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## Mix and sequencing of economywide and agricultural reforms: Chile and New Zealand

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### ABSTRACT

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Once committed to economywide and sectoral reforms – stabilization, structural adjustment, and trade liberalization – and companion reforms of institutions, how does government best proceed? With what reforms in response to initial conditions, and in what mix, sequence, strength, and speed? This study examines what factors were most critical to success during transition in two early reformers. The economies of Chile and New Zealand have undergone seismic reforms, starting in the mid-1970s and 1980s, respectively. Comparative analysis of their reforms look at the prior conditions that induced drastic action and the policy choices made in each country. Though similar in many respects, differences in initial economic conditions and implementation led to dissimilar, even contrary results. For Chile, the outcome was a vigorous, recharged economy and agricultural sector; for New Zealand, the economy and the sector are lagging still. How policy choice and implementation, as well as simultaneity of reforms, affected the outcomes is the major thrust of the study. The preeminence of trade and macroeconomic policies over sectoral interventions, and in particular the strategic nature of the real exchange rate in allowing agriculture to compete domestically and internationally highlight the discussion.

### INTRODUCTION

Once committed to economywide and sectoral reforms – stabilization, adjustment, and trade liberalization – and companion reforms of institu-

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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.

tions, how do governments best proceed? With what reforms in response to initial conditions, and in what mix, sequence, strength, and speed? This study focusses on issues of transition. For agriculture, specifically, it 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 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, open economies dependent on exports of primary goods, creates many parallels with LDCs and some of the former socialist economies. They especially share a history of state intervention in economic policy. Nowhere is the parallel more marked than with policies of import-substituting industrialization.

The key questions addressed in this study are:

- What were the prior conditions that led to significant reforms?
- What kind of reforms?
- What were their consequences for the economy as a whole and agriculture in particular?
- What lessons can be drawn from the Chilean and New Zealand experiences?

In both countries, reforms centered on stabilization to correct macroeconomic imbalances, structural adjustment to eliminate distortions in incentives, and 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.

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 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 traded 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, the questions: 'How broad the reform?' and 'What is the optimal sequencing of reforms?' are fundamental to the analysis.

#### 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 1972–73, reflected in the acute breakdown of public finances (fiscal deficit equal to 25% of GDP), which had led to accelerating inflation and widespread price controls and rationing. Furthermore, massive agrarian reforms between 1965 and 1973, with 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% of agricultural GDP per annum during 1960–1973, net of input subsidies and public investment, largely the result of exchange rate misalignment and industrial protection (Hurtado, Valdés 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 1%, repre-

senting a declining share of total GDP (fluctuating between 6.3% and 10.0%) and of overall employment (declined from 30% in the 1960s to 16.5% in 1973). It was time to give agriculture a fair chance.

In New Zealand, while trade policies protected manufacturing, imposing high invisible costs on agriculture, government implemented compensatory measures for agriculture (in the form of direct input subsidies, tax and interest concessions and other transfers), which amounted to about 34% 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 rates were controlled, the exchange rate remained a target of policy, and assistance to agriculture was close to 10% of total public expenditure. Then, following national elections, three major classes of 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 start 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 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 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 of the reform process were the key considerations. A bold trade liberalization program was implemented early – eliminating all foreign trade prohibitions and removing all quantitative restrictions, and reducing tariffs from a range of 0–750% in 1974 to a uniform tariff of 10% in 1979 (Hachette and de la Cuadra, 1991) – most price controls and all multiple exchange rates were also eliminated early, and a progressive and ultimate 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, and 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% 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) – adversely affected agriculture.

The necessary conditions to stimulate private on-farm investment were still not in place. These problems, and particularly the clearcut 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 a decline in the real exchange rate (unfortunately coinciding with reduced world prices for importables). Early on (1974–76), reduced trade barriers had stimulated a real depreciation; the subsequent appreciation (1979–82) was essentially a function of the management of the capital account (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 (Muchnik and Allue,

TABLE 1

Public expenditure on agricultural assistance in New Zealand, 1970–90

| Year ended March                    | (NZ\$ million) |       |       |       |        |        |        |        |        |        |        |        |        |
|-------------------------------------|----------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                     | 1970           | 1975  | 1980  | 1981  | 1982   | 1983   | 1984   | 1985   | 1986   | 1987   | 1988   | 1989   | 1990   |
| 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 (SMPs) | 0              | 28    | 17    | 1     | 245    | 438    | 346    | 215    | 65     | 0      | 0      | 0      | 0      |
| Other                               | 3              | 11    | 47    | 49    | 64     | 74     | 74     | 78     | 82     | 82     | 42     | 35     | 35     |
| Total                               | – 13           | 141   | 136   | 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    | 187    | 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        | 1 350          | 3 462 | 7 586 | 9 132 | 11 196 | 12 672 | 14 250 | 15 317 | 17 673 | 20 941 | 23 238 | 23 740 | 24 979 |
| Expenditure share                   | 2%             | 7%    | 5%    | 4%    | 7%     | 9%     | 8%     | 7%     | 5%     | 2%     | 2%     | 1%     | 1%     |
| Total value of agricultural output  | 722            | 960   | 2 621 | 2 766 | 3 165  | 3 540  | 3 631  | 4 577  | 3 831  | 3 967  | 4 575  | 5 407  | 6 148  |
| Producer subsidy equivalent (PSE)   | 3              | 24    | 16    | 12    | 25     | 34     | 30     | 23     | 23     | 13     | 12     | 5      | 3      |

Sources: Government expenditure data from Reserve Bank, adapted from Tyler and Lattimore, 1990 [in Janssen, Scobie and Gobson (1991, pp. 72–75, tables 4.1 and 4.2)].

1991; Quiroz and Valdés, 1992) 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 had on agriculture's performance after its economic reforms. In New Zealand, the sequencing of stabilization and liberalization reforms 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, substantial fiscal deficits emerged, adversely affecting the performance of traded goods, and the sequence of labor market reforms was incorrect. It is estimated that in 1991, New Zealand's agriculture faced an 11% implicit tax due to the delay in the reduction of industrial protection (Jansen, 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. As described by Scobie, "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 affecting agriculture. In addition, and as part of the adjustment, there were some significant write-offs of accumulated debt through the marketing boards. Borrowings 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" (personal communication, 1992). The combined removal of most government assistance (see Table 1 on public expenditures on agricultural assistance in New Zealand), high interest rates, and devaluation of rural assets worsened farmers' ability to service debt, posing a serious challenge (as in Chile in 1981–82). Government facilitated a program of debt restructuring for qualified farmers (applicants without prospects of viability were declined); however, at least until early 1992, heavy debt still overburdens much of New Zealand's rural sector. 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.

The internal competitiveness of agriculture (tradables vis-a-vis home goods) continued to deteriorate throughout the liberalization process. Unemployment levels are still high in New Zealand (at the end of 1991),



and this situation is a political liability that could undermine support for the continuation of reforms. Particularly, in an attempt to stem job losses in manufacturing, pressures will mount to further slow the rate of tariff removal, thus weakening the recovery of agriculture. Unfortunately, a positive outcome has not yet emerged for New Zealand's agriculture. The unfinished business of reform is the major issue.

#### 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?

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 4% per annum from 1974 through 1990, rapid growth of non-traditional exports, a substantial increase in land productivity, and a substantial increase in rural employment. Institutional reform has been the source of several innovations in technology generation and extension, credit, export and import marketing, water rights management, and price stabilization schemes. Perhaps the most complex unfinished business in Chilean agriculture after 15 years of reform is how to address the needs of small farmers, who are geographically scattered, usually located in disadvantaged areas, and remain separate from the sector's newly found dynamism. An additional challenge ahead is the continuing pressure for protection of some importables in Chile such as wheat, sugar, milk and oilseeds.

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 left 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 quotas and of export subsidies in the form of drawbacks, (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 since the reform (wheat, cattle, and milk), and (d) nominal and effective rates have been higher than the uniform tariff on importables, the result of a special treatment for

TABLE 2

Changes in agricultural output, productivity and exports, Chile, 1960–90

|  | Pre-Reform | Economic reform |         |
|--|------------|-----------------|---------|
|  | 1960–73    | 1974–83         | 1983–90 |
| <i>(A) Production (%)</i> <sup>a</sup>             |            |                 |         |
| 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<br>(annual growth rate)          | 0.2        | 4.8             | 4.5     |
| <i>(B) Productivity (t/ha)</i>                     |            |                 |         |
| Exportables  |            |                 |         |
| Table grapes                                       | 11.8       | 8.5             | 8.1     |
| Apples   | 11.3       | 13.7            | 25.0    |
| 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    |
| <i>(C) Exports (average annual rate of growth)</i> |            |                 |         |
| Fresh fruits<br>(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    |

<sup>a</sup> Percentage change over the 1960–73 level.

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 and quotas.

TABLE 3

Average annual direct and indirect price interventions to agricultural producers in Chile, 1960–91

| Year                                | Direct |        |       |       |        | Total |        |       |       |        |
|-------------------------------------|--------|--------|-------|-------|--------|-------|--------|-------|-------|--------|
|                                     | Wheat  | Cattle | Milk  | Apple | Grapes | Wheat | Cattle | Milk  | Apple | Grapes |
| <i>Nominal rate of protection</i>   |        |        |       |       |        |       |        |       |       |        |
| 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  |
| 1985–89                             | 0.14   | 0.44   | 0.22  | 0.00  | 0.00   | –     | –      | n.a.  | –     | –      |
| 1990–91                             | 0.21   | –0.11  | 0.40  | 0.00  | 0.00   | –     | –      | n.a.  | –     | –      |
| <i>Effective rate of protection</i> |        |        |       |       |        |       |        |       |       |        |
| 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   | –0.01  |
| 1985–89                             | 0.16   | 0.44   | 0.27  | –0.12 | –0.02  | –     | –      | n.a.  | –     | –      |
| 1990–91                             | 0.27   | –0.11  | 0.48  | –0.01 | –0.01  | –     | –      | n.a.  | –     | –      |

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

Source: Estimates for 1960–84 from Hurtado, Valdes and Muchnik, 1990 (p. 106). Estimates for 1985–91 from A. Valdés, 1992.

As indicated above, New Zealand's agricultural performance was poor immediately after the reforms. Three years after the initiation of reform, farm income had declined and land values fallen. At the same time that the sector lost high levels of assistance (input subsidies, price supports, and others), agricultural competitiveness declined; mainly as 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 1982–91). Agriculture suffered a fall in its domestic terms of trade since 1984, and farm incomes fell sharply by 1986 and then rose slightly over the pre-reform period (Table 5). Land values fell in line with farm income and higher interest rates, resulting in a substantial farm indebtedness relative to their equity, and farm bankruptcies rose sharply. Within agriculture, the sheep and beef sub-sectors experienced the greatest reduction in revenues.

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

TABLE 4

Trade and 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\$ million) | 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   |

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 affects 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).

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

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.

There is, however, the issue of what lags should be anticipated in terms of the sector's growth response to adjustments? According to an analysis by Sandrey and Reynolds (1990), the lengthy lags in adjustments of land ownership and in the capital structure of farm business were largely unanticipated. With heavy debt burdens, and 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.

TABLE 5

New Zealand: Key economic indicators 1982–91

|  | 1982  | 1983 | 1984  | 1985  | 1986  | 1987  | 1988 | 1989 | 1990 | 1991 |
|--|-------|------|-------|-------|-------|-------|------|------|------|------|
| <i>Overall economy</i>                 |       |      |       |       |       |       |      |      |      |      |
| (1) Real GNP (% change)                | 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 | 106.2 | 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  |
| <i>Agriculture</i>                     |       |      |       |       |       |       |      |      |      |      |
| (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: Lines 1 through 7 from Janssen, Scobie and Gibson (1991); lines 8 and 9 from OECD, Committee for Agriculture (1992).

## LESSONS OF EXPERIENCE

Following reforms in policies and institutions (Chile in 1974 and New Zealand in 1984), which reforms were the most critical during transition to the success of overall reforms, in that they significantly slowed down or accelerated private investment and the supply response of agriculture?

*Strategic importance of the real exchange rate.* 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 most sensitive to shifts in trade and macroeconomic policies. The main 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 and can create considerable resistance by farm lobbies against trade liberalization, and create strong pressures for special treatment after the major reforms have been implemented.

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 increase in the real exchange rate, 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. A macroeconomic background which remains unstable after the initiation of the reforms risks the sustainability of the reform program.

Moreover, 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.

*Simultaneous reforms.* “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 in the deregulation of services (transport, communications, insurance) and the privatization of agricultural input sectors was beneficial for agriculture, particularly non-traditional exports. Privatization early in the reform process in Chile resulted in a relatively smooth and quick transition to a more competitive and dynamic supply system. Closing down relevant state agencies contributed to credibility and accelerated private investment.

*Legal framework to secure property rights.* 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 and reform in the financial sector importantly facilitated changes in output and its composition and in the capital structure of farm business in Chile.

*Trade and price reforms up front.* Such reforms were important in Chile, providing transparency to the structure of incentives, removing the anti-export bias, and 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.

*Price and non-price related reforms a false dichotomy.* 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 price reforms are often more difficult to implement quickly because they involve both the federal and state agencies, and require a piece meal approach developing a new regulatory framework affecting various activi-

ties. Much effort could be saved by the new reformers by 'borrowing' from the experience of the early reformers, for example, by analyzing the regulatory norms implemented by the latter.

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 due 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, one should expect that a bold trade and price reform early in the process will eloquently expose those inefficiencies in domestic markets and induce more political support for accelerating the non-price related reforms.

*Trade and fiscal reform together.* Trade reform in Chile was accompanied by fiscal reform, and so 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, which is effectively a tax on agricultural exports. Consequently, a strong anti-export bias persists.

*No need to increase public expenditures on agriculture.* 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.

*Appropriate speed in enacting reforms.* 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.

*Alertness regarding farm debt.* 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 percentage of agricultural GDP, agricultural debt since reforms has been much higher, rising from 11.6% during 1965–73 to 79.8% between 1983 and 1990. Like New Zealand, not all the debt overhang can be attributed to the reforms, given the considerable accumulation of debt during an earlier time 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, the focus on *extension and supervised credit* programs is 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.

*Privatized export trade is possible.* Chile's post-reform institutional set-up for agricultural exports is privatized, without quality control or government promotion. Uniquely based on consignment, however risky, there is no averaging of export prices for individual farmers. The only mandatory controls cover sanitary and phytosanitary requirements based on government guidelines. 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.

*Special needs of small farmers.* 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 difference exists in the development of market and non-market institutions serving modern commercial farms and the traditional small-farm sector in Chile. The relative non-competitiveness of part of the small farm sector requires special emphasis via credit and extensive services.

*No need to pick winners and losers.* 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.

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