equivalent (PSE)	25	34	30	23	23	13	12	5	3	n.a.
7 Effective Rate of Assistance (ERA)	49	123	98	40	34	19	15	-1	-6	n.a.
8 Real Farm Income (1984 = 100)	90	87	100	55	52	60	70	100	108	n.a.
9 Agricultural Output (1984 = 100)	95	100	100	108	103	103	105	100	98	n.a.

Sources: Janssen, Scobie and Gibson (1991) lines 1 through 7; OECD (1992); and Committee for Agriculture (draft) Paris.