Working Paper

Reforming agricultural policy: lessons from four countries

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The Future Agricultures Consortium aims to encourage critical debate and policy dialogue on the future of agriculture in Africa. The consortium is a partnership between research-based organisations in Africa and the UK, with work currently focusing on Ethiopia, Kenya and Malawi.

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Abbreviations

BADC	Bangladesh Agricultural Development Corporation
BNP	Bangladesh Nationalist Party
FF	Federated Farmers of New Zealand
GDP	Gross Domestic Product
IFDC	International Fertilizer Development Center
ISI	Import Substituting Industrialisation
MAF	Ministry of Agriculture and Fisheries, New Zealand
NZ$	New Zealand dollar
PSE	Producer Subsidy Equivalent
VAT	Value Added Tax

Contents

Summary

Comparing reform of agricultural policy in Bangladesh, Chile, China and New Zealand, this paper derives lessons for countries contemplating reform.

In all cases reforms to farm policy were undertaken as part of overall reforms across the whole economy, started in response to a perceived national crisis and usually implemented by new governments with a mandate to make major changes. Political will is, not surprisingly, a necessary condition.

In designing reforms and their implementation, much depends on context, including external conditions such as world market prices. The scope for change, and certainly the sequence and pace of reform, may be as much a matter of administrative feasibility as choice.

Where outcomes are uncertain and state capacity limited, gradual approaches to reform that allow for learning may be better than swift and comprehensive — 'big bang' — packages.

This working paper presents the first stage of a review of agricultural reform experiences within African countries, specifically Ethiopia, Kenya and Malawi. It aims to draw out issues for would-be reformers by examining the experience of four cases of agricultural reform, purposely selected as often being seen as successful. These are:

- Reform of agricultural input markets in Bangladesh in the early 1980s, followed by liberalisation of grain trading and the cancellation of several longstanding programmes of public distribution of grains during the late 1980s and early 1990s;
- The impact of economy-wide reforms and counter-reform of land on Chilean agriculture from 1973 through to the 1980s;
- Introduction of the 'household responsibility system' of production and liberalisation of marketing in China starting around 1978; and,
- Removal of price and other support to New Zealand farming that began in 1984 and continued into the 1990s.

This review seeks to answer the following questions:

- What were the conditions that created the impetus for agricultural reform?
- What factors determined the actual content of the reform packages?
- What challenges were faced in the implementation of the reform and what lessons, if any, can be learnt from these for future reform programmes?
- What opposition was there to the reforms and how was this overcome?
- What factors exerted the greatest influence on the outcomes of the reform?

The country cases

Bangladesh undertook two waves of agricultural reforms between the late 1970s and early 1990s. In the first, the markets for agricultural inputs — above all fertiliser and irrigation equipment were liberalised. This led to falling prices, greater availability, and increased use of these inputs. Tubewells and pumps, in particular, allowed a major expansion of winter ('boro') rice production that saw increases in domestic supply of rice outstrip population growth and thereby drove down the price of rice. This in turn made it easier to implement the second round of reforms where the markets for food grains were liberalised and some large-scale programmes of food subsidies were ended.

Bangladesh benefited from phased implementation of reforms that allowed for learning, monitoring and adjustment to developments in the markets. Timing was important — and fortuitous, since the liberalisation of inputs took place just as international prices dropped, thereby more than offsetting the loss of subsidies on inputs.

Much of the impetus for reform came from domestic concerns over the costs and ineffectiveness of controls on markets and subsidies. Donors were also concerned, provided some help for research on the costs, and also ended up acting as a target to draw the fire of domestic opponents of reform.

Formal research played a role in revealing the high costs of existing policies. The numbers were fed into debate by cabinet briefings, policy seminars and by (leaked) press reports. People were aware that there were problems, but it seems the numbers shocked them sufficiently to act.

Chile's reforms took place within the context of sweeping changes to overall economic policy carried out after the coup of 1973. The first phase that lasted until 1975 consisted of gradual measures to liberalise the economy and open the country for trade, while cutting back on the role of the state. For agriculture, the main measure was the part reversal of the redistributive land reforms that had taken place in the decade or so before the coup, as some large farms were returned to their former owners. From 1975, economic policy became more radical in a determined attempt to create conditions for business to invest. But after a banking collapse in 1982, more pragmatic policies were introduced that allowed some trade protection, some regulation of finance markets, and some programmes and projects that saw the government trying actively to stimulate investment and productivity.

Farming was affected by changes in land ownership, the more open trading regime, and by a reduction in the provision of public services. By the early 1980s the sector had adjusted to reforms and began to take the opportunity to boost exports of fruit, forest products, fisheries, and wine. The freer market had allowed some concentration in supply chains with large conglomerates then bringing in capital and know-how. From the mid- 1980s to the mid-1990s the farm sector grew at annual rates that were usually 5% a year or more.

Reformers in Chile were able to take advantage of an authoritarian regime that was determined to reform the economy to push through changes that favoured business, albeit at the expense of workers and small farmers. But the path taken by Chile was far from being a blueprint: reform went through stages, as lessons, sometimes quite painful, were learned. The precise configuration of policies was worked out through interactions between technocratic economists — the 'Chicago boys' — and elite groups within industry and farming, mediated by a leadership that was prepared to take unpopular decisions if convinced by the arguments.

In the case of **China**, the reforms introduced after 1978 marked a significant departure from previous economic policies. In agriculture, markets for produce that previously had been under tight control of the state were partly liberalised. Land that formerly had been worked by production units was leased out to households who a few years later were even allowed to rent out their plots. Labour markets were eventually allowed.

The results have been striking: per capita agricultural output more than doubled in the two decades following reforms, and rural incomes have risen considerably making a big dent in poverty. Not all of the increases in income can be attributed to agriculture: jobs in burgeoning rural industries and remittances from the increasing numbers of migrants from rural areas have contributed. But some of those changes have been linked to reforms in agriculture.

Although at first sight China made dramatic reforms, the process was more gradual, based on experimentation and pragmatic choices. The reformers of the late 1970s could draw on the results of tolerated trials in small areas carried out in the 1960s and 1970s. Moreover, once the initial round of reforms of 1978–1979 brought gains that exceeded expectations, policy-makers were thus encouraged to introduce further rounds of reforms from 1984 onwards that deepened and strengthened the initial changes.

For much of the twentieth century, **New Zealand** farming suffered negative net protection within an economy pursuing import-substituting industrialisation. However, for a brief period from 1980–84 it enjoyed considerably increased support levels that were quickly identified by economists and policy makers as unsustainable. A Labour government came to power in 1984 following a snap general election and was quickly forced into devaluation of the New Zealand dollar by a financial crisis. Despite not having signalled this in its election campaign, it then embarked on a radical reform of the entire economy, focusing on achieving macroeconomic balance and stripping away sectoral policy support.

Agricultural support — the majority of which was to sheep meat, wool and beef production — was the first to be cut. In the first year, 1984–85, the effects of the cuts were offset by the benefits from exchange rate devaluation combined with high international commodity prices. It took longer to control inflation than had been expected. In the meantime, high real interest rates caused the exchange rate to appreciate again and this, combined with two years of lower international commodity prices, made the adjustment for New Zealand's farmers to their loss of policy support much more painful than would otherwise have been the case. Land prices fell when support was withdrawn, leaving some farmers severely indebted, whilst farmers in marginal areas found it hard to compete in the undistorted market. Some support to ease the adjustment process was forthcoming from the Labour government after it was returned to power in 1987.

Government agencies in all sectors were subject to 'new public management' aimed at increasing their efficiency. Within the Ministry of Agriculture and Fisheries reform began in 1985, with initial targets set for cost recovery of services such as quality control and extension. Organisationally, services were separated from policy and ultimately the former were either privatised or spun off into independent agencies.

An interesting exception to radical reform was the preservation of export marketing organisations. Instead of introducing competition, efforts were made to increase their efficiency and accountability to producers.

Inflation was eventually brought under control in 1989 and both the economy as a whole and the agricultural sector in particular resumed growth in the early 1990s. There was some switching out of sheep meat and wool towards, in particular, dairy and horticulture. Overall, farmers managed to raise total factor productivity, so as to maintain overall output levels with reduced inputs, thereby fairly quickly restoring profit levels after an initial shock.

New Zealand's reforms were not opposed by the main farmers' organisation. This broadly supported reform and indeed, pressed the government to reform other sectors such as ports and transport where inefficiencies impaired the competitiveness of export agriculture.

Conclusions

The **context** of agricultural reform was that of response to a perceived crisis, either economic, political or a combination of both. In all cases, with the part exception of China, reforms were undertaken following a change of government. The crisis seen was not specifically agricultural, nor even rural: in all four cases, it was a national problem. It was not surprising then to see that agricultural reform was part of a wider set of measures designed to affect the entire economy. In all four cases studied here, the national programme included liberalisation of markets and a retreat of the state from intervening in the economy, although we do not mean to imply that this is the only form that reform can take.

The main difference within the four cases was the pace and sequencing of the reforms. Chile and New Zealand went for swift and comprehensive reforms — 'big-bangs', while the approach in Bangladesh and China was more gradual, with reforms introduced in stages.

When examining the agricultural **content** of the reforms, in many cases these were the sectoral concomitants of a more general strategy, as seen for example in the liberalisation of markets for agricultural produce and inputs, in reducing subsidies, and in reducing the extent of state intervention in production and markets. In all cases, the reforms saw the scope of public agencies, and especially parastatals, reduced.

Process: the sense of crisis gave incoming governments a mandate to make substantial changes. In all cases, the new leaders of the countries had a vision of change and were prepared to bring this about. It helped that in three of the cases, the reforming governments were not subject to full democratic scrutiny: two military administrations in power after coups, and a single-party state. In New Zealand, where this condition did not apply, it seemed the elected government benefited from a widespread acknowledgment that change was needed.

Since both crisis and response were national, rather than specifically agricultural, the politics of agricultural reform were subsumed within national debates on overall economic strategy. Indeed, in three of the cases, important reforms were seemingly imposed on agriculture and the state agencies concerned with the sector by policy-makers and advisors situated in more powerful parts of the government, notably the ministry of finance.

None of the reforms necessarily went smoothly: all were marked by adjustments and indeed, some important deviations from the initial schemes were seen. Given the more comprehensive nature of reforms in Chile and New Zealand than in China and Bangladesh, it is perhaps not surprising to find that there were also some ‘fits and starts’ in implementation in both these countries.

Outcomes: Success did not depend on the degree of reform. In Bangladesh and China, the modest initial measures taken paid off within a year or two. In both cases, food production for the domestic market increased well ahead of population growth: a valuable gain for countries that were very poor at the time and where the availability and price of food was a key issue. Initial success strengthened the hands of reformers and allowed bolder subsequent changes.

Success came quickly in Bangladesh and China since the changes were designed to stimulate farmers to increase production of crops and livestock that they knew well, for domestic markets that they knew equally well. Farmers had to make few adjustments. The main challenge in these cases was to encourage the emergence of private entrepreneurs in the supply chains: input dealers, credit intermediaries traders and processors.

In Chile and New Zealand, on the other hand, the response of farming to the changes was delayed, by a dozen years in the first case and by half that time in the latter. Two reasons relevant to both cases may explain the lag in response. First, some of the measures undertaken to stabilise the macro-economy — higher interest rates, less public spending — had deflationary effects that affected farming as it did other sectors.

Second, many farms eventually changed their production mix and techniques. In Chile the shift was from producing staple foods for the domestic market towards fruit, wine, nuts and other high-value crops for export. Exporting was clearly a challenge requiring learning about distant markets, achieving standards, and investing in the necessary equipment for processing and packing — a process that was assisted by the entry of foreign capital. In New Zealand farmers knew all about exporting, but they also shifted their production mix, away from sheep and beef cattle towards horticulture. New Zealand farmers also found that they could cut their costs of production to their advantage, costs savings outweighing any loss of production.

Lessons for Africa and other would-be reformers

Clearly, reform does not take place without **political will**. These cases support the hypothesis that significant changes only emerge from crises. But crisis is not the only requirement — if it were, Africa would lead the world in reforms. There has also to be a political response to crisis, usually a change of administration that has a mandate to act. This too is not sufficient: there has to be a reasonably coherent vision of strategic change amongst leaders and their policy advisers plus a sense that change is imperative.

External conditions usually matter as well: they can help or hinder reforms. Few countries can choose the moments when external conditions are suitable for reform: windows of opportunity for domestic policy reform may have to be seized irrespective of international market conditions. In most cases it is a question of designing measures in the light of external conditions — and hoping that they are advantageous.

Should reform packages be comprehensive and swift — the **‘big bang’, or gradual** and phased? Big bang has the advantages of changing while there is the political will, often taking opponents by surprise and giving them little chance to obstruct change. If, however, producers are to respond quickly to new incentives and opportunities it does require functioning markets and indeed a set of economic institutions in place. It also requires capacity and competence within the public service. Both of these conditions existed within the developed New Zealand economy, whilst the large farm focus of policy in Chile reduced the market access and service delivery constraints. However, such conditions rarely exist in Africa.

Gradual approaches, on the other hand, run the risks of being waylaid, and may delay unnecessarily the adoption of key reforms. But they have the advantages that they allow for some learning; they may be administratively feasible when the civil service has limited capacity; and if initial measures are successful, they may whet the appetite of leaders and the public for further reforms.

The choice may be more apparent than real. Some reforms are relatively simple and swift to carry out, requiring little more than high level policy advice and a ministerial decision — think, for example, of altering a tariff, changing central bank interest rates, or even adjusting government budgets. Others inherently require more time and more staff: as applies when restructuring a ministry, privatising a state-owned enterprise, or redistributing land. By and large, most measures for macro-economic stabilisation belong to the first category; structural changes, institution building, and many other measures that enhance supply response belong to the second.

Not only so different aspects of reform vary, but their feasibility will also vary by context — depending on factors such as the capacity of the public service, the extent of development of markets, institutions and private enterprises, and the experience and abilities of farmers. Hence the feasibility, pace and sequencing of reform require considerable adaptation to circumstances. There may thus be less room to choose the pace and sequence of reform than may be imagined.

Since political choices do not have to be rational, and rarely are fully informed, it is perfectly possible to misjudge the feasible range, pace and sequence of reforms. Given such uncertainties, there is something to be said for a prior preference for gradual reform, since this avoids large mistakes and allows more time for learning and adjustment. It may be just coincidence, but the two countries that took a more gradual approach to reform took no longer to see through the various stages of policy changes and see the benefits, than it took the two countries that opted for more rapid reforms to see the benefits of their changes.

1. Introduction

This report summarises the experience of four countries — Bangladesh, Chile, China and New Zealand — with episodes of agricultural policy reform.[1] It is the first stage of work that will subsequently examine agricultural reform experiences within African countries, specifically Ethiopia, Kenya and Malawi.

The reform experiences covered in the report, purposely selected since they are often seen as being successful, are as follows:

- Reform of agricultural input markets in Bangladesh in the early 1980s, followed by liberalisation of grain trading and the cancellation of several longstanding programmes of public distribution of grains during the late 1980s and early 1990s;
- The impact of economy-wide reforms and counter-reform of land on Chilean agriculture from 1973 through to the 1980s;
- Introduction of the 'household responsibility system' of production and liberalisation of marketing in China starting around 1978; and,
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- What opposition was there to the reforms and how was this overcome?
- What factors exerted the greatest influence on the outcomes of the reform?

In the chapters that follow we present the four country case studies, based on reviews of secondary literature and some insights from key informants; followed by a chapter summarising and synthesising the experiences.

[1] What do we mean by agricultural policy 'reform'? Reform implies, in this case, a set of policy changes that are both reasonably wide in their coverage or their impacts, and that are sufficiently strong to cause significant changes to the incentives facing producers, and thereby to trigger equally significant responses in production. More prosaically, reform implies policy changes that imply a break with previous policies, where new ways of reaching overall goals are embraced.

2. Bangladesh

Introduction

Bangladesh became independent in 1971. During the 1970s there was much state engagement in both provision of farm inputs and marketing of produce. Reforms began in the late 1970s and early 1980s when there was notable liberalisation of input markets. In the early 1990s marketing of produce, and above all food grains, was liberalised. At the same time trade policy was reformed to reduce protection against imports and to allow private companies to enter international trade.

Context of reform

At independence in 1971 Bangladesh was one of the world's poorest countries. Densely settled, it was predominantly rural. The land was also highly vulnerable to natural hazards, both cyclones from the Bay of Bengal and (exceptional) floods from the great rivers — the Ganga, Meghna and Brahmaputra — that flow through Bangladesh.[2]

While the country benefits from alluvial soils and annual flooding that allows wetland rice to be grown, average farm sizes were — and remain — small, in part owing to the heavy pressure of population in rural areas. The agricultural economy at independence was moreover growing only slowly: yields of rice, by far the main food crop, had risen by just 1.5% a year from 1950 to 1971 (Hossain 1988).

In the early 1970s the situation of Bangladesh was parlous: extensive poverty, high vulnerability, and apparently so few resources per person that the country seemed locked into poverty. The country was thus heavily dependent on food aid to feed its growing population.

The Bangladeshi economy at the time was marked by extensive state controls over markets and public ownership of key enterprises. In the agriculture field, the Bangladesh Agricultural Development Corporation (BADC) was responsible for the import and wholesaling of all agricultural inputs, and administered price controls and licensing for their retail distribution.

The early years after independence were marked by calamity in the form of the 1974 famine, and the political upheavals of 1975 as one-party rule was brought in, the first president, Sheik Mujib, was assassinated and a series of military coups led to dictatorial rule. In apparent recognition of the need for change of economic direction, Sheik Mujib's last government took steps towards a an economy with state intervention and more reliance on markets, an approach that was continued and intensified under the government of General Ziaur Rahman in the second half of the 1970s. The gradual reforms that date from this period covered the key areas of agriculture, industry and trade and indeed, the economy as a whole. (World Bank 2003)

The reforms undertaken in agriculture

Table 2.1 outlines the agricultural reforms undertaken from the early 1980s to the mid-1990s. Two waves of reforms took place. In the early to mid-1980s, subsidies on inputs were cut back, and domestic trading of inputs was liberalised.

A second wave of reforms came in the late 1980s and early 1990s. This included the liberalisation of imports of inputs, but also saw private trading in grain markets both domestic and international, liberalised, and major reductions to longstanding programmes for public distribution of grains.

Over the course of around fifteen years, wide-ranging reforms in agricultural policy were carried out. By the end of the process, the markets for both farm inputs and outputs had been almost completely liberalised from a previous situation of considerable and pervasive state interventions and controls. Subsidies and support to agriculture had also been cut, other than public investments in agricultural research and extension, flood control, and other rural physical infrastructure. In the breadth and depth of agricultural reforms, Bangladesh stands alone amongst its South Asian neighbours, where reforms have been much more limited (Ahmed 1996).

As will be described, the reforms appear to have been very largely successful. Public transfers to farmers as farmers, and to food consumers, have been much reduced; while private markets in inputs and outputs have functioned reasonably well. The ultimate proof of the pudding is that since the reforms, Bangladesh has seen sustained increases in the production of rice, and a fall in the wholesale and retail prices for rice to something like half the levels prevailing in the early 1980s.

[2] In the first thirty years as an independent country, Bangladesh experienced severe floods in 1974, 1987 and 1998; and catastrophic cyclones in 1985, 1989 and 1991.

Table 2.1: The reforms undertaken in Bangladesh agriculture, early 1990s to mid 1990s

<table>
<tr><th></th><th>1980–1985</th><th>1986–1989</th><th>1990–1996</th></tr>
<tr><td>Other Inputs</td><td>1980 Pesticide subsidies eliminated, import and distribution liberalised passing from MinAg to private sector</td><td></td><td>1990 Seeds: new policy proposed</td></tr>
<tr><td>Fertiliser</td><td>1978–84 Fertiliser:
BADC withdraws from retailing and thana wholesaling.
Licensing abolished, movement restrictions removed (except for 8km border zone)
Prices deregulated
Subsidy reduced, from 50% of cost in FY1979 to 21% by FY1982</td><td>1987 Fertiliser: private traders allowed to buy at factory gates and ports</td><td>1992: Fertiliser: free import from world market
1994–95: Fertiliser shortages see re-imposition of government controls on dealers, with licensing, quotas, and delimitation of sales areas</td></tr>
<tr><td>Machinery</td><td>1980–85 Irrigation: low lift pumps and tubewells sold by BADC to private parties, backed by special credit</td><td>1987 Irrigation: private dealers allowed to import engines and pumps
1988 Irrigation: standardisation rules limiting makes and models of equipment removed
1989 Power tillers: import restrictions, standardisation rules lifted</td><td>1995 Power tillers, tractors: duty free import, with credit support to buyers</td></tr>
<tr><td>Marketing</td><td></td><td></td><td>1992 Rural rationing withdrawn, Statutory rationing abolished
1991–93: Reduced public procurement</td></tr>
<tr><td>Trade</td><td></td><td></td><td>1991–93 Liberalised grain trade
Reduced tariffs on imports: Import-weighted average tariffs<table><tr><th></th><th>FY 94</th><th>FY 96</th><th>FY 02</th></tr><tr><td>Primary commodity</td><td>27.2%</td><td>13.2%</td><td>9.4%</td></tr><tr><td>Intermediate inputs</td><td>22.9%</td><td>22.7%</td><td>16.2%</td></tr></table></td></tr>
</table>

			All commodities 24.1% 17.0% 9.7%
Overall		1988/89 to 1995/96 Input subsidy: down from 2.53% to 0.83% value of output Price support down from 0.20% to 0.01% of output PSE down from 2.73 to 0.84	

The process of reform

Two forces can be singled out as propelling reforms in the 1980s. One was pressure from the main aid donors, above all USAID and the World Bank, presumably inspired by the Washington Consensus. The other was domestic concern over the cost of subsidies and transfers, and an awareness of the ineffectiveness and inefficiencies of public interventions.

The success of the first wave of agricultural reforms in the 1980s, in both saving the government funds and encouraging the use of input, may have paved the way for the probably more controversial reforms of grain marketing in the late 1990s and early 1990s — where there were longstanding arrangements of public procurement of rice, storage, and distribution to particular groups at subsidised prices. Once again, key factors were the twin forces of donor advocacy and domestic concerns over costs. Foreign aid also fell during the 1990s, making it clear to government that domestic resources would be increasingly important. Closure of costly public programmes was thus seen as a good way to make economies.

By the late 1980s and early 1990s there was growing awareness of the costs of the public distribution and the extent of leakage away from target groups, thanks to reports from NGOs such as the Bangladesh Rural Advancement Centre (BRAC) and the efforts of the IFPRI team located in the Ministry of Food (Babu 2000). The latter group in particular was able to quantify the losses, and thereby making the cost of waste dramatically clear. It was also well located within the Ministry to make sure that the messages reached ministers. One of the reports was leaked to the press and the publication of its main findings caused a stir in policy circles.

The reformers could count on the support of the main food aid donors — Canada, the European Commission, and the USA — and deflect criticism towards to these outsiders.

The context, however, favoured reformers. In the late 1970s and early 1980s the prices of diesel and fertiliser were high internationally thanks to the surging oil prices of 1973 and 1979. But by the early 1980s the oil price was coming down. This meant that even as reformers cut the subsidy on fertiliser, the price fell on the domestic markets. Similarly, as irrigation equipment became more available, and cheaper, the price of diesel to keep the pumps operating was falling. Figure 2.1 shows these price movements.

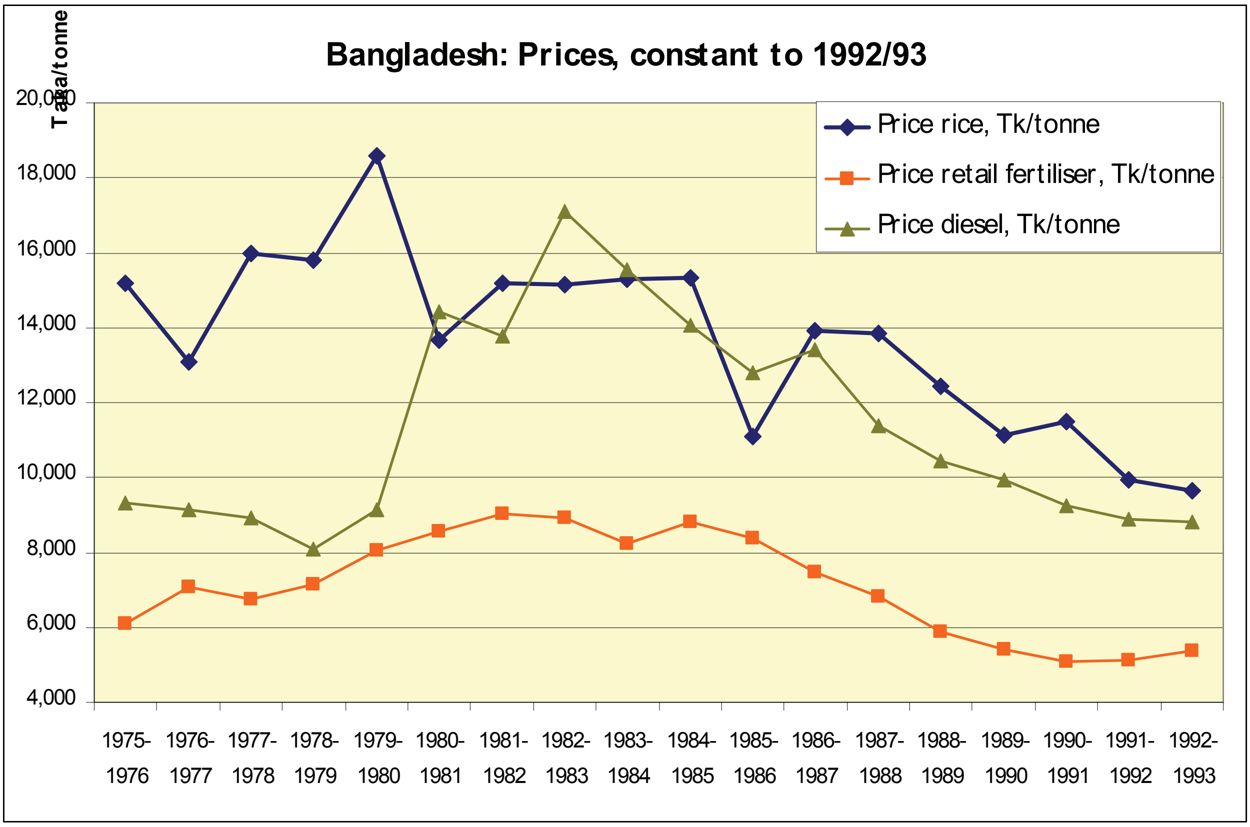
Seen in terms of relative prices, the picture can be seen in Figure 2.2. At the time that input market reform was contemplated, the situation for rice farmers was poor, with the costs of outputs to inputs having fallen sharply from 1979 to 1980. After the key reforms in the input markets, the fall in the prices of inputs was so strong that even though the price of rice was falling, relative to input prices that of rice rose a little.

In part the reduced prices of inputs were a consequence of reforms that allowed more efficiency in distribution of inputs with reduced marketing margins. But in large part they came from movements in international prices. Reformers, then, were able to take advantage of fortuitous events in world markets.

Not all was luck, however. The cost of irrigation equipment came tumbling down in the late 1980s, thanks to opening up imports and abandoning rules that only allowed the import certain standard models. This meant that the cost of pumps and tubewell equipment on the open market fell to well below the price that had previously been charged by the parastatal even with subsidy. The reformers had spotted that it was possible to make great savings on the cost of equipment by liberalisation.

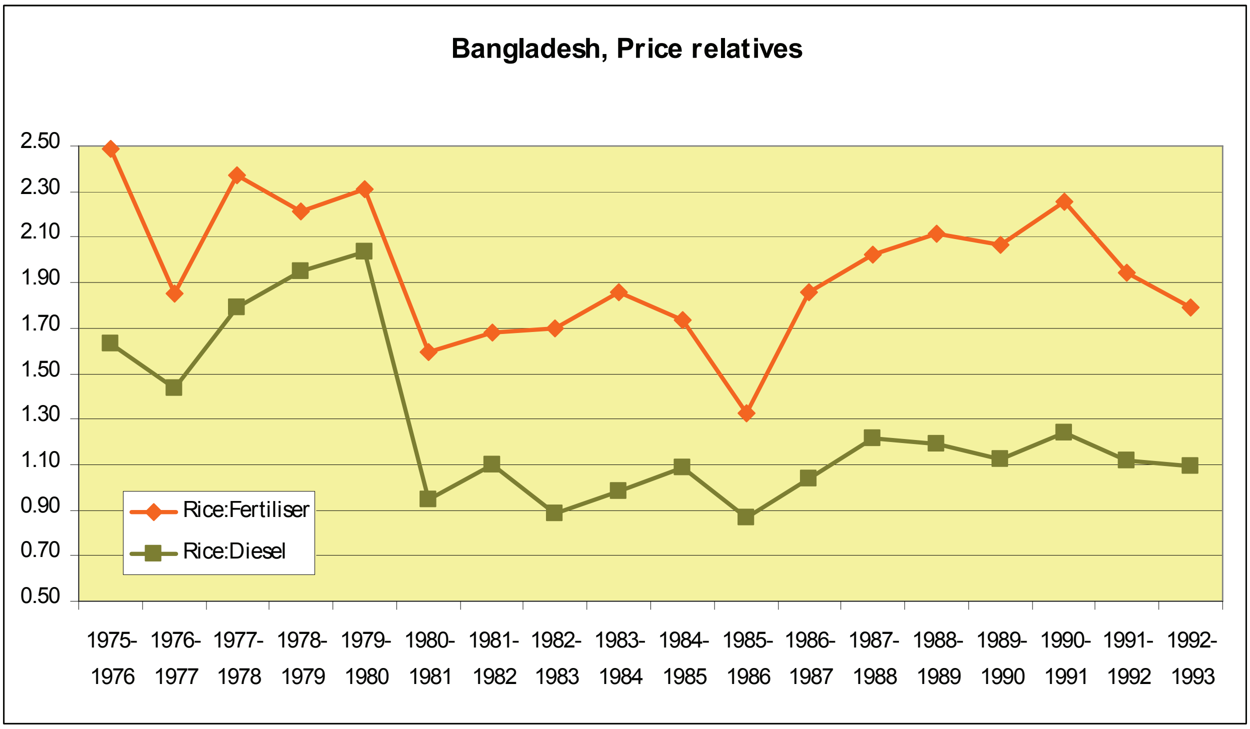
Success bred success. The input market reforms can be credited with, in first instance, an acceleration in the use of fertiliser and tubewell irrigation. The latter was particularly important in allowing winter cultivation of irrigated rice (the boro crop). Previously the bulk of domestic rice production came from the aman crop, planted during the summer. Double cropping, use of modern varieties and increased fertiliser use led to major increases in rice production. While technology accounted for some the gains, reforms encouraged its use. Ahmed (1995) calculates that by 1992 Bangladesh was producing between 20% and 32% more rice than it would have done had the reforms not taken place.

Figure 2.1: Prices of rice and inputs in Bangladesh in the late 1970s and 1980s



Source: Computed from data in Ahmed 1995

Figure 2.2: Relative prices of rice to fertiliser and diesel in Bangladesh in the late 1970s and 1980s



Source: Computed from data in Ahmed 1995

Success with the green revolution in the 1980s meant that by the early 1990s the country was increasingly less reliant on food aid, and indeed, the prices of rice in the open market were falling. The value of the subsidised rations was thus in decline, and there seems to have been only muted protest from the 15 million recipients when the two main ration schemes were closed down in the early 1990s.

Ahmed's assessment of the input reforms stresses the phased approach adopted. Bangladesh did not liberalise at a stroke: instead, the markets were freed in stages. This made the task more manageable, and it also allowed reformers to see success before embarking on wider measures. They were also able to undertake the most obviously beneficial reforms first of all. For example, in the distribution of inputs, the heavy hand of the state monopoly was at its clumsiest at the retail level, where it tried to control prices and margins of licensed dealers. Thus the first step was to relinquish those controls on retailers. Only later did the reforms take on the wholesale and import-export functions of the BADC, where inefficiencies were less.

The process of market liberalisation was monitored by the IFDC for the performance of markets with a view to resolving emerging problems promptly.

Finally, some of the reforms were brought in by incoming governments, with political programmes that favoured reforms — the events after the entry of the BNP government in 1991 is a good example.

What of the opposition to the reforms? Several sources of opposition are mentioned in the literature, thus:

- Military and police: while most programmes of subsidised rations have been either closed down or targeted to the poor, those for the military and police remain. They are judged too powerful a group to alienate;
- Rice mill owners who realised considerable rents from the old form of public procurement from the mill gate. The reforms contemplate open tendering to replace mill-gate acquisitions. It is not clear that this change has been made, but in any case the level of public procurement has fallen; and,
- Intellectuals: Ahmed (2005) mentions a 1990 paper by two prominent academics who argued for subsidies on fertiliser, and feared that moving to liberal markets lead to more capitalist farming and make national self-sufficiency in basic foods even less likely. Clearly this kind of objection did not prevail. Such doubts would have been rapidly allayed by the increased rice harvests.

While the reforms in Bangladesh is general can be seen as a series of phased and gradual measures, they were not without reversals. In 1994–95 the market for fertiliser failed and shortages became widespread, partly it seems on account of fertiliser produced in the country with a public subsidy being exported. The government in response reintroduced controls on dealers.

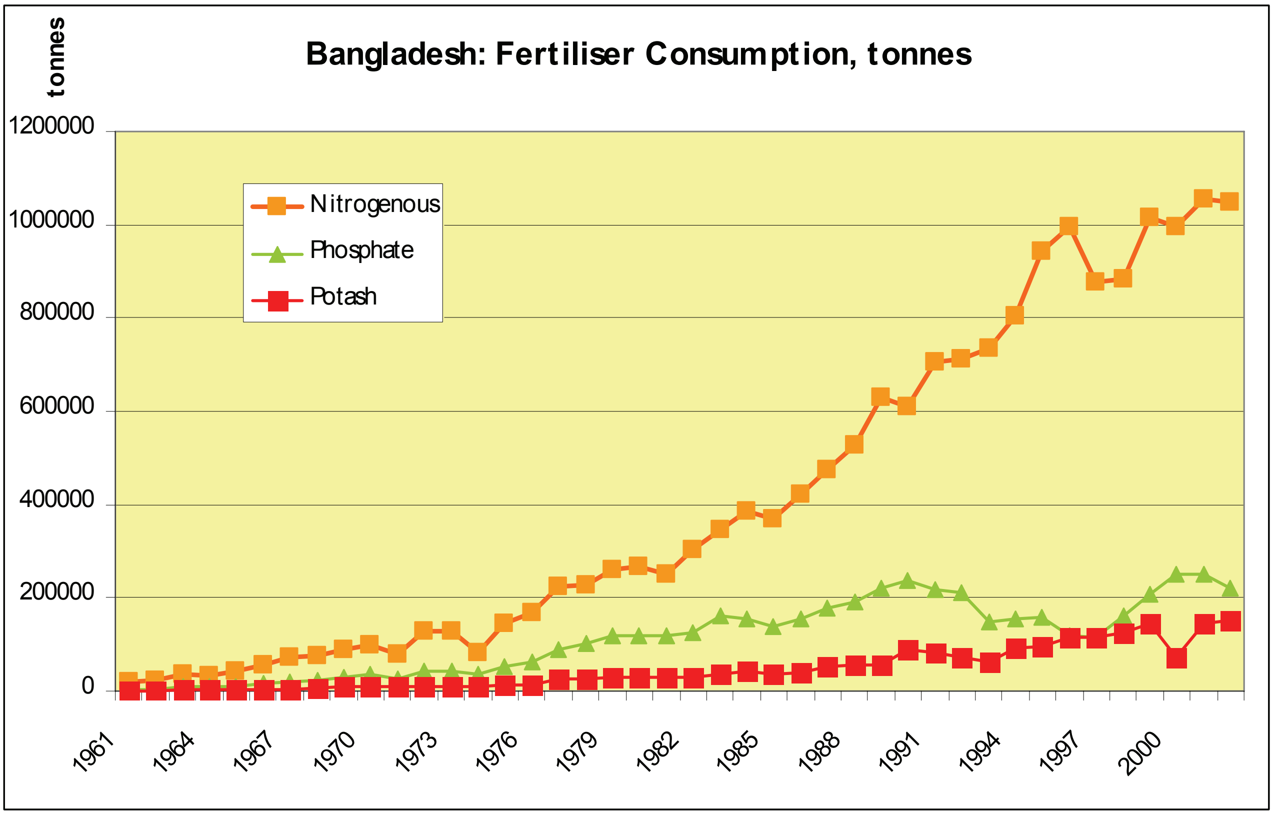
Outcomes of reform

The 1980s reforms were successful in at least two dimensions. First, for government, there were clear savings from cutting subsidies on inputs. In FY 1981 the subsidies on fertiliser and irrigation water cost 15% of all tax revenues.

Second, input dealers and farmers responded: fertiliser use increased — see Figure 2.3, and the use of pumps and tubewells rose very strongly so that groundwater irrigation rapidly outstripped the area under surface irrigation — see Figure 2.4. These combined effects allowed the green revolution varieties of rice to be adopted, and for land to be cropped more than once a year. This allowed rice production, see Figure 2.5, to expand during the 1980s and 1990s well ahead of population growth so that by the early 2000s the country was close to domestic self-sufficiency.

The marketing reforms of the early 1990s had the principal virtue of saving public spending. For example, the rural rationing programme was costing US$31M a year when it was closed down.

Figure 2.3: Bangladesh fertiliser consumption, 1961 to 2002



Source: FAOSTAT data

Figure 2.4: Trends in irrigation cover and the area planted to modern varieties of rice in the boro season, 1969/70 to 2001/02

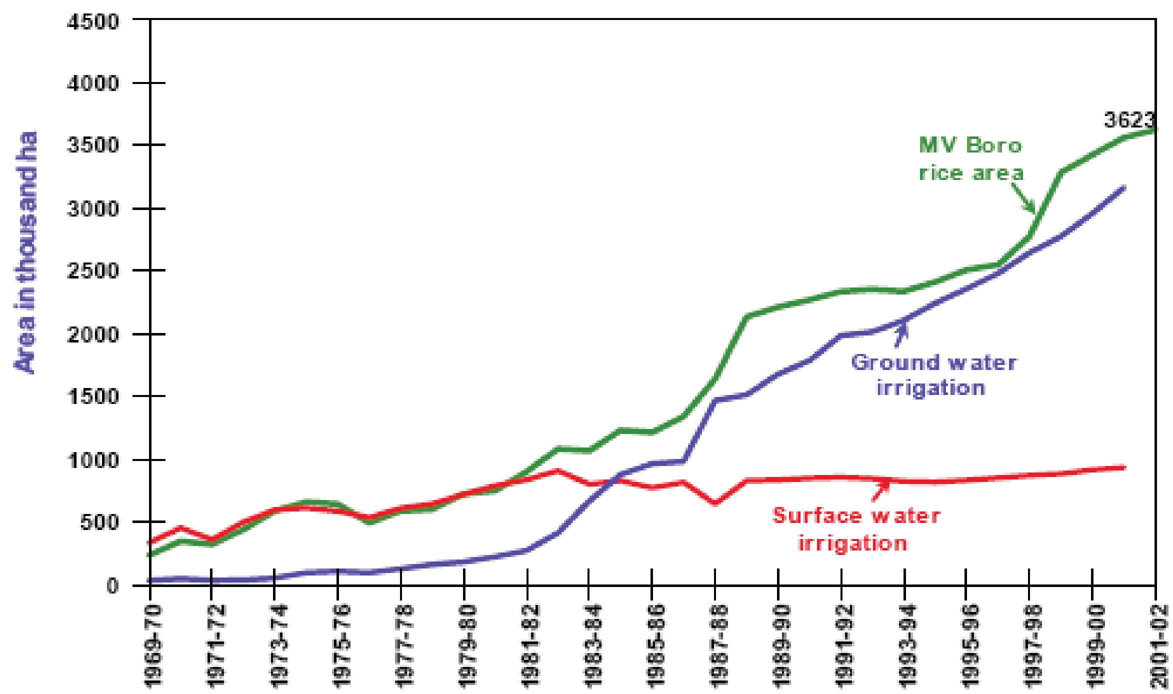
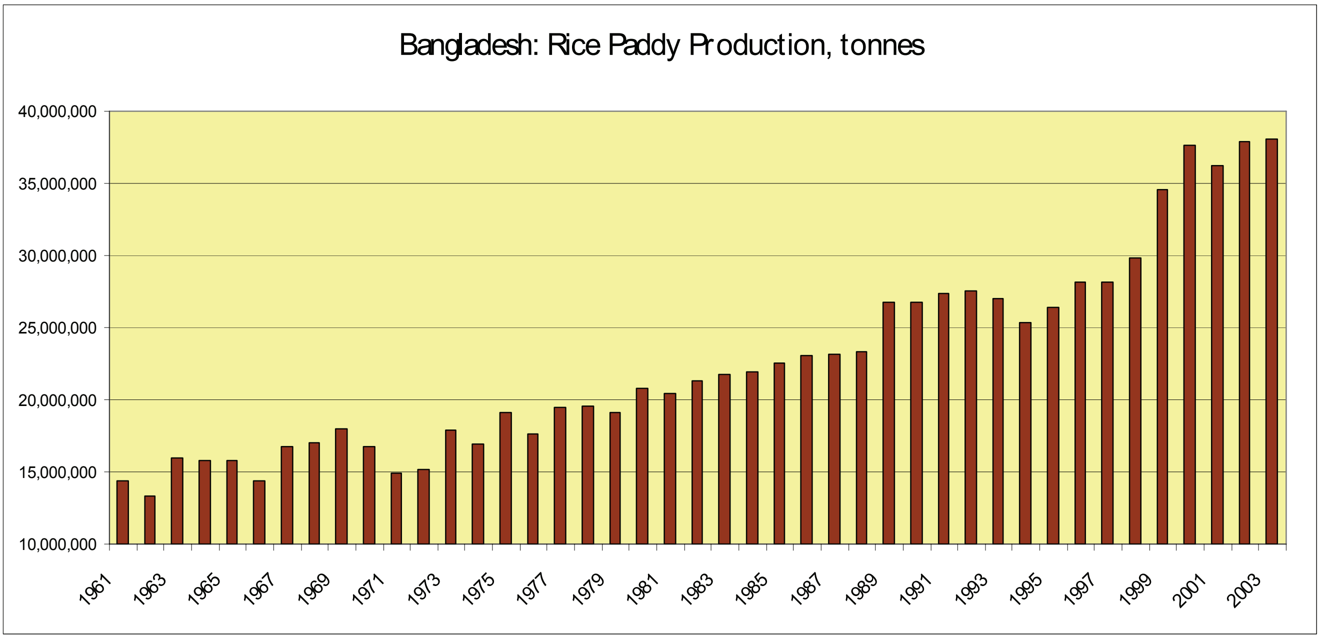


Figure 2.5. Bangladesh: Rice paddy production, 1961 to 2003



Source: FAO data

Lessons from Bangladesh

Phase the reforms. Look to do the simpler things first of all, demonstrate success, and then move towards more difficult tasks

Monitor markets when they are liberalised, and take action to correct emerging problems

Choose the moment to act. It helps to reform when there are opportunities for clearly visible gains in the short term. It also helps when prices on international and national markets are moving to cushion hardships created by loss of subsidies, and that allow vigorous supply response to new incentives created.

Use formal research to reveal the costs of existing policies. Get the numbers into the debate, with cabinet briefings, policy seminars and (leaked) press reports. People may be aware that there are problems, but the numbers can shock sufficiently for people to act.

Donor pressure can be helpful, especially if they can become the targets for the reactions of those losing from reforms and thus deflect criticism from domestic reformers.

3. Chile

Introduction

This chapter analyses the reform processes which took place under General Pinochet's authoritarian military regime (1973–89). These reforms covered a wide range of policy domains: land (counter) reform, privatisation of land and state enterprises, exchange rate devaluations, trade liberalisation (reduction or removal of tariffs and quantitative restrictions), financial sector liberalisation, labour market de-regulation, protection of property rights and infrastructure development. The reform package has been described as the most comprehensive and profound neo-liberal developmental model of the last three decades (Jarvis *et al*., 2004).

Although most of these economic policies were not generally directed to the agriculture sector,[3] they had significant impact on Chilean agrarian structures and agricultural performance. The average size of holding was significantly reduced;[4] the relation between landowners and farm labourers changed leading eventually to the emergence of a more independent, skilled and competitive labour force; agriculture production systems were modernized as the liberalisation of trade facilitated access to new foreign technologies; the agriculture product mix shifted from traditional grains and oilseeds production for the domestic market towards high value exports such as fruits, nuts and wine.

The direction and depth of reforms and their impact on agricultural structures and performance varied considerably during the sixteen-year military dictatorship. E. Silva (1993) distinguishes three phases of neo-liberal restructuring: gradual (1973–75), radical (1975–82) and pragmatic (1983–89) — see Table 3.1. Improvements in agricultural performance became apparent only from 1985, during the pragmatic stage, as the result of the combination of a stabilised macro-economy, some degree of protection to the agricultural sector and favourable conditions in the international market. Agriculture modernization and prosperity was, however, achieved at the cost of distributional inequalities and, in the first years of reform, increased rural poverty.

Context of reform

The context for the introduction of the reforms was a deep economic recession coupled with a vigorous social and political struggle which culminated with a military coup and the institution of a military dictatorship in 1973. The crises resulted from the collapse, in the late 1960s, of the import-substitution industrialization (ISI) model of economic development in a context of world-wide economic stagnation and strong polarisation of interests and political forces within Chilean society.

The ISI model[5] had generated substantial transformations in the modes of production and political and social structures (Taylor, 2001). Key changes included: industry growing substantially in size while the agriculture sector declined; the emergence of an industrial bourgeoisie and expansion of urban middle class; migration of peasants from rural areas into expanding urban centres; the growth of a politically organised working class with the Communist and Socialist parties expanding to constitute an important threat to the dominance of landowners and urban bourgeoisie; and, increased state intervention[6] combined with measures to attract foreign capital.

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[3] Gwynne and Kay (1997) argue that the only distinguishing feature of neo-liberal agrarian policy was the land counter-reform. Agricultural policy was, during the 1970s, mostly defined by accident rather than by intent, with the key agricultural parameters being determined by the wider economic policies.

[4] In 1979, more than 50% of Chile's land was held in plots of less than 20 hectares, considered small by Chilean standards (Jarvis *et al*., 2004).

[5] The ISI model was based on the promotion of industrial production through interventions such as subsidies to the emerging industrial sector, overvalued exchange rates to cheapen machinery and technological imports, and high tariffs on foreign consumer goods.

[6] According to Taylor (2001) the development of the interventionist state was a process driven by societal struggles. Through greater interventionism the state attempted to harness the working classes to capitalist development, control the emergence of subversive ideologies, and provide the economic and social stability necessary for sustained accumulation and reproduction of capitalism. The combination of

increased interventionism and neo-liberal economic development was reinforced during Eduardo Frei's administration (1964–1970) and strongly backed by the US.

Table 3.1: Stages of economic reform during Chile's authoritarian neo-liberalism, 1973-1989

Stage	***Gradual neo-liberalism (1973–75)***	***Radical neo-liberalism (1975–82)***	***Pragmatic neo-liberalism (1983–89)***
Context	Political and social instability Economic crisis	Slow growth High inflation Deepening authoritarianism through strong political repression	Severe recession in 1982—83 driven by financial sector collapse
Economic policy measures	Gradual reduction of tariffs from an average of 94% to 60% in 3 years Devaluation of the exchange rate Progressive privatisation	Drastic deflation Acceleration of tariffs reductions Rapid privatisation	Lower tariffs but protection against unfair competition High real exchange rates and low interest rates Moderate re-regulation of capital flows Further privileges to export sector Renewed privatisation Sectoral policies (export promotion, construction projects, agricultural development) State playing a more active role in agricultural development: new series of tariffs introduced and price guarantees reintroduced
Driving forces	Authoritarian regime	Neo-liberal technocrats occupying senior government positions Large internationally oriented economic conglomerates (liquid assets holders)	Business and landowning associations pragmatic formed coalition calling for greater protection
Opposition	Repressed	Peasants and working class repressed Landowners and business entrepreneurs penalised remained loyal to the military regime although discontent starting to mount	

Sources: E. Silva (1993), P. Silva (1993), Valdés (1994) and Kurtz (1999).

The collapse of the ISI model was prompted by worldwide economic stagnation in the mid to late 1970s which had strong repercussions on Chilean exports of raw materials, particularly copper (80% of Chile's export earnings), which were the source of earning supporting the import of industrial inputs and technology. The decline in export earnings led to growing public indebtedness, increasing dependency on foreign capital, rising inflation and declining real wages, and strong pressures to reduce social spending and increase investment.

In this context of economic crisis, the conformation of social structures resulted in growing polarisation of forces: a politically mobilized working class reacting against the decline of wages and reduction in social spending, and a wealthy capitalist class demanding increases in investments to hold back the deepening recession. The 1970 election reflected this polarisation and produced a left-wing government, led by Salvador Allende, with little more than half of the votes.

Allende's socialist programme reinforced distributional mechanisms and nationalized key economic sectors. Crucially, it carried out a massive land reform which expropriated large land holdings and distributed it to peasant farmers.[7] Allende's response to the crisis proved however ineffective and counterproductive. The result was an even deeper economic crisis, continuous class struggles and

[7] In 1965, 55% of Chile's agricultural land, measured in terms of productive capacity, was held in about 5,000 farms, while the remaining 45% of land was held in 238,000 smaller farms. About 43% of land was expropriated between 1965 and 1973 and nearly all large farms were partly or whole expropriated (Jarvis *et al*., 2004).

strong pressure from domestic bourgeoisie (particularly expropriated landowners) and foreign investors, which led to a counter-revolution through a military coup and the formation of an authoritarian state.

It was in this context of strong economic crisis and social and political turbulence that the new self-instituted administration launched a profound and wide-ranging policy reform package. The military regime allied to the bourgeoisie wanted to re-establish the conditions for capital accumulation and to eliminate the political forces (such as peasants and labour unions and opposition parties) that posed a threat to capitalism.

Policy formation

Proposed content of the reforms

The wide-ranging economic reforms carried out during the authoritarian regime were based around four main objectives: (i) stabilisation to correct macroeconomic imbalances; (ii) market liberalisation and deregulation with the opening the economy to international markets; (iii) specialization in export-oriented production in areas where Chile had a comparative advantage, and (iv) 'state subsidiarity'[8], i.e. the withdrawal of the state from economic activity through large scale privatisation and substantial reduction in social spending.

Macroeconomic stabilisation was about managing the interest and exchange rates and cutting down the fiscal deficit. Exchange rate management was, according to Valdés (1994), central to the reform package given its importance in determining the incentives facing the tradable sector.

Market liberalisation measures included the freeing of prices, deregulation of trade, withdrawal of restrictions to free mobility of capital and the removal of basic consumer goods subsidies. In addition to this, industries, land, banks (nationalized or redistributed in previous administration) and public services (such as agricultural extension) were privatised.

The counter-reform to land distribution was part of the process of privatisation. About 28% of the land expropriated during Frei and Allende's regimes was returned to their former owners, 10% was retained by the state and 5% auctioned (Jarvis *et al*., 2004). The remaining 57% was subdivided into plots of land (*parcelas*) and distributed to selected beneficiaries.[9] About 45% of the peasants who had gained land in the previous agrarian reforms lost their property rights (Taylor, 2001). Many of the former landowners who received their property back, and many of those who received a *parcela,* eventually sold it to emerging large agro-export enterprises, driven by the increased value of land (particularly that suitable for fruit production) and by the lack of supportive policies towards the beneficiaries, who lacked capital and technical skills (Jarvis *et al*., 2004).

Other agriculture sector related measures included: the transfer of state agri-businesses and public institutions (crucially, agricultural extension) to the private sector,[10] the sale of the entire machinery park provided to the *Sector Reformado*[11] by the state, the elimination of fixed prices and price guarantees paid to producers by the state, the elimination of state monopoly on agricultural inputs, the reduction and subsequently elimination of tariffs and taxes on the import of foodstuffs and agricultural inputs, the elimination of subsidised credit to peasant farmers, and substantial contraction of the Ministry of Agriculture and public spending.

Yet, despite the austerity of the reform package there were also protected niches. The forestry sector was the striking exception to the state subsidiarity policy, with private investors in the sector benefiting from generous state subsidies and tax exemptions (Silva, 1990).

Proponents and arguments

The policy reforms were initially enthusiastically endorsed by the entrepreneurial bourgeoisie, particularly the landowners traumatized by Frei and Allende's expropriations. As P. Silva (1993) notes:

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8 The principle of 'state subsidiarity' was central to the neo-liberal model. It means that the state should have a complementary role, intervening only when the private role fails. In Chile it meant the withdrawal of the state from an active role in promoting economic and social development.

9 Although the selection of beneficiaries had a welfare rationale it purposely excluded those who had been leaders of farm workers (Jarvis *et al.*, 2004).

10 Which contributed to strengthen the agrarian bourgeoisie and urban conglomerates who had financial capital to acquire these businesses — usually at well below their real value (Silva, 1990).

11 Peasant farmers who had received land during the land expropriations (under Frei and Allende).

'the overthrow of Allende produced a general sense of joy among entrepreneurial circles. Even the official announcement of the application of a tough economic policy, severe credit restrictions, and the elimination of state support for the productive sectors, initially constituted no major deterrent to continued support for the new authorities' (p. 66). Hence, despite the severity of reforms in the agriculture sector, they were initially supported by landowners who were willing to accept the sacrifices demanded by neo-liberalism in gratitude for the recovery of their land and the dismantling of the peasant movement.

While strongly driven by the interests of the military apparatus and the capitalistic bourgeoisie, in particularly the emerging internationally-orientated conglomerates,[12] the reforms were conducted under the technocratic guidance of the so-called 'Chicago Boys'— a group of Chilean economists trained at the University of Chicago and strongly influenced by Milton Friedman's monetarist paradigm.[13]

The reform engineers attributed the economic crisis to rising wages and the expansion of state expenditure to unsustainable levels which reinforced market distortions and undermined the profitability of capitalist enterprise. In response to this crisis narrative, a comprehensive package of neo-liberal policy measures was enforced by the authoritarian regime.

Although many have praised the internal coherence, comprehensive and determination of the reform experience, others have argued that the reform process was marked by hesitation, contradictions, shifting goals and incremental choices which resulted from the attempts by the military to address two often conflicting overarching goals — economic stabilization and political restructuring (Kurtz, 1999). Indeed, as discussed further below, the reform process seems to have been shaped by the dynamic interaction between the political agenda of the authoritarian state, the intellectual positioning of technocrats and the diverging economic interests of the traditional producers focused on domestic markets and the internationally-oriented entrepreneurs.

Debates on reforms

There was little contestation to the reforms during the first years of implementation. The authoritarian regime allowed the neo-liberal model to be applied which would have been harder or impossible under democratic rule. As Silva (1990) points out 'within a democratic framework the political and social tensions generated by the introduction of this policy would have immediately engendered massive rejection from the popular parties and social organisation, making its further application impossible' (p. 31).

Resistance and opposition to the policy measures — which penalized directly peasant farmers and the urban working class — were prevented through strong repression of opposition parties and organised societal forces. Labour unions and farmer associations were dissolved, strikes prohibited, political opposition suppressed and oppressive labour legislation enacted.

Furthermore, the doctrine of state subsidiarity and state contraction was convenient to the new military administration which used it to get supporters of the previous regime out of government posts. Silva (1990) argues that personnel cuts were carried out at the Ministry of Agriculture for strictly political reasons.

Opposition from the other greatly disadvantaged group — landowners producing traditional crops to domestic markets and negatively affected by market liberalisation and fierce foreign competition — was temporarily restrained by the sense of loyalty and gratitude to the military regime. There were, however, some cleavages and tensions within

[12] The reforms are said to have been strongly influenced by large conglomerates. They had preferential access to international credit and purchased state enterprises at prices below market value: 'Within the decade a handful of major economic groups grew to control some 68% of the assets of all corporations operating on the Chilean stockmarket. They also accounted for 45% of all foreign capital borrowed as of 1977 and, by 1980, 42% of all banking capital in Chile and 60% of all available and extended credit' (Taylor, 2001: 7).

[13] Friedman was the leading proponent of the monetarist school of economic thought. He maintained that there is a close and stable link between inflation and the money supply, mainly that the phenomenon of inflation is to be regulated by controlling monetary emission. He rejected the use of fiscal policy as a tool of demand management, and argued that the government's role in the guidance of the economy should be severely restricted.

landowner organisations well documented by P. Silva (1993).[14] But the protests never acquired a political connotation and criticisms were always directed to the 'Chicago Boys' technocracy and not the military regime. Yet, some degree of contestation started progressively building up, leading eventually to a change in policy direction.

Policy implementation

Administratively and agencies

The implementation of reforms was conducted from the centre: the regime was supported by a highly centralised technocratic apparatus. The 'Chicago Boys' were indeed all macro-economists heading or advising ministries of economy, finance and the Central Bank. The degree of centralisation of policy implementation was also reflected by the contraction of the public sector bureaucratic structures. The Ministry of Agriculture, for example, was downsized to a fifth in seven years (Silva, 1990).

Indeed, for its very own nature the neo-liberal package was about central-level management of interest and exchange rates, and reformulation of the regulatory framework of commodity, financial and labour markets. On the whole, policies were about simplifying and reducing public sector intervention in the economy. Gwynne and Kay (1997) argue that with the exception of land counter-reform, during the 1970s the military government had no specific agrarian policy. Agrarian policy was what resulted from the economic policies defined centrally by finance and economy ministries. Only after 1982 a distinctive agrarian policy started to emerge (see below).

The technocratic apparatus driving reform implementation was also re-known for being inflexible and non-consultative: 'We have never consulted the agrarian producers for the adoption of any measure. Our decisions are not negotiated, and the government will not allow any pressure during the implementation of policies' (P. Silva, 1993: 69, citing the Minister of Economy Pablo Baraona).

Obstacles, responses and revisions

The implementation of the neo-liberal model was anything but smooth and determined. Despite the often-praised determination of the reform champions, there are strong arguments suggesting that neo-liberal reforms emerged from the opportunistic interplay between political and business agendas and that the neo-liberal technocracy was to some extent instrumental to the pursuit of those agendas.

Kurtz (1999) offers an additional perspective by arguing that the policy process rather characterized by hesitation, incrementalism, policy contradictions and shifting priorities in the attempt by the regime to address the two often conflicting overarching goals of economic stabilisation and political restructuring — what he calls, using Charles Lindblom term, 'disjointed incrementalism.' [15]

Pinochet's regime opted initially for a moderate neo-liberal strategy to avoid harming important pro-coup supporters, in particular those who would have been penalised by drastic trade liberalisation and exposure to foreign competition. Liberalisation of trade was hence moderate — tariff reductions were gradual and devaluations of the exchange rate offered additional protection. Eduardo Silva (1993) argues that a 'gradualist coalition' — composed by internationally competitive producers for domestic markets, and those who had traditionally opposed high tariffs under ISI[16] — had a strong influence in shaping the technocratic policy design.

The regime also found also ways to compensate for potential losses. Privatisation of state enterprises, for example, saw them sold off at well below market value and represented a significant state subsidy to the emerging economic groups which facilitated concentration of production in the hands of few conglomerates — a handful of major economic

[14] An example of this was the opposition between two important landowner associations. The *Sociedad Nacional de Agricultura* (SNA) accepted the export-oriented agriculture model (although criticizing the reform austerity) while the *Confederación de Productores Agrícolas* (CPA) strongly disapproved of the model, calling instead for an integral agricultural development with modernization and increased production in all the main components of Chilean agriculture (P. Silva, 1993).

[15] Kurtz distinguishes four different policy reform periods: economic crisis and initial repression (1973–75), neo-liberal economics versus corporatist politics (1975–78), emergence of the neo-liberal model (1979–82), and reconstruction of a bourgeois political coalition (1982–89).

[16] Fixed-asset producers for external markets (mining and fruit industry), large-scale merchants and even landowners who were not internationally competitive but resented ISI bias against their sector (E. Silva, 1993).

groups grew to control about 68% of transactions on the Chilean stockmarket (Taylor, 2001).

Economic liberalisation, privatisations and fiscal austerity intensified from 1975 till 1982. Several factors seem to have led to intensified reform (E. Silva, 1993 and Kurtz, 1999): (i) the ineffectiveness of the moderate approach to stabilisation — economic growth was stagnant and inflation still very high; (ii) mounting pressure from the international conglomerates for accelerated market liberalisation;[17] and (iii) the establishment of political repression which had lowered the costs of deepening the neo-liberal reforms.

The intensification of the neo-liberal model is also argued to have been motivated by the international pressures for political opening. Kurtz (1999) argues that political stabilisation became the central goal driving reform from 1979-82, with market-led transformations seen as the means to prevent the emergence of statist or leftist policy proposals. The radicalisation of the neo-liberal package was hence also instrumental to the political agenda of the authoritarian regime.

The radical neo-liberal package included drastic deflationary measures, accelerated tariff reductions and rapid privatisation. This was the period in which the 'Chicago Boys' had the most influence in the design of economic policies, occupying powerful government positions and having very close connections with the large conglomerates (E. Silva, 1993).

An exogenous economic shock in 1982, however, led to a significant reversal in the reform path, from radical to a more pragmatic form of neo-liberalism. The international debt crisis had significant impact in an economy highly exposed and dependent on foreign savings. The Chilean financial system collapsed and with it the empires of the large economic conglomerates. The whole economy plunged with production falling by 16.7% and unemployment reaching 26% (Taylor, 2001). The unprotected agriculture sector was severely hit by the crisis: agricultural GDP dropped by 2.1% in 1982 and 3.6% in 1983 and the total cultivated area decreased to 860,000 hectares from a historical average of 1,200,000 hectares (P. Silva, 1993).

The nature of the shock led to a shift in the coalitional forces influencing policy reform. Landowners and businessmen with international market interests dominated the new coalition (E. Silva, 1993). They put substantial pressure on the government to reverse its policies – particularly in response to the bankruptcy of influential enterprises in the sugar and fruit export industry.[18]

In the face of the severe recession and mounting opposition, the neo-liberal economic model eventually collapsed and Pinochet discharged the neo-liberal economic team. From 1985 to 1989, Chile underwent a more pragmatic neo-liberal policy stage during which the state revisited the subsidiarity policy and started playing a much more interventionist role in managing the economy. In the agriculture sector, import tariffs,[19] credit facilities and price guarantees were re-introduced, the debts of agrarian entrepreneurs with banks were renegotiated and tough anti-dumping measures were adopted (P. Silva, 1990, 1993).

The economy and the agriculture sector in particular recovered considerably after 1983 as a result of the new policies but also from an improved situation in international markets. The devaluations of the peso in 1982–83 had import-substituting effects and the agricultural trade deficit was eventually eliminated. Yet, the reformulation of agricultural policies favoured mostly the large landowners, with no social dimensions attempting to address the constraints facing the rural peasantry. In fact, the influential landowners were so satisfied with the new measures that they demobilized the landowner organizations (*ibid*).

Policy outcomes

Chile's policy reforms had overall positive effects in agriculture over time, but in the short run these effects were not always as anticipated. Policy reforms

[17] These conglomerates had privileged access to international banking and were in a privileged position to benefit from further liberalisation and deregulation. These conglomerates activities concentrated in liquid-assets sectors, primary commodity exports and internationally competitive manufactures for domestic markets. (E. Silva, 1993)

[18] The landowners commissioned a independent diagnostic study of agriculture which recommended an increase in flexibility and a relaxation in the application of neo-liberal policies and the adoption of fiscal and financial measures in support of agrarian producers (P. Silva, 1993).

[19] To protect national producers from imports of subsidised agricultural products.

were indeed marked by errors and setbacks. Valdés (1994) argues that the sequence and magnitude of reforms were incorrect and that the combination of rapid reduction in public spending, high real interest rates, elimination of credit and input subsidies and decline in the real exchange rate during 1978–82 harmed the agriculture sector severely.

Agricultural performance took off in 1985, as the result of a more moderate liberalisation policy, combined with changes in agrarian structures and favourable international market conditions. Yet, although agriculture was significantly modernized and eventually achieved good performance in production, productivity and competitiveness in international markets, this was accomplished at the cost of strong distributional inequalities and increased rural poverty.

Agricultural prices: reforms altered significantly the relative prices of agricultural products, reducing the price of the products for domestic consumption (such as oilseeds and grains), which benefited from high levels of protection prior to liberalisation, relative to the prices on export-oriented crops, such as fruits, wine, nuts and forestry products. International prices of Chile's traditional crops also declined while that of its exports rose. These price changes led to significant adjustments in Chile's crop mix.

Agricultural land prices: land prices grew steadily throughout the reform period and by 1984 land prices were four times higher than in 1970. Land became a very profitable investment, particularly in areas suitable for fruit production.

Technical change and productivity: use of agricultural inputs increased (Figure 1), improved access to foreign technology (new animal and seeds varieties, irrigation systems and machinery) benefited particularly the fruit sector; cultivation of basic foodstuffs was modernised and investments in plantations and agri-businesses were supported by large inflows of foreign capital (particularly to the fruit and forestry sectors). Input suppliers, machine shops, banks, and labour contractors proliferated in rural areas and agriculture became a technologically leading sector (Jarvis *et al*., 2004).

Agricultural growth: Initially after the reforms agriculture stagnated, recovered a little after 1974, but it was to be until the early 1980s before growth accelerated — see Figure 3.2. Agricultural value added took off in 1984, growing more than 7% a year from 1984 to 1991 (Jarvis *et al*., 2004).[20] Between the mid 1980s and the mid 1990s the sector as a whole saw production rise by 5% or more in almost all years. Fruit and forestry grew more rapidly (Figure 3.3), again seeing acceleration from the early 1980s.

Agricultural balance of trade: remarkable changes in the structure of trade saw less dependence on copper exports in favour of exports of non-traditional agricultural products. Dramatic increases in exports in a few years, with the main source of growth being the fruit and forestry industry. Earning from agricultural exports rose by 158% from 1981 to 1988, with those from fruit rising by 163% (Chakravarty, 1993). Food imports did not rise in the same period, so the balance of agricultural trade became positive.

Agricultural labour, employment and wages: the agricultural labour force increased owing to population growth and reduced rural to urban migration; employment declined from 1975 to 1981 due to slow growth, decline of traditional crop prices and adjustments in land structures. Employment expanded thereafter, particularly in the fruit sub-sector. The labour force composition saw a growing proportion of skilled temporary workers, mainly in fruit production with a rising proportion of female temporary workers. Agricultural wages fell dramatically after 1974 only to recover gradually after 1979. Remuneration also changed with the old system that provided tenants with usufruct rights to land and in-kind payments being replaced by workers hired on a salary basis (a daily wage or, increasingly, for many tasks, on a contract or piece rate basis). With pay tied more closely to productivity, workers had stronger incentives to acquire skills and provide greater effort. Jarvis et al. (2004) note that productivity rose more quickly than workers' earnings.

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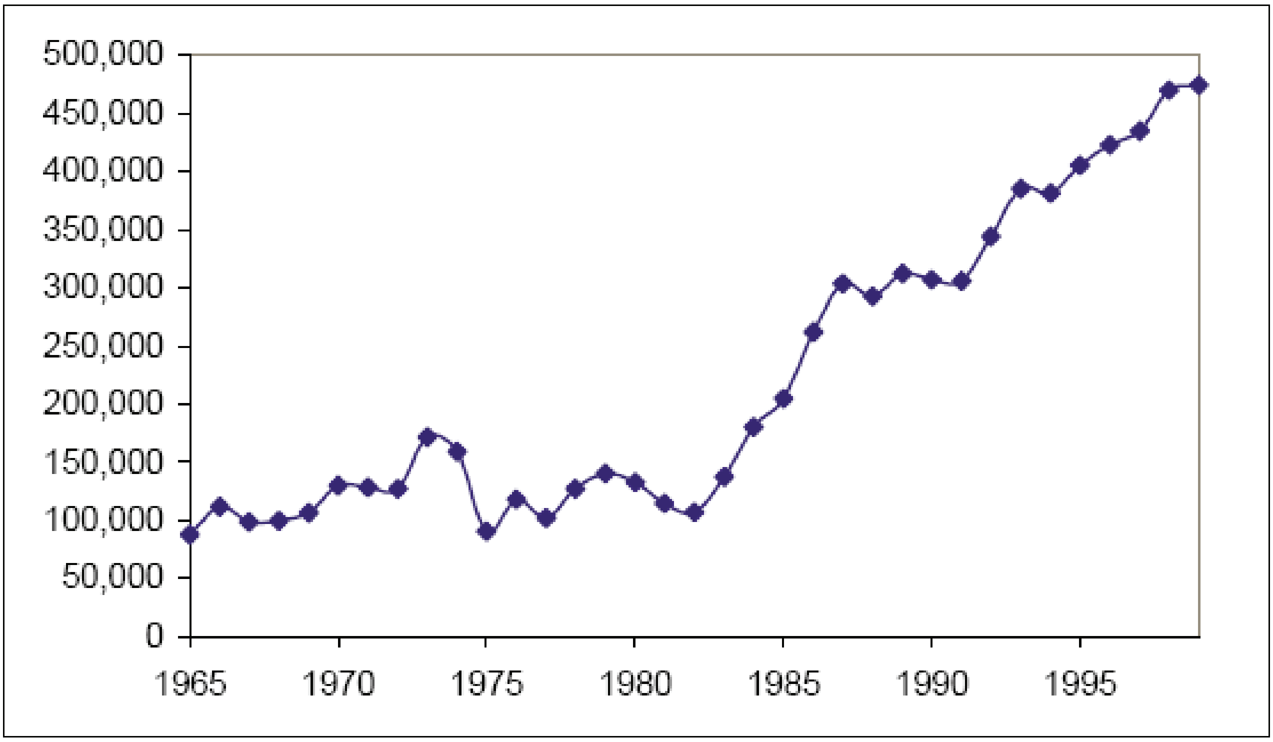
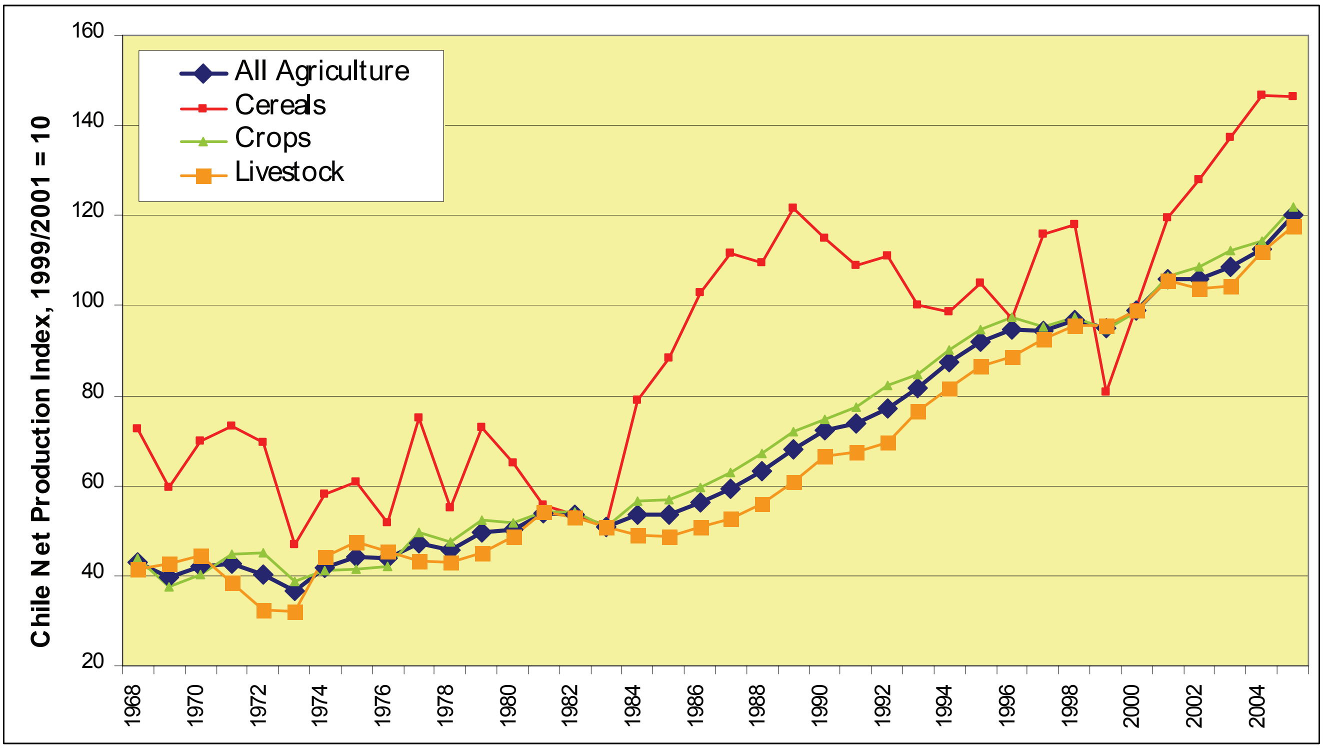
[20] The FAOSTAT data suggest more modest growth over this period, of around 5.5% a year. The difference lies in one source using a measure of value, the other being a production index. Presumably over this period there was an increase in the overall value per unit of output of Chilean produce.

Figure 3.1: Chile, Fertiliser consumption 1965 to 2000, tonnes



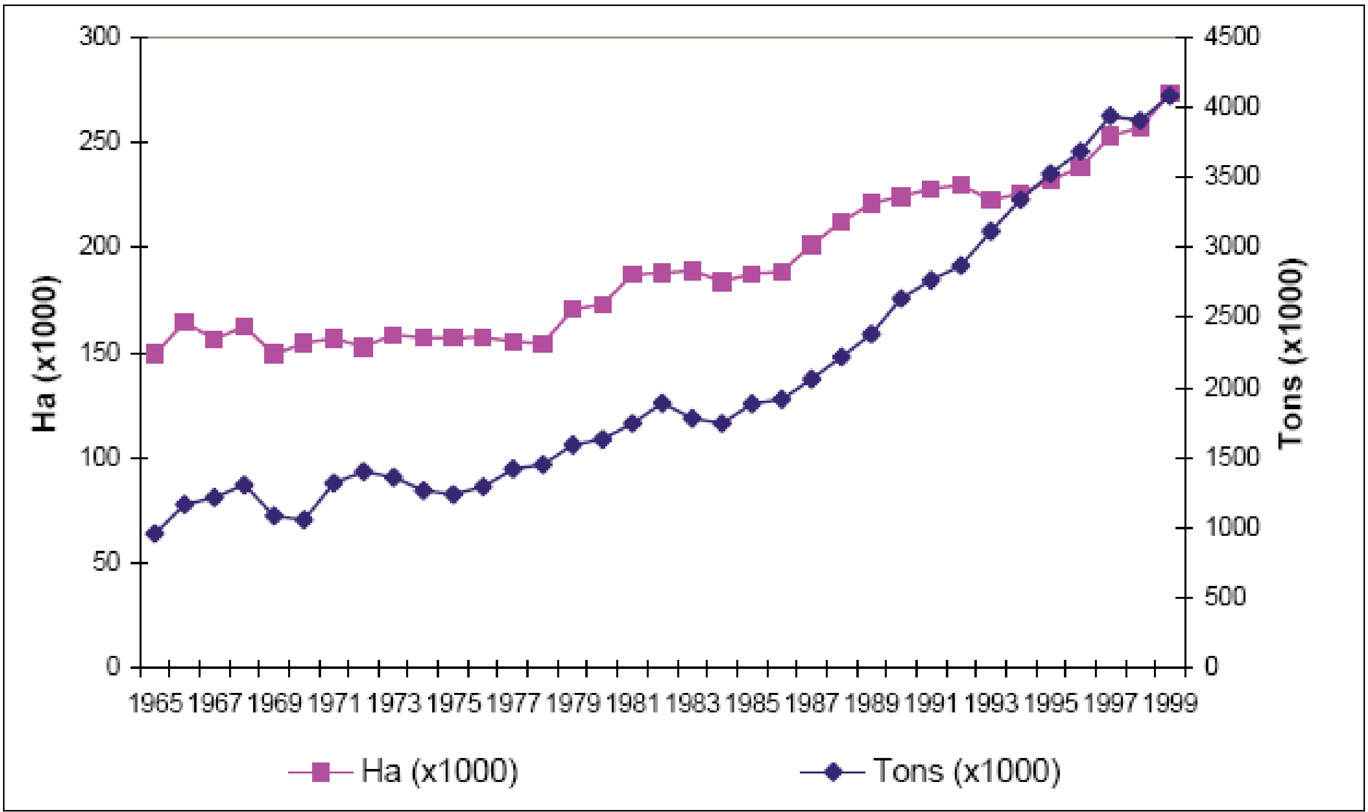
Source: Jarvis *et al*. (2004).

Figure 3.2: Chile. Agricultural output indices, 1968 to 2005



Source: FAOSTAT data.

Figure 3.3: Chile. Total fruits production, 1965 to 1999: area harvested (Ha) and Tonnes



Source: Jarvis et al. (2004).

Income distribution and rural poverty: the pattern of growth was very heterogeneous, favouring large conglomerates and those with best access to capital and technology (Cruz, 1993). Growth was particularly significant in non-traditional exports.[21] Poverty increased particularly in rural areas, to reach 50% in some areas. The rural poor suffered the most from the neo-liberal model because of the withdrawal of the state from the traditionally supportive role (as provider of technical assistance, cheap loans, etc.) and because more than half of the peasants who had secured land from expropriated farms after the land reform and counter-reforms had to sell their plots under unfavourable terms since they had received little support to make their farming activity profitable.[22] Landless wage labourers were also badly hit because employment became overwhelmingly temporary, minimum wages suffer sharp fluctuations and there were severe restrictions to trade unions' activities (*ibid*). There is evidence, however, that rural poverty eventually started to decline in the late 1980s and throughout the 1990s, although this was still accompanied by a widening urban-rural gap (Foster and Valdés, 2004). The high demand for unskilled labour from the booming agricultural sector coupled with the decline in real food prices reduction contributed to the reduction of rural poverty from 63.5% in 1987 to 37.3% in 1998 (*ibid*).

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21 Exports of fresh fruit, lumber and forestry grew from 7.6% of total exports in 1971 to 20.5% in 1981 (Taylor, 2001). In agriculture 8 large firms accounted for 80.6% of the export market share and in forestry 5 firms accounted for 78.4% (*ibid*).

22 It has been argued that policy makers did not want land reform to succeed and policies towards beneficiaries reflected this. For example, the selection of beneficiaries of land redistribution excluded, for political reasons, those who had been leaders of the farm workers and most beneficiaries were not even well qualified as farmers. Furthermore, these beneficiaries received no technical assistance from the state which had withdrawn from that type of service provision. As a result, by the early 1980s about 40% of the land reform beneficiaries had sold their plots and by the early 1990s the figure had reached almost 100% in some areas. Land was bought by investors in the emerging fruit industry (Jarvis *et al*., 2004).

Lessons from Chile

Key issues from the Chilean experience with authoritarian neo-liberalism include the factors triggering reforms, determining choices of reforms, and those shaping progress through the selected path.

Reform initiation or re-orientation in Chile seems to have been strongly motivated by the occurrence of economic crises and the political breaches produced by those crises. Given the importance of the tradable sector in the economy, the developments in international market – both in commodity and financial markets – played a significant part in the generation of the crises. Chile also benefited strongly from the counter-seasonality and low-storibility of a significant proportion of the country's agricultural exports which has enable it to take advantage of lower trade barriers in northern markets (Foster and Valdés, 2004).

The definition of the actual content of reforms resulted from a combination of the need for both economic and political stabilisation. Although the neo-liberal technocratic ideology played an important role (particularly until 1982), the reform paths chosen were significantly determined by the interests of the dominant social coalitions which were a critical source of support to the regime's political agenda.

The authoritarian nature of the state was instrumental to its capacity to carry out the reforms and repress any obstacles on the way. But the authoritarian character of the state did not mean that the state was autonomous from societal pressures. It was rather built on the support of powerful societal coalitions who backed it up as a means to ensure the pursuit of their economic interests.

Despite the price paid in the short run in terms of rural poverty and inequality, the economic growth and agricultural modernisation strategies eventually generated improvements in the living conditions of the rural poor, particularly throughout the 1990s. Can these improvements be attributed back to Pinochet's policy reforms, and were the social costs endured a necessary evil? Or where the positive poverty outcomes rather an unintended fortunate result of policies which were not fundamentally driven by concerns for the poor? This is an ongoing debate.

4. China

Background to agricultural and rural reforms in China

China initiated agricultural and rural economic reforms in the late 1970s and early 1980s. Although it was not well stated in many documents, the key driving force for reform ideas was the change in the Central leadership. Of course, the increased demand for better life and higher production efficiency in rural areas also were among significant factors.

The overall performance of China's agricultural sector since the founding of the People's Republic of China has been remarkable given the political instability (Great Leap Forward, Cultural Revolution, etc.) and inefficient economic management (of the Commune System) of the pre-reform period. Although it was successful in terms of eliminating a good deal of rural poverty and achieving greater equality among the rural population — features admired by many western development economists at the time, the Chinese were not satisfied with their own agricultural performance, in terms of productivity and growth.

Common deficiencies during pre-reform period included: low economic efficiency due to a uniform planning system that disregarded comparative advantages; and, over-emphasis on the agricultural policy of 'taking grain as the key link' rather than overall development mainly for food security purposes. At the same time, obstacles placed in the way of labour migration from rural to urban areas left a huge labour surplus in rural areas since more than 80% of the population were in rural areas.

As a result, agricultural production and productivity grew only slowly. However, the pressure of increasing demand for food due to population growth and the low living standards of much of the rural population forced the Government to re-examine its rural economic policies, especially after the death of Mao Zedong. The key factor was the change in the central leadership in the late 1970s, and the introduction of a reform programme under the overall direction of Deng Xiaoping.

Basic features of agricultural and rural reforms

The process of agricultural and rural reform was gradual and evolved over time. All the reform measures had been gradually introduced one by one on a regional trial basis and later these practices were spread throughout the country. Although it is difficult to discuss agricultural and rural economic reform separately from other reforms, the major features could be summarized as follows.

1. Reform of the system of production management, circulation of commodities and finance mainly by allowing farmers to engage in production activities other than grain and oil-bearing products and by increasing agricultural output prices to increase farmers incomes and improve the standard of living.[23]

   'The price and market reforms initiated in the late 1970s were aimed at raising farm level procurement prices and gradually liberalizing the market. These reforms included gradual increases in the agricultural procurement prices toward market prices, reductions in procurement quota levels, the introduction of above quota bonuses for cotton, tobacco, and other cash crops, negotiated procurement of surplus production of rice, wheat, maize, soybean, edible oils, livestock, and most other commodities at price levels higher than those for quota procurement, and flexibility in marketing of surplus production of all categories of agricultural products by private traders.' (Rozelle et al. 2005, 4)

2. Structural reform: before 1978 most farm production was carried out by teams organised by the communes. The Household Responsibility System was introduced with the aim of introducing new production incentives for farmers, by which the teasms leased the land, draft animals and divisible tools to individual households. This idea was initially tried in one of the very poor counties in Southern China: its success soon was discovered by the Central leadership and it was subsequently recommended and adopted by most rural areas. By 1984 further reforms were introduced extending the leases to 15 years, allowing households to sub-let land parcels, and to hire labour.

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[23] Under the commune system prior to the reform, production and distribution of all agricultural commodities were controlled by the Government. Farmers were only allowed to retain basic amount of products for self-consumption, all remaining amount had to be delivered to state marketing agencies.

3. Encouragement of rural industries — diversified economy and township enterprises — by providing them with access to raw materials and product markets, which were relatively competitive. Tax for non-state enterprises were lowered to 35% compared to 55% in the state sector, on the grounds that the former had to acquire inputs in the market (Bromley & Yao 2006).
4. Reform of rural technical and extension systems by shifting the emphasis from concentrating on increase in grain yield alone to the transformation of agricultural technology — promoting agriculture by science and education — into a much broader field as applications to other crops were to be looked at, and economic as well as technical considerations were taken into account.
5. Reform of the rural political system, chiefly the abolition of the commune system. The fundamental intention was to separate production management from the rural administrative or political system.

In essence, the reforms turned the Chinese rural economy into a half-planned and half market-oriented system. There were similarities, indeed, with the policies of the early-mid sixties, following the debacle of the Great Leap Forward. Farmers regained freedom in decision-making and government control over rural areas weakened. The general trend of reform has continued in this direction, towards marketisation and de-regulation.

The process of reform implementation

Initial reforms brought significant increases in agricultural production as well as noticeable improvement in rural peoples' livelihoods. However, in viewing the past, although the reforms had gained national support, the process of agricultural and rural economic reform was far from smooth. The unexpected successes of the initial reform encouraged both Government and farmers to push forward with reforms. Bearing in mind the fact that there were no precedents to follow, beyond the limited experiments of the 1960s liberalization, even the reformers themselves were not sure what should be done next. Conflicts between political and economic objectives contributed to the uncertainty and inconsistency in the party line and the direction and speed of reform.

As the reform process gathered pace, new successes and new problems were both encountered. One enduring tension has been the desire to relax administrative interventions to improve the market environment and the legitimate fear of social instability due to widening income inequality and differentials. This has caused oscillations between tighter and looser control over the whole reform process. This situation is reflected especially in grain production while the Central leadership still put food security as top policy priorities.

One notable stage in the early reform process was the loosening of grain production control after the bountiful harvest in 1984 and re-tightening control in late 1980s and early 1990s due to the larger price rises for non-grain commodities and a shift in resources generally from agriculture to rural enterprises resulted in a sharp decline in agricultural outputs, especially grain output for a few years following 1984.

Apart from the above, there was one important aspect which needed to be addressed in order to understand the outcome of the reform: that is the attitudes of the participants. It was obvious that an effective policy not only depends on how 'good' the policy sounds, but also on how it is implemented and how people respond to it. The impetus for rural reform in China initially came from the grass-roots. Due to poor economic performance and the low standard of living in some backward areas, local cadres reintroduced incentive measures, such as contracting certain types of farm work to individuals. These began to a limited extent during the 1960s under the leadership of Liu Saho-qi (the President of China at the time), and although they were afterwards officially abolished, they continued quietly in some areas. Only when the success of such activities came to be noticed by top-level officials, and the Central government approved, were such systems taken up in other parts of the country. After the long and stultifying period of collective management, the new system received great attention and evoked an immediate response from rural people. Increased prices accelerated the trend to decollectivisation and the spread of individual household farming.

However, the very speed of events and pressure for more increments of reform — in marketing, credit and investment in rural infrastructure — led to a more cautious approach and the realization that the government needed to maintain control over the process of rural economic development. The decision to shift back to tighter controls on agricultural production was made under these conditions. From the mid-to-late 1980s onwards, Chinese leaders have been more ready to intervene and to steer the course of reform to secure internal order and a certain level of macro-economic stabilization in the face of inflationary pressures building up within the economy. The above cycle repeated again just a couple of years ago even after China joined the WTO.

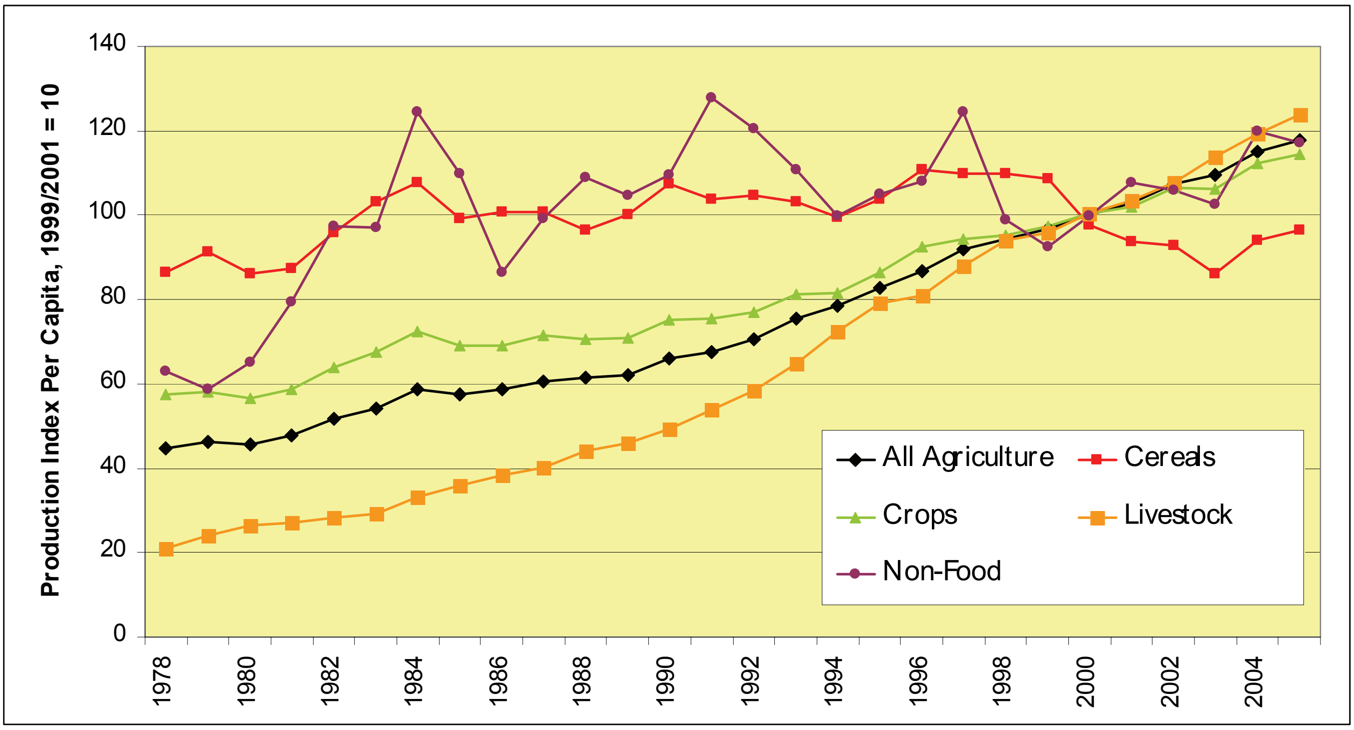
Coupled with the agricultural and rural economic reforms, there has been overall parallel emphasis on political reform at community level: village leader elections and the implementation of 'Organic Law' of the outcome of such moves.

Outcomes of reforms

There is a large literature discussing both positive and negative outcomes of the agricultural and rural reform. Here, as the key points are drawn out (see Zhang, Huang & Rozelle, 2004 for details).

Overall rise in agricultural productivity —One of the main components of a healthy development process is that the agricultural sector has to have strong productivity growth (Johnston and Mellor, 1961). Figure 4.1 shows the pattern of increasing production in Chinese agriculture. As can be seen, production compared to population increased notably in the 1980s and 1990s: the index of overall production per capita more than doubling in the twenty years after reforms.

Figure 4.1: China. Production per capita in agriculture, 1978 to 2005



Source: FAOSTAT

Although there was concern in the early 1990s about the slow down of total factor productivity (TFP) in the late 1980s after the rapid rise in the early 1980s (Wen, 1993), during the 1990s, productivity of rice, wheat, and maize, China's main staple crops, have risen strongly (Jin et al., 2002). Between 1979 and 1996, average TFP for all crops rose at more than 3% a year. The rise has exceeded 2% annually during the 1990s, far above the rate of growth of China's population, and a rate of growth that is considered healthy by international standards.

Perhaps more importantly, China's agricultural sector is poised to continue to grow. Although some of the growth in the early 1980s came from reform measures (which are one-time only changes), throughout the last 20 years, China's production growth, yield rises, and TFP increases have relied on the government's investment into research and development and other infrastructure investments (Jin et al., 2002; Fan et al., 2001). More than 60% of China's TFP rise and almost all of the growth in rice yields came from new technologies (Hu et al., 2001; Huang and Rozelle, 1996). Investments in irrigation raised cropping incomes of the poor by up to 50% in North China's maize and wheat areas (Huang et al., 2002b). China's future commitment to increasing spending in conventional, biotechnology and water control means that the productivity of agriculture should continue to rise as long as the past performance continues (Huang, 2001).

Significant increase in rural-urban migration — Development, however, is more than making the farming sector more productive. The shift of population from rural to urban and agriculture to industry is at the heart of the development process. Taylor and Martin (1999) have shown that, given China's income level in the 1980s, urbanisation is lagging. However, in recent years, the status quo has changed faster in the off farm sector than in any other. The breakdown of barriers in both rural and urban areas in the mid-1990s started an unprecedented, and perhaps irreversible, flow of labor to the cities (Rozelle et al., 1999). According to a new study by de Brauw et al. (2002), despite the macroeconomic conditions of the late 1990s, the surge in off-farm employment not only continued after 1995, it accelerated. Today, more than 200 million people work off the farm and more than half have jobs in the city. Almost 85% of rural households have at least one member in the off farm sector.

Table 4.1: Comparison of Labour Participation Rates in Percentage of Individuals that Participate in the Off-farm Labour Force by Age Categories, 2000 and 1990

	Percentage with Off-farm Work in:	
Age Ranges	**1990**	**2000**
16-20 (a)	23.7	75.8
21-25	33.6	67.2
26-30	28.8	52.5
31-35	26.9	47.6
36-40	20.5	43.3
41-50	20.8	37.6

Source: Authors' survey as reported in de Brauw, 2002.

(a) Table compares workers aged 16 and 20 in 1990 with workers aged 16 to 20 in 2000.

More poignantly, new trends suggest that the current labor flows may be different than those in the past, and, more transforming. For the first time, rural workers show signs of specialization — especially when we examine working behaviour by age cohort. Young workers are much less likely to work on the farm than older workers, see Table 4.1. In 2000, more than 75% of individuals between 16 and 25 work in the off-farm sector, almost double the rate of 16-to-25 year olds in 1990. Almost all of them live away from home. Most of them have found their way to the city. Changes in regulations now allow farmers in some cities to purchase homes and gain access to social services. And, perhaps most telling, almost none of the young workers that work in an off-farm job now have ever farmed. Indeed, according to both de Brauw's descriptive and multivariate analysis, there is robust support for the conclusion that the emergence of labor markets are such that they will be able to transform China's economy in the coming years.

Significant increase in farmers' incomes — Rapid economic growth has helped to dramatically improve the standard of living of its people. This can be shown from the trend of rural per capita income increase. Per capita income in rural China was extremely low prior to the reforms. In 1978, average income per rural resident was only about 220 yuan per year, or about US$150. During the 29 years from 1949 to 1978, per capita income increased by only 95%, or 2.3% a year. This changed dramatically directly after the initiation of rural reforms in 1978. Per capita income increased to 522 yuan in 1984 from 220 yuan in 1978, a growth rate of 15% a year. From the middle 1980s onwards, rural income continued to increase, but at the much slower pace of 3% annual. This was due mainly to a slow down in growth of agricultural production after the early reforms. With non-farm income as an increasingly large proportion of rural income, income increase started to accelerate since 1990s. This trend continued until late 1990s.

The overall achievement in the economy brought significant reduction in rural poverty. The significant reduction in the number of poor people, especially during the first decade, was a fact widely recognized both at home and abroad. In China, poverty is considered to be primarily a rural phenomenon. Estimated with China's official poverty lines, China's rural poor decreased dramatically in the past twenty years, from 260 million in 1978 to 128 million in 1984. After slowing down in the late 1980s, the rapid fall in the poverty head count continued in the 1990s, declining to 42 million in 1998 and about 30 million in the year 2000. The incidence of rural poverty also decreased sharply during the period, falling from 32.9% in 1978 to 15.1% in 1984, and then to 3% in 2000.

Emerging Commodity Markets — In part some of the striking changes in the off-farm sector are being facilitated by equally dramatic changes in China's commodity markets. Since Imperial times, governments have sought to control grain markets and have placed food security at the top of its priorities. Reformers in the 1980s did not abandon this commitment. When transition began, unlike their counterparts in other transition countries, China's policy makers kept tight control of agricultural commodity markets long after they provided incentives to farmers by decollectivizing agricultural production (Sicular, 1995). Although commodity markets were allowed to slowly emerge in the early 1980s, even during the late 1980s and mid-1990s, the government explicitly attempted to restrict the flow of major goods (Park et al., 2002).

Despite the attempts by the government to control markets over the past decade, agriculture markets have not only emerged, they have flourished, becoming more and more like those that exist in other nations. In a very real sense, the story of agricultural market development follows the process described by McMillan and Naughton (1992). In their parlance, reform, China-style, is like letting the 'Genie out of the bottle.' Gradualism opens up an industry or sector of the economy, providing the agents with initial incentives to exert more effort. The response of those in the sector, who initially earn substantial profits as new innovators, attracts more participants, which in turn creates competitive pressures and provides further impetus to expand the reforms. Soon policy makers find themselves facing markets that are dominated by multiple, profit-seeking agents that face prices set by supply and demand and are often unaffected by policy pronouncements or efforts to curb profit seeking activities.

The record of agricultural commodity markets shows that its market institutions are deepening rapidly. Park et al. (2002) measure the persistent fall of transaction costs of shipping commodities interregionally. The rise of integration is even more surprising since it passes through periods when the government tried to ban private grain sales and encourage regional self sufficiency (Huang et al., 2002b). By the late 1990s, prices in all pairs of markets — even those remote from one another — move consistently together for rice, maize and soybeans, see Table 4.2.

Part of the rise is due to the massive effort to construct roads and improve communications in the 1990s (Xie, 2002). But it is also due to the rise of hundreds of thousands private traders that now arbitrage price difference between regions — even across long distances — for razor thin profit margins (Sumner et al., 2001).

Table 4.2: Increasing integration of markets for agricultural produce

Percentage of Market Pairs that Test Positive for Being Integrated based on Dickey Fuller Test in Rural China, 1988 to 2000

Commodity	1991 – 1992 *	1994 – 1996	1997 – 2000
Percentage of integrated market pairs			
Maize	46	55	93
Soybeans	56	79	95
Japonica rice (mostly NE, North and Central China)	67	92	96**

Note: * For maize and soybean markets: first period is 1991-1992; for rice: first period is 1991-1993.

** There are total 28 rice markets from 1997-2000.

Results calculated by authors

Inputs market reform and rural credit services — Although national leaders announced efforts to relax restrictions on inputs during the early reform years, the attention given to the reform of markets for fertilizers, pesticides and seeds lagged behind the reforms affecting output commodities (Qiao, et. al. 2003). The challenges faced by reformers in the case of inputs also have been greater than for farm output. Prior to the reforms, agricultural inputs almost exclusively were manufactured by state-owned enterprises and distributed through rigidly-structured state-run sales networks. Although implemented in a start and stop manner, reformers did not commit themselves to liberalize domestic fertilizer markets until the early 1990s. Only the pesticides market was liberalized in 1990s.

China started to increase fertilizer imports in the 1980s, however, it did not come in tandem with the liberalization of domestic fertilizer markets. Planned fertilizer allocations dominated the national marketing and distribution system. Almost all fertilizer factories were state-owned and heavily subsidized (Xiao, 1998). After that, however, fertilizer wholesalers and retailers were commercialised and private trade was allowed. By 1995, half of China's fertilizer was sold by non-state firms and in 1997 all trade limits were dropped.

During the pre-WTO years, China maintained strong central control of international fertilizer trade. Increased imports during reform did not come as a result of trade liberalization. Instead, rising imports were the result of administratively determined actions. Planners, not markets, guided the interface between world and domestic fertilizer markets. Hence it should be the administrative decision to increase imports that is given credit for increasing the availability of fertilizer for China's producers.

The reform of rural financial system did not lead to much liberalization of rural credit services. Although efforts have been made by government to encourage formal credit institutions to supply services to rural farmers, limited progress have been achieved due to relatively high operational cost of working with rural people. Consequently, increased credit needs has led to activation of informal credit services in rural areas, although the central government has not legalised such institutions in rural China.

Institutional Changes in Land Management and Rural Enterprises — The changes occurring to land systems and local enterprise management demonstrate, perhaps more than anything else, the pervasiveness of the changes taking place in rural areas. The transformative nature of the changes are perhaps most surprising because land and local enterprises, at one time, were the most important assets under the control of local leaders (Rozelle and Boisvert, 1994).

Secure property rights are considered an important catalyst for economic growth, the argument being that investment can only flourish when there is a reasonable chance of reaping its rewards. Reduced risk of capital expropriation by the state historically has contributed to higher growth (North and Weingast, 1989). In the past, poor land rights have been blamed for low investment in agriculture and the absence of land rentals (Brandt et al., 2002). Blame has often focused on the rent-seeking behavior of local leaders and the rigidity of national policies. However, despite such a legacy, in most recent studies, the empirical evidence clearly shows that land rights in China are having little effect on investment and production (Jacoby et al., 2002). Moreover, in a recent survey of 1200 farm households in six provinces conducted by the Center for Chinese Agricultural Policy, investment histories found almost no evidence of expropriations of investments in the land in rural China during the last 10 years. A vast majority of farmers do not believe their land will be reallocated for the next 30 years. In some of the more advanced provinces, such as Zhejiang, rental transactions are becoming so common that one-third of the land is being rented, levels that approach those found during the era before Socialism. The rise of rental opportunities will almost certainly allow farmers to begin to enlarge farm size and increase total earnings.

Leaders also are beginning to let go of their control over enterprises, instead allowing them to be owned and managed by private individuals and become more subject to the forces of markets (Kung, 1999; Li, 2001). Any visitor to rural China immediately notices the widespread nature of the privatization movement. By the end of the 1990s, the move of local officials to privatize rural industries was deep and fundamental. Almost 90% of local government-owned firms have transferred their shares to private sectors partially or completely by 1999. Much of the privatization has given complete control to the new managers. Moreover, analysis shows that many of the privatization moves create new firms that are more efficient than those that they replaced (Li and Rozelle, 1998). In many of the firms, although in the initial years, new owners lay off workers, privatized firms are beginning to hire more workers and have positive employment impacts in the local economies. The firms that now dominate rural China's landscape are profit seeking and are interested in new technologies that will increase the long run efficiencies of their firms.

However, coupled with the positive achievements, there are concerns as well. These include: increased regional disparity; worsened environment, and looser Central government role as public good and service providers.

The economic reforms were able to bring, in broad terms, an increase in rural household income. However, owing to differences in marketing access as well as in basic conditions — such as fiscal health and natural resources — between regions, some areas, and especially the coastal provinces, had much faster development than the others such as the northern and north-western provinces. Although there were overall increases in rural household incomes, the difference between regions became lager over the time.

On the environmental side, rapid decrease of the groundwater table, and increased water pollution caused by both intensified use of agricultural chemicals as well as rural small industries have occurred.

The central government's decentralising fiscal reform started in the middle 1990s has imposed more responsibility on local governments for public goods provisions. Owing However, due to fiscal resources in some regions, limited improvements were made in terms of providing basic public services, such as education and health services.

Lessons from Chinese agricultural reforms

Although at first sight the move from a centrally-planned to a market economy seems a seismic shift, this has taken place over a couple of decades. The initial changes tried in the late 1970s were more modest. The process of reform has essentially been gradual, experimental, and cumulative. Reformers, moreover, were able to draw on the experiences of trials carried out in small areas during the 1960s and 1970s.

Above all, China's reforms can be seen as pragmatic. Policy-makers may have tried to maintain the principles of socialism in their overall objectives of improving the livelihoods of all citizens, but they have been quite flexible when looking for ways and means to achieve those ends.

China also demonstrates the extent to which early gains to reform can encourage bolder changes. The level of success seen in the first five years or so after 1978 was unexpectedly large, thus giving support to those recommending further liberalisation of markets for goods and factors.

5. New Zealand

Context of reform

Agriculture in New Zealand accounts for roughly 6% of GDP, but a much larger proportion of exports. Major agricultural activities are dairy, sheep meat and wool, beef and horticulture.

Historically farming in New Zealand had little government support:

> 'Relatively little government assistance was provided to agriculture until the mid-1960s. Then, following a number of balance of payments crises, government began the introduction of a range of programs aimed at increasing production and foreign exchange earnings' (Harris and Rae, 2006).

Support included:

- Subsidised credit (introduced in 1930);
- grants to encourage pasture land development and stocking (started in the mid-1970s);
- subsidies for fertilizer, weed control and irrigation structures (introduced between 1965 and 1975);
- Various tax advantages for farmers, introduced during the 1960s and 1970s; and,
- An export incentive scheme that had been introduced in 1963 to encourage diversification away from traditional farm exports.

Nevertheless, prior to 1980, support to agriculture was insufficient to compensate it for the effective taxation that resulted from tariff support to industrial production and periodic overvaluation of the exchange rate.

A major boost to farm support came through supplementary minimum prices, introduced in 1978. These had characteristics of deficiency payments or export subsidies depending on the commodity. They were introduced as the agricultural sector was suffering from the effects of increasing currency overvaluation and was failing to achieve growth targets set for it during an influential 1963 public consultation (Johnson, 2001; Lattimore, 2006). In 1980 government assistance to pastoral agriculture was worth 7% of output. This had risen to 39% by 1984, with more than two-thirds of this accounted for by price support and/or stabilisation measures. By contrast, fertiliser subsidies only accounted for 2.5% of support (figures quoted by Johnson et al., 1989). Hence by the early 1980s farming was enjoying unprecedented levels of public support.

Reforms to New Zealand agricultural policy in the 1980s

The impetus for reform was a general economic crisis. Harris and Rae, 2006 comment:

> 'In New Zealand, reform … was primarily a response to an economic crisis. … By 1984 macroeconomic problems were acute; heavy selling of the New Zealand dollar threatened to exhaust the country's foreign reserves. Following an election in June 1984, a new administration set about a major reform program. Government assistance for agriculture was rapidly withdrawn. The New Zealand dollar was devalued and subsequently allowed to float. Export assistance was eliminated; tariffs were progressively lowered across-the-board; and import controls were dismantled, all with the objective of promoting international competitiveness. Later, the central bank was given increased autonomy in its pursuit of price stability [1989], and the labor market was deregulated. The public sector was downsized, and many former activities of the government were privatized (including agricultural extension).'

Over and above the immediate problems faced, there was a recognition that New Zealand was failing economically in the longer run. In the early 1950s New Zealand was one of the richest countries in the world:[24] by the early 1980s it had slid down the international rankings. (Johnston and Frengley, 1994)

Major capital flight in weeks preceding the 1984 election led to a financial crisis after it, including the temporary cessation of forex trading. Thus the initial devaluation of the dollar was forced upon the new government. A 20% devaluation of the New Zealand dollar was announced immediately after the election. This was followed by a removal of exchange controls later in the year, then full flotation in March 1985.

The reform package gained the name 'Rogernomics', showing the personal influence of Minister of Finance (1984-88) Roger Douglas, who was given very free rein to shape economic policy in the years following the 1984 election. Douglas had written a

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24 According to Penn World Tables, only the USA, Luxembourg and Switzerland had higher real levels of GDP per capita at the time

book advocating radical free-market reform in 1981, but this line only commanded partial support within the Labour Party prior to the 1984 currency and financial crisis. Scrimgeour and Pasour, 1996 argue that the relatively young age of the new cabinet also encouraged radical policies, rather than another attempt to apply a 'sticking plaster' to the economy, as had been done by previous governments. In addition, key officials in the Treasury and Commerce Department favoured monetarist economics and knew of the reform experience in Chile that had begun the previous decade.

For Douglas and his advisers, the fundamental problem was lack of international competitiveness. Restoring competitiveness required efficient resource allocation and entrepreneurship. The policy response was to achieve macro-economic stability and remove obstacles to enterprise: assuming that business, including agriculture, would then respond to market signals that were unleashed, and that private enterprise would generate more wealth than controlled industries facing distorted prices.

Macroeconomic policy included: monetarist monetary policy using control of the money supply to combat inflation — see below on the effectiveness of this; cutting public spending to remove government deficits; reduction in personal income tax and introduction of VAT (believed to be a better combination for encouraging entrepreneurship); and, devaluation followed by flotation of the exchange rate. These were to be accompanied by progressive trade liberalisation (removal of quantitative import restrictions, reduction in tariffs), reduction in industrial assistance, financial deregulation and corporatisation of government departments (see below).

Macroeconomic policy was always the focus; sectoral policies were seen as sources of distortion and inefficiency to be stripped away, rather than developed. Agricultural reform was thus in some ways a by-product of a wider economic philosophy. But that may overstate the case. Johnson et al., 1989 report that there was a general political consensus even before the 1984 election that the level of farm support had become unsustainable. During the election campaign the outgoing National government announced that supplementary minimum prices would be phased out. By contrast, Labour, which had not traditionally received much support from the farming community (Scrimgeour and Pasour, 1996), was non-committal until after the election.

Agriculture was the first major sector to be reformed — it took almost a decade for support to be removed from some industries, even though a small start had been made on this before 1984. This suggests that there were more powerful interest groups associated with industry than with agriculture. (After all, historically industry in new Zealand had been privileged at agriculture's expense).

Supplementary minimum prices were the first agricultural supports to go (Scrimgeour and Pasour, 1996). Their value plummeted from NZ$438 million in 1983 to zero in 1987 (Valdés, 1994). At the same time, the government contribution to the Meat Industry Stabilization Account fell from NZ$337 million in 1985 to zero in 1988 (Valdés, 1994). Input and finance subsidies were cut in late 1984 as were various tax preferences for farmers in 1985. Deregulation of domestic marketing began with poultry in 1986 and wheat in 1987, with milk, apples and pears following in 1992-93.

Support to pastoral agriculture, expressed in PSE terms, fell from 34% in 1984 to 23% in 1987 and 3% in 1994 (Sandrey and Scobie, 1994). As a proportion of public expenditure, support to agriculture fell from 9% in 1983 to 7% in 1985 and 1% in 1989 (Valdés, 1994).

Process: from initial idea, through drafting to approval

Reforms were apparently introduced with little warning and few prior consultations. However, there was also surprisingly little opposition to the principle of reform. When the difficulties of adjustment faced by some farming households was realised, some support was provided specifically to assist the adjustment process (including exit from agriculture), rather than going back on the reforms themselves.

Although the Labour government was not elected on a deregulation mandate in 1984, the fact that it was re-elected in 1987 showed broad public support for the overall reform programme at that stage. However, this began to wane as growth failed to pick up and unemployment rose. Real GDP was stagnant through 1985–86 to 1991–92, following 5.6% growth in 1984–85, whilst unemployment had risen to 10% in 1991–92 from 4% in 1986–87 (Johnson et al., 1989; Johnson, 1993). Roger Douglas was replaced as Minister of Finance in late 1988 and a Conservative government was elected in October 1990. Nevertheless, the new government pursued the same basic policy direction as Labour had done, concentrating on macro-economic management and looking to liberalisation to create the conditions for an entrepreneurial supply response. This showed that public sentiment was still broadly supportive of the changes that were being undertaken, even if they wished someone else to undertake them.

An interesting feature is that Federated Farmers (FF), the main farming lobby group, emerged as a significant supporter of economy-wide reform, particularly once agricultural support had been cut (Johnson, 1993). Having seen support to agriculture removed before support to other sectors — which the government had also stated its intention to reform — FF chose to urge economy-wide reforms, from which agriculture would benefit, rather than a return to farm support. This was despite the fact that the agriculture sector endured several tough years commencing in 1985–86, when the FF leadership came under some pressure from members to call for renewed support for agriculture (Johnston and Frengley, 1994).

The general support of FF for reform may have stemmed from there being no sustained history of support to farming, and that it wished to have some voice on specific reforms and that might be enhanced by a generally supportive stance. In addition, the first year of reform, 1984–85 was good. Subsequent problems were seen to be more a problem of the real exchange rate as those of reform. FF may also have taken pride in seeing New Zealand as a leader in agricultural reform.

Scrimgeour and Pasour, 1996 argue that the position taken by FF can be explained in terms of a 'prisoner's dilemma'.[25] Farmers could either seek to secure their livelihoods by devoting time and resources to rent-seeking activities (lobbying government to provide them with various protection and support measures) or could focus on achieving competitiveness in global markets. However, the pay-offs to these strategies would depend on what industrialists did, as protection for industrialists would have an impact on the competitive position of the agricultural sector, in particular through exchange rate impacts.

This provides a reason why Federated Farmers might have contemplated reform even *ex ante* – assuming that they believed the Labour government's rhetoric about economy-wide reform. It certainly explains why they lobbied hard for reform to be carried through economy-wide once agricultural support had been cut[26].

Scrimgeour and Pasour, 1996 also claim that analysis of the economic costs of farm support prior to 1984 influenced the debate on farm support, making it more likely that such support would be cut.[27] It is also plausible that such analysis, if it attracted high-level attention, could have influenced Federated Farmers' choice of strategy *ex ante*. If they believed that their support was going to be cut, it perhaps made sense to embrace a programme of economy-wide reform, hoping that this would also reduce support to industry and government openness to rent-seeking.

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25 Formally they present the following matrix of pay-offs to different strategies:

		Non-Agriculture	
		Production and Exchange	Rent-Seeking
Agriculture	Production and Exchange	(Ag) 200, 800 (Non-Ag)	100, 850
	Rent-Seeking	250, 500	125, 600

In a classic prisoner's dilemma, neither 'party' can be sure of the strategy that the other is going to pursue. Under such circumstances, rational independent decisions under uncertainty lead to an overall outcome that is fully satisfactory to neither (in the table above, pay-offs of 125 and 600 where both 'parties' rent-seek).

Scrimgeour and Pasour, 1996's argument is that, in the context of economy-wide reform (such that protection to industry was also going to be cut), farmers could also embrace reform – abandoning their own calls to protection and focusing on adjusting to the new terms on which they had to compete in world markets.

26 An alternative view is that later commentators have over-emphasised the role played in reform debates by FF. According to this view, they were not initially consulted about reform proposals and, when they were brought "into the loop", they were told by Treasury to play a constructive game or face further cuts.

27 'Information about the direct and indirect effects of protectionist policies can influence public attitudes about the benefits of deregulation and help create a political climate conducive to institutional reform. … Economists in New Zealand helped to provide the intellectual basis to support reform through their analyses of various restrictions on competition, including agricultural programs.' (p257, p265)

The same authors add that by 1984 the public at large was getting tired of government regulation, whilst industry was growing disillusioned with the cost of rent-seeking activity and was suffering from its loss in international competitiveness, despite the support that it was achieving. The offer of lower inflation, lower taxes and more business opportunities through privatisation, in exchange for lower protection and loss of subsidies, was a reasonable one and the New Zealand Business Roundtable and became a strong supporter of reform, along with Federated Farmers. Nevertheless, some industries proved able to negotiate a slower reduction in support than agriculture.

Process: implementation

In general, government agencies were reformed in a drive from the centre where the Treasury led the reforms. Other ministries were thus subjects of reform, rather than architects or drivers of it. The initial corporatisation of nine government departments included Lands + Surveys and Forestry (‘specific’ tasks, as per Israel, 1987, so ‘easy’ to produce management contracts), but also simultaneous reforms of Post Office and Telecommunications and electricity supply.

However, there is some evidence that reform-minded elements within MAF were able to collaborate with the Ministry of Finance and Treasury in the reform process, so as to shape it. Bell and Elliott (1993) present MAF as being fairly pro-active in instigating organisational change, seeing that it was coming anyway: “MAF was the first government department in New Zealand to go through major bureaucratic change. Initially, the changes were based on a strategic assessment of the changing needs of agriculture due changes in New Zealand farming. MAF also anticipated many of the eventual requirements of State sector reform. MAF took early initiatives rather than waiting for change to be mandatory.” The Minister of Agriculture at the time, Colin Moyle, does not appear to have been a major driving figure behind the reform, but there is a view that he was appointed as someone who would be sympathetic to, rather than obstructive of, MAF reform.

Reform of the Ministry of Agriculture and Fisheries (MAF) began in 1985, when it was announced that two-thirds of funding for quality control services and 40% of funding for research and extension would come from private sources (that is, through cost recovery) by 1990. The envisaged revenue amounted to 16% of MAF’s gross expenditure (Johnson et al., 1989, p 53). These targets were then raised to full cost recovery for both agricultural inspection and extension services by 1990–91, targets that were met. Meanwhile, within MAF, delivery services were separated from policy services, with a view to privatising the former. There was, however, some debate about this. In July 1992, instead of privatising extension, extension personnel were organised into Agriculture New Zealand, a profit centre within MAF that charged both the government and private users for its services (Johnson, 1993). However, in 1994 extension provision was fully privatised (Scrimgeour and Pasour, 1996).

In June 1992 a shake-up of research economy-wide, including within agriculture, was announced. Ten ‘crown research institutes’ (independent institutes albeit still within the public sector) were established from the former science activities of MAF, the Department of Scientific and Industrial Research, Forestry Research and the Meteorological Office. These ten included four related to agriculture: the Agriculture Research Institute (for pastoral agriculture), the Horticulture Research Institute, the Institute for Crop and Food Research (arable crops) and the Landcare Research Institute (land and ecology). These were to be providers of research services, working on contract to the Foundation for Research, Science and Technology (Johnson, 1993).

Prior to the onset of reform, MAF comprised ten divisions and had a total staff of 5,600 (Bell and Elliott, 1993). By January 1995, following the changes to extension, research, quality management and animal and quarantine services, the staff of MAF (excluding those now working within separate organisations) had been reduced to 2,263 (Scrimgeour and Pasour, 1996). The reformed MAF was also ‘less captive to its constituency’ (Scrimgeour and Pasour, 1996).

One interesting exception to the ‘radical reform’ approach within the agriculture sector relates to export marketing authorities. A review of statutory marketing authorities was undertaken in 1984 and those with domestic marketing functions were reformed. Thus, statutory marketing boards for wheat, milk and eggs were eliminated and the marketing of these products was deregulated. However, export marketing organisations were basically left alone (Johnson et al., 1989). Minor reforms of export marketing were undertaken during the next decade, but, as often as not, single-channel control of marketing was strengthened. Instead of introducing competition, efforts were made to increase the efficiency of marketing agencies and their accountability to producers (Johnson, 1991). Thus, for example, the 1992 Dairy Board Amendment Act made the board more independent of government, by replacing the two government nominees on the board by commercial directors, and more accountable to the dairy industry. Cooperative dairy companies and their suppliers were made the owners of the Board's capital and the majority of directors were to be elected by the dairy industry. In addition, more commercially-oriented financial accounting was introduced, along with five-yearly independent audits of performance and efficiency (Johnson, 1993).

This was an area where the government proceeded in consultation with farmers' representatives, whose message was strongly in favour of retaining single-channel marketing agencies. According to Lattimore (2006, p5): "Government was also astute in not dismantling agricultural marketing boards in the early stages of the reforms. These boards, particularly the Dairy Board, were held in high regard by many farmers because they had been around for a long time, were co-operative in nature and appeared to act as political and economic safety nets." Although, according to Lattimore, there was "strong suspicion in analytical circles that the boards implicitly hindered product and market development rather than aided it (i.e. that they were export taxes rather than export subsidies)", others believed that the market power benefits of a single organisation where New Zealand producers accounted for a significant share of total world supply (e.g. kiwifruit, apples, dairy) outweighed any additional efficiency benefits to producers that might come through competition (Johnson, 1993). As of 1996, marketing boards still influenced the marketing of 80% by value of New Zealand's agriculture and horticulture exports and boards with statutory monopolies still controlled 30% (Scrimgeour and Pasour, 1996).

A key reform in the wider economy of considerable importance to the export agriculture was that of labour markets and specifically legislation affecting labour organisation at ports (so-called 'waterfront' labour). The Labour government was cautious about embarking on labour market reform, which eventually commenced with the Labour Relations Act in 1987, fearing that it could be sufficiently unpopular to derail the entire reform programme. However, once pay and employment bargaining at ports was decentralised, reducing the power of central trade unions, the number of workers was reduced considerably, port charges fell and farmers were able to receive a higher proportion of world prices for their products due to reduced marketing margins (Johnson, 1993; Scrimgeour and Pasour, 1996; Harris and Rae, 2006).

Reform of agriculture proceeded swiftly. However, progress in other parts of the economy was slower than expected and this had adverse impacts on agriculture, making the adjustment process more difficult. Specifically, it took longer than expected to get inflation under control after the initial devaluation and flotation of the NZ$. Inflation ran at 10–15% p.a. through 1985–86 to 1987–88, compared with 6% in 1984–85 (Johnson et al., 1989; Johnson, 1993). The high interest rates that were maintained to try to control inflation led to a real appreciation in the NZ dollar during this period, which hurt agriculture. This was exacerbated by falling world prices for some of New Zealand's major agricultural products in 1985–86 and 1986–87. The government deficit was finally controlled in 1987–88 and in 1989 the Reserve Bank Act replaced monetarist targets as a strategy for controlling inflation with a single direct target, given to the new reserve bank, to keep inflation within the range 0–2% a year. (Sandrey and Scobie, 1994). A decade after reforms began, the real exchange rate facing the tradeable sector had 'returned to levels comparable to the pre-liberalisation era' (Sandrey and Scobie, 1994) and agriculture was beginning to grow again.

The government acted to mitigate hardship to farmers in the late 1980s:

> 'As agricultural assistance was withdrawn following 1984, it became apparent that the government's existing social welfare provisions did not protect marginal and non-viable farm families. Specific schemes were devised, including a program for Special Assistance to Farming, which was in operation between 1986 and 1989. Provided certain criteria were met, grants were made to farmers who were in a critical financial position to provide for day-to-day living expenses. In this way, farmers and their families received a welfare benefit equivalent to the unemployment benefit rate (Chadee and Johnson 1994). An Exit Grant scheme was introduced in 1988, to encourage farmers whose businesses were not viable to leave farming.' Harris and Rae, 2006

Moreover, Rural Bank debt was reduced: 'about 20% of the total debt owed by the farm sector was written-off, and about 5% of farms [where liquidation difficult to avoid] were sold' (Harris and Rae, 2006). However, these debt reductions only began in 1987, once the pain in rural areas was acute (Johnston and Frengley, 1994). Furthermore, the Rural Bank was privatised in 1989, so could no longer administer government programmes or soft loans.

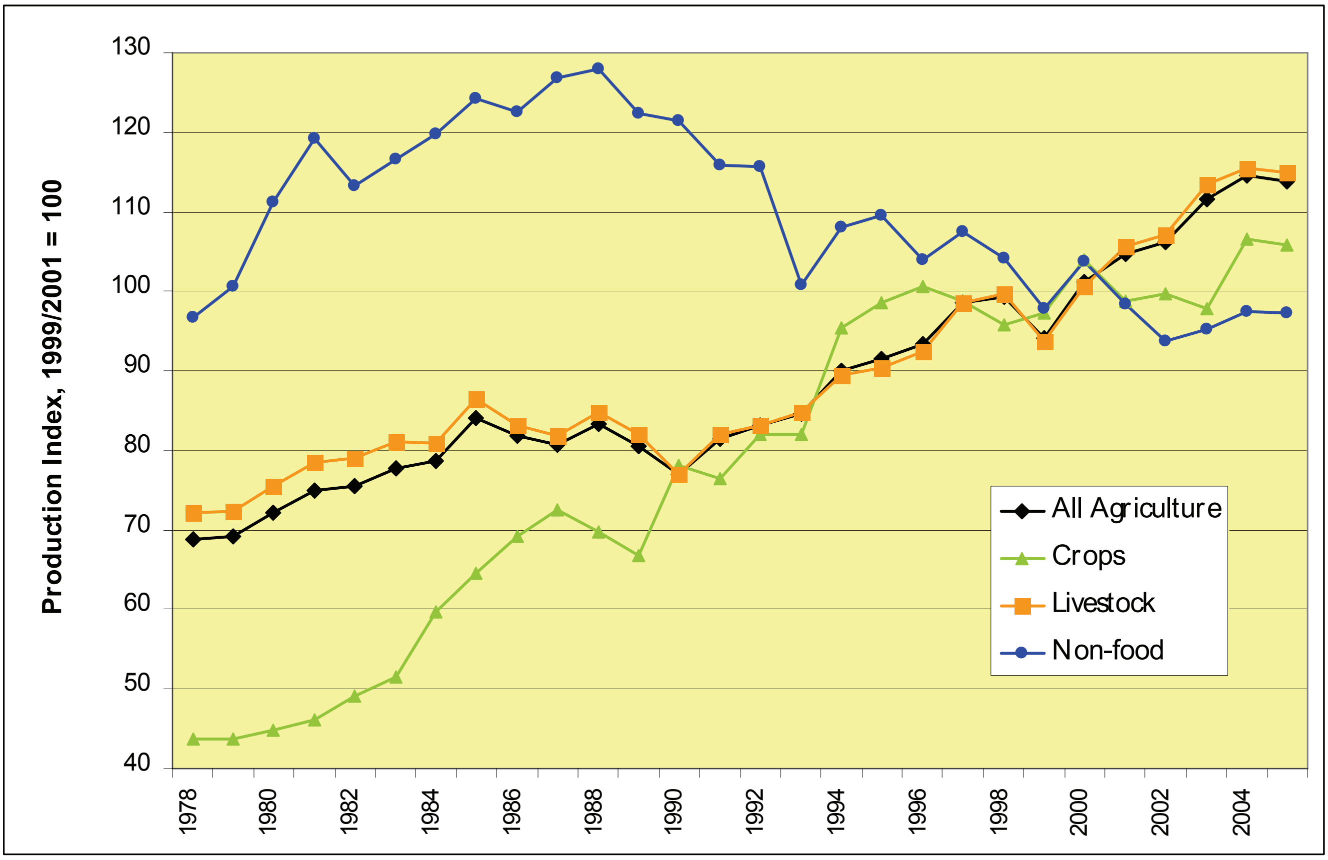
> 'Government facilitated the adjustment process in other ways … A Rural Coordinator service, working with local support groups and partially funded by government, helped with financial counseling and the development of non-farm activities in rural areas. The Ministry of Agriculture established a Rural Affairs Unit to monitor impacts on rural communities, appointed staff to coordinate strategic planning within the sector, funded a Rural Help Directory to advise on locally available sources of assistance, and funded a series of risk management seminars for farmers.' (Harris and Rae, 2006)

Outcomes

Two overall points are that it is difficult to disentangle effects of economy-wide reform from reforms within the agricultural sector; and that it is difficult to specify a without-reform scenario, but one would expect that to be fairly bleak. Note also that world prices of some of New Zealand's major agricultural products, having risen in 1984–85, fell during the next couple of years before showing some recovery in 1987–88 (beef, wool) and 1988–90 (all). The price falls exacerbated the pain of adjustment for farmers.

Overall, the economy took longer to resume growth after the reform period than expected.

Figure 5.1: New Zealand. Agricultural production from 1978 to 2005



Source: data from FAOSTAT

Agricultural production — see Figure 5.1:

> 'At the aggregate level real agricultural output, which had increased during the early 1980s, did not decline over the remainder of the decade when farming was undergoing adjustment to deregulation. In fact, real output remained largely static from 1985 until 1990. It was the composition of output that changed in response to changes in relative prices during this period, rather than total output' (Harris and Rae, 2006).

The production of sheep and beef comprised 44% of the value of total agricultural output in 1984. Producers of these commodities were also the most heavily assisted, with total assistance that amounted to over 38% of the value of farm output in 1983: hence they bore the brunt of reforms.

> 'The impact of deregulation on the production of sheep and beef was rapid. The number of sheep declined from 70.3 million in 1983 to 60.5 million six years later with consequent reductions in sheep meat and wool production. To some extent sheep were replaced by beef cattle and newly establishing farmed-deer and goat enterprises - between 1983 and 1988, the number of beef cattle rose from 4.5 million to 4.9 million, but fell back to 4.5 million the following year. Over the same period the number of farmed deer rose from 0.2 million to 0.8 million; farmed goat numbers rose from 0.15 million to 1.2 million. Since then, the goat industry has all but disappeared, but the deer industry has continued to develop. Using three-year averages based on 1984 and 1990, sheep meat production declined by 19% over the period; wool fell by 14%; and beef and veal production increased by 10%' (Harris and Rae, 2006)

By contrast, fruit took off during reform period, to exceed wool, cattle or sheep by 1990. Dairy production was always largest sub-sector, but doubled in early 1990s

Elimination of input subsidies was partially offset by reductions in trade controls (tradable inputs) and control of inflation 1989- (non-tradables), such that input price inflation greatly reduced post-reform. Sharp falls in both fertiliser use and spending on repairs and maintenance were seen from 1985 to 1989: one area where economies could be made, as loan repayments soared with higher interest rates, thanks in part to removal of interest rate controls in 1984.

Despite falling input use, maintained output was maintained. Total factor productivity (TFP) grew at 1% p.a. 1976–84, but at 2% p.a. 1984–1990, and 2.3% p.a. 1990–1997. Agricultural value added rose in 1985, fell in 1986–87, but has subsequently grown with economy since — maintaining a roughly constant 6% share of GDP.

Rising profitability in New Zealand agriculture by the early 1990s contrasted with static or falling profits in Australia, despite a similar level of output growth. The New Zealand sector — and the economy more widely — had been more successful in controlling its costs (Johnson, 1993).

Producer incomes — price support was reduced between 1984 and 1987. The effects were partly offset by devaluation in 1984 and rising world prices for wool, lamb/mutton and beef 1984–85. Exchange rate appreciation 1986–88 had the opposite effect and rising domestic marketing margins over reform period also had negative impact on prices received by farmers. Nevertheless, overall between 1985 and 1989 farm gate prices for wool and beef rose, prices for lamb fell much less than support payments (-6 NZc/kg p.a. c/w –23.4 NZc/kg p.a.); only for mutton did prices fall more than support payments (-4.4 NZc/kg p.a. c/w –1.8 NZc/kg).

Annual surveys of incomes from sheep and beef farm incomes show that incomes and profits — that had actually been falling from 1980 to 1984, despite rising revenues — rose in 1985, fell in 1986, then rose gradually since. The revenue trend was fairly constantly upwards, with 1985 and 1986 as deviations either side.

Rising levels of farm indebtedness were one result of the reform programme that had long-term consequences. Falling levels of agricultural support were critically reflected in lower land prices, yet some farmers were repaying debts that were incurred when land prices were much higher. A positive side to this is that it contributed to the reduced input use and higher TFP achieved within New Zealand agriculture during the 1980s, in contrast to Australia. However, it also discouraged investment in farming more generally, thus possibly reducing post-adjustment growth: 'Like the Great Depression, the impact of deregulation continues to temper the financial decisions of a generation of farmers' (Johnston and Frengley, 1994, p 1039).

Consumer welfare — consumer may have gained from deregulation of domestic marketing arrangements leading to lower consumer prices and greater choice, but the major focus of reform was always export competitiveness.

Effects on the environment — Arguably positive changes in land use were seen:

> 'The fall in the profitability of sheep enterprises relative to other types of farming led to major changes in land use patterns. Over the ten years from 1984 to 1994, the area of grassland devoted to sheep and beef cattle declined by 1.93 million ha, or by 16 percent. Of this, 1.08 million ha (56 percent) were changed to other grassland uses, such as dairy farming, and diverse uses such as vineyards, other horticulture, and semi-urban 'lifestyle' blocks. The remaining 850,000 ha of diverted land was devoted to forestry or involved retirement of marginal lands (Davison 1996b).'

Other effects — Investment in farm capital stock fell as interest rates rose, insufficient to offset depreciation, so total capital stock on farms fell. Farm values fell. Agricultural land prices fell relative to urban, but recovered in 1990s. Despite this there were fewer bankruptcies than feared, perhaps in part owing to the debt write-offs by both state-owned Rural Bank and informal (e.g. family) lenders.

There may have been some loss of jobs. Harris and Rae, 2006 report an estimated an '11% drop in farm labor employed during 1986-91', allowing for trend decline due to technical change. In absolute terms, equal falls were seen in farm owners and employees (disproportionately more employees), with younger owners faring worse because of less equity. Also, job losses were experienced in port handling as part of wider labour market reforms (1987–91).

Lessons from New Zealand's agricultural reforms

Overall, New Zealand now has a competitive agricultural sector with some of the lowest levels of protection and support in the world. Farmers demonstrated impressive flexibility in responding to the reform programme. Some labour was shed during the transition and some farms went out of business, although the latter were mainly in more marginal production areas, so their demise is seen as an environmental 'plus'. Reservations about the reform process focus on the impact of lagged reform elsewhere in the economy — difficulties in controlling inflation, hence real exchange rate appreciation; lags in labour market reform — on the pain of adjustment experienced by farmers, rather than on 'unwelcome side effects' per se.

The reform of the agricultural sector encountered surprisingly little opposition. Even Federated Farmers accepted it and advocated the completion of the reform agenda elsewhere in the economy, rather than a return to agricultural support, when the adjustment process was at its most painful for farmers.

The New Zealand experience perhaps needs to be kept in perspective. Although the reforms were radical, they took place in the context of a well-established economy that had reasonably well functioning institutions, and several sectors — above all in agriculture — that had for decades been amongst world's leading producers, skilled at selling to (very distant) international markets. While the economic difficulties were real enough, they were more the perturbations of an advanced economy, rather than the deep crises that have been seen in many developing countries. It is perhaps not that surprising that adjustment and recovery were achieved at relatively low cost.

6. Conclusions

This chapter compares the experiences of the four countries, looking in turn at the context, content, process and outcomes of reforms. At the end we draw preliminary lessons for agricultural policy reform in Africa.

Context of Reform

In all four cases, agricultural reform was undertaken in response to a perceived crisis, either economic or political or both. In all cases with the possible exception of China, reforms were undertaken following a change of government.

- In Bangladesh presidential assassination and a series of military coups in 1975 ushered in a gradualist programme of economic reform, beginning with attempts to establish macro-economic stability. The political calamities of 1975 followed a terrible famine in 1974, which highlighted the chronic poverty, food insecurity and vulnerability of the Bangladesh population. Nevertheless, agricultural policy reform proceeded gradually, with reform of agricultural input markets being the first step in the late 1970s and early 1980s.
- In China agricultural and rural market reform began in 1978 once Deng Xiaoping had consolidated his power following the death of Mao Zedong. Mao's period in power had perhaps laid some of the foundations for future growth of the Chinese economy, but in the late 1970s economic growth was slow and rural poverty was widespread, with severe food shortages experienced in some years in the 1970s. The Chinese leadership knew that it had to change its agricultural policies if it was to reverse this situation and maintain its credibility with its citizens.
- Market-oriented agricultural reform in Chile commenced following the military coup of General Pinochet in 1973. Agricultural reform was part of a radical reform of the entire Chilean economy, in which state intervention gave way to liberalised markets, and in which policies for growth and development switched from favouring substitution of imports to an export orientation. In addition to growing dissatisfaction with the performance of the Chilean economy during its import-substitution phase, General Pinochet's reforms aimed to restore the power of Chile's traditional landed classes, in particular by reversing a land redistribution started by President Frei and intensified by the man whom Pinochet replaced, Salvador Allende.
- The reform of the New Zealand economy during the 1980s was arguably as radical as that undertaken during the Pinochet dictatorship, but was undertaken in a democratic and peaceful context. In the early 1980s the economy was hit by macroeconomic crisis, most clearly seen in heavy selling of the NZ dollar. There was, moreover, a widespread sense that the economy was failing: in the early 1950s New Zealand was one of the five richest economies in the world, judged on incomes a head. But thirty years later the country had slipped down the rankings — to around 17th place — as its economy became one of the slowest growing in the OECD. The incoming Labour government in 1984 was immediately faced with a foreign exchange crisis and quickly embarked on a radical overhaul of the entire economy designed to increase international competitiveness. Agriculture was the first sector to undergo reform.

What is noticeable here is that the crisis perceived was not specifically agricultural, nor even rural: in all four cases, a national problem affecting the whole economy was perceived. Is this just the result of examining a small sample of cases, or would such a result apply more widely? Examples of other cases where important changes to agricultural policy followed a more general crisis include: Mexico 1988, Kenya 1954, Indonesia 1967, Vietnam 1986, Bolivia 1952, and Nicaragua 1979. Looking for cases of major changes to agricultural policy that followed crises that could be seen as specifically agricultural, rural or concerned with food, the cases of India in 1965 and 1966, Ethiopia in 1975 — where agricultural crisis led to revolution, stand out. It may be that the latter cases are exceptional.

An important aspect of context was the role of agriculture in the economy. In Bangladesh and China, the rural areas were still home to the large majority of the population. Farming was still a major source of income for very large numbers of households. The rural areas were also disproportionately poor. In Chile even by the early 1970s the majority of the population were urban: agriculture was a relatively small part of the economy set against mining, urban manufacturing and services. New Zealand was also largely urban: but in this case, although farming was not a major employer, it was the key sector for export earnings and was thus strategically central to the economy.

Content

Since in these four cases the trigger for reform was a national problem, it is not surprising to see that agricultural reform was in all cases part of a wider set of measures designed to affect the entire economy. In all four cases, the national programme included liberalisation of markets and a retreat of the state from intervening in the economy. This has subsequently become the received wisdom throughout much of the world: in the 1970s when three of the four reforms began, the direction taken was radical, especially in the case of Chile in 1973.

The main difference was the pace and sequencing of the reforms.

- In Chile and New Zealand the approach taken was to stabilise the macro-economy and open up productive sectors to international trade, stripping them of a range of policy supports that they had previously enjoyed. In both cases, reformers tried to push through their programmes quickly, convinced that the sooner changes were made, the better. However, in neither case was the full package of reform implemented overnight: some elements took time to carry out, either owing to the administrative demands or to the need to mobilise political will and energies.
- Both Bangladesh and China saw reforms brought in more gradually. This may reflect guarded expectations of the reaction of the private sector: while in the cases of Chile and New Zealand the reformers were convinced that private enterprise would invest once the dead hand of government was removed, few had the same convictions in Bangladesh and China — indeed, in both these cases, some leaders were suspicious of private business. In addition, and this probably applies to the case of China, leaders preferred incremental change allowing time to learn lessons and make adjustments to more drastic changes.[28]

When examining the agricultural content of the reforms, in many cases these were the sectoral concomitants of a more general strategy, as seen for example in the liberalisation of markets for agricultural produce and inputs, in reducing subsidies, and in reducing the extent of state intervention in production and markets.

But there were some specifically agricultural elements. In Chile, for example, soon after the 1973 coup the government moved to reverse the redistributive land reforms of the previous two governments: partly restoring land to previous owners, partly regularising titles, and partly dispossessing those rural leaders seen as sympathetic to the toppled government. Subsequently some targeted support, preferential access to credit and acquisition of state enterprises at prices below the market value, was provided to emerging companies interested in fruit and forestry production for export. In New Zealand measures to mitigate hardship to farmers were brought in a few years after the start of reforms.

In all cases, the reforms saw the scope of public agencies reduced, although we do not mean to imply that this is the only direction that reform can take.

- In Bangladesh, the government agency for providing inputs, the BADC, saw its functions curtailed. Significant cuts in staff were made in the Ministry of Food when some of the programmes for public procurement and distribution of grain were ended.
- In Chile, public sector reform entailed privatisation of state enterprises and withdrawal of the state from direct intervention in economic activity; some public agencies providing agricultural services — particularly to poor peasants — were closed. Staff were lost from the Ministry of Agriculture, especially those seen as sympathetic to the previous government.
- In New Zealand a thorough reform of the Ministry of Agriculture and Fisheries was undertaken in which, even after allowing for staff redeployment to new autonomous agencies, about 40% of staff lost their jobs. Functions such as extension and quality inspection were transferred to the private sector, as MAF rethought its role within the country's changing agricultural sector. Other functions, related to administration of support payments, simply disappeared as a result of the wider reform measures. Perhaps surprisingly, there was a willingness within MAF to consider and even

[28] In China such caution was understandable: the generation of leaders in the late 1970s had, within the previous two decades, experienced two extraordinary national experiments — the Great Leap Forward and the Cultural Revolution — that brought chaos to the country.

initiate changes, which may have headed off even more radical proposals for scrapping the organisation.

The process and politics of reform

As described, the trigger for reforms in these cases was a crisis affecting the economy in general and this gave the incoming governments a mandate to make substantial changes. In all cases, the new leaders of the countries had a vision of change and were prepared to bring this about. It helped that in three of the cases, the reforming governments were not subject to full democratic scrutiny: two military administrations in power after coups, and a single-party state. In the cases of Bangladesh and Chile, the leaders were able to present themselves as restoring order to a previously chaotic situation. Certainly in Chile, General Pinochet's governments benefited for many years from the support of the middle and upper classes and business interests who were grateful for the restoration of order and protection of their property. Hence although large sections of the population may have doubted the reforms, including some who were direct losers from the measures taken, they could be ignored.

In New Zealand, where this condition did not apply, it seemed the elected government benefited from a widespread acknowledgment that change was needed. Indeed, the outgoing National party pledged to scrap the main source of farm support during the 1984 election campaign.[29] Even the main farming lobby group, Federated Farmers, soon came out as vocal supporters of economy-wide reform: convinced that farmers would benefit as much from improved efficiency in sectors such as transport, as they would lose from less direct support.

Given the trigger being national crisis, the response was thus primarily a national one, not a specifically agricultural one. Thus the politics of agricultural reform were subsumed within national debates on overall economic strategy. Indeed, in three of the cases, important reforms were seemingly imposed on agriculture and the state agencies concerned with the sector by policy-makers and advisors situated in more powerful parts of the government, including the ministry of finance. This is clearly true in both Chile and New Zealand where policy prescriptions for agriculture flowed directly from a strong philosophy regarding the nature of reform that the economy as a whole needed, espoused strongly be senior officials in the ministry of finance.

The desire to cut public spending so as to control inflation was also a centrally-driven motive for reform of the institutions responsible for agriculture, along with the philosophical belief that sectoral policy was closely associated with distortion of incentives facing producers.

Technocrats played significant roles in the cases of Chile and New Zealand. In the former, a group of Chilean economists trained at the University of Chicago and hence known as the 'Chicago Boys' had a central role in the design of the policy. In New Zealand the broad reform package gained the name 'Rogernomics', showing the personal influence of Minister of Finance (1984–88) Roger Douglas. However, he was assisted by key officials in the Treasury and Commerce Department, who were inspired by the latest thinking in neoclassical and monetarist economics and knew of the reform experience in Chile that had begun the previous decade.

In Bangladesh a research team in the Ministry of Food was to play an important role in the second round of reforms, affecting grain marketing and distribution.

China is unusual as a case where policy-makers were able to benefit from experiments on a limited scale. A trial version of the household responsibility system had been run in one of the very poor counties of southern China, but, once brought to the attention of the central leadership, was quickly adopted throughout the country. Paradoxically, the regime that most clearly identified itself as committed to an ideology — socialism — proved to be highly pragmatic.

None of the reforms necessarily went smoothly: all were marked by adjustments and indeed, some important deviations from the initial schemes were seen. Given the more comprehensive nature of reforms in Chile and New Zealand than in China and Bangladesh, it is perhaps not surprising to find that there were also some 'fits and starts' in implementation in both these countries.

- This was most clearly seen in Chile, where observers pick out three or even four phases of

[29] The incoming Labour government was seen to have a much more coherent vision of what should be done to the economy as a whole than the National party, which, by the time it returned to power in 1990, had adopted many of the major policies of the Labour party.

reforms in the sixteen years that General Pinochet led the country. Reform gathered momentum in the latter part of the 1970s following a cautious start during 1973–75. This owed much to the influence of the so-called 'Chicago Boys'. However, the global economic downturn, the Latin American debt crisis and collapse in world commodity prices at the beginning of the 1980s presented a major challenge for an economy that had been opened to the international scene. In 1982 Chile was facing a severe economic recession and the agriculture sector was strongly hit. In a short-lived reversal of policy, the 'Chicago Boys' were largely dismissed from their positions of policy influence and the government was forced – crucially by the long faithful business elite supporters – to reverse the neo-liberal model and play a more active role in the economy and in the agriculture sector in particular. Tariffs, credit facilities and price guarantees were reintroduced and the debts of agricultural entrepreneurs were renegotiated with state support. When a reform path was resumed in 1983-84, it was a pragmatic form of neo-liberalism in contrast to the more radical ideologically-driven approach of the later 1970s. This is argued however to have emerged out of short-run political calculation – a response to pressures coming mainly from domestically-oriented businesses and large food-crop producers – rather than deliberate policy design (Kurtz, 1999).

- In New Zealand, the main test of the government's will to carry through its agricultural sector reform occurred during 1986–88 when an appreciating real exchange rate (due to the government's use of tight monetary policy and high interest rates to try to get inflation under control) and low international commodity prices caused considerable pain to farmers who were still adjusting to the shock of the removal of price support. Either side of the 1987 election, a number of measures were introduced to ease the pain of adjustment felt by the agricultural sector whilst the fruits of reform were yet to be seen elsewhere in the economy. These measures included: a programme for Special Assistance to Farming, which was in operation between 1986 and 1989; an Exit Grant scheme, which was introduced in 1988 to encourage farmers whose businesses were not viable to leave farming; debt write-offs by the main rural lender, the state-owned Rural Bank, during 1987–89 (before the Rural Bank was privatised), and the provision of various services deigned to help farmers with financial counseling and the development of non-farm activities in rural areas. A notable aspect of the support provided to farming households in the late 1980s, however, was that it was provided specifically to assist the process of adjustment to the new, competitive market conditions (including exit from agriculture for farms in marginal areas that were unlikely to be viable without state support). The support in no way represented a retreat on the basic thrust of the reforms themselves.
- In China official enthusiasm for markets in essential foods has been tempered when prices have risen, and the state has sought to re-impose price controls and obligatory procurement. In Bangladesh, a fertiliser shortage arose in 1994–95 that led to partial reversal of reforms, with the state reintroducing controls over dealers.

The main contrast again arises when comparing Chile and New Zealand to Bangladesh and China. In the former widespread reform was contemplated from the start, and reforms were made generally as soon as they could practically be carried out. In the latter cases the initial intentions seem to have more modest, reforms were introduced in waves and it seems that initial success with reforms then encouraged wider and deeper measures.

Outcomes of Reform

Once again, the two Asian cases contrast with other two. In Bangladesh and China, the modest initial measures taken paid off within a year or two. In both cases, food production for the domestic market increased well ahead of population growth: a valuable gain for countries that were very poor at the time and where the availability and price of food was a key issue.

In Bangladesh the price of fertiliser fell after the private sector assumed responsibility for input supply, despite the ending of input subsidies at the time of the reform. This was partly a result of fortuitous international conditions, partly owing to of private suppliers being more efficient than the BADC. As a result fertiliser use rose dramatically. At the same time, liberalisation of the import of irrigation equipment allowed an equally dramatic expansion of tubewells. Rice production rose strongly enough to see rice prices fall by 50% in real terms over two decades. Partly as a result, when public procurement and distribution of grains was ended a decade later, there was little opposition to the ending of subsidised rice rations for poor consumers.

In Chile and New Zealand the response of farming to the changes was delayed, by a dozen years in the first case and by half that time in the latter. Two reasons relevant to both cases may explain the lag in response. First, some of the measures undertaken to stabilise the macro-economy — higher interest rates, less public spending — had deflationary effects.

Second, many farms changed their production mix and techniques. In Chile the shift was from producing staple foods for the domestic market towards fruit, wine, nuts and other high-value crops for export. Exporting was clearly a challenge requiring learning about distant markets, achieving standards, and investing in the necessary equipment for processing and packing — a process that was assisted by the entry of foreign capital.

In New Zealand farmers knew all about exporting, but they shifted their production mix away from sheep and beef cattle towards horticulture. New Zealand farmers also found that they cut their costs of production, the advantages outweighing any loss of production.

Success was probably seen faster in Bangladesh and China, since the changes implemented were designed to stimulate farmers to increase production of crops and livestock that they knew well, for domestic markets that they knew equally well. In short, farmers had to make fewer adjustments. The main challenges in the two Asian cases was to encourage the emergence of private entrepreneurs in the supply chains: input dealers, credit intermediaries traders and processors.

Lessons for Africa and other would-be reformers

Clearly, reform does not take place without **political will**. These cases support the hypothesis that significant changes only emerge from crises. But crisis is not the only requirement — if it were, Africa would lead the world in reforms. There has also to be a political response to crisis, usually a change of administration that has a mandate to act. This too is not sufficient: there has to be a reasonably coherent vision of strategic change amongst leaders and their policy advisers, a sense that change is imperative.

The dangers are that crisis leads not to strong governments with mandates, but to weak coalitions of divergent interests. Not only do such regimes lack the political capital to see through major changes, they may find it difficult to formulate a vision that is widely accepted. Without vision and determination, governments then become highly susceptible to rent-seeking by interest groups, populism, and the servicing of patron-client networks. Arguably this is precisely what has happened in response to many crises seen in contemporary Africa.

External conditions matter as well: they can help or hinder reforms. Few countries can choose the moments when external conditions are suitable for reform: windows of opportunity for domestic policy reform may have to be seized irrespective of international market conditions. Reformers may have little influence over the precise time at which reforms are introduced. In most cases it is thus a question of designing measures in the light of external conditions — and hoping that they are advantageous.

- In Bangladesh, a fortuitous occurrence was that diesel and fertiliser prices fell on international markets as domestic input market reforms were implemented. This meant that fertiliser market liberalisation could be accomplished with no increase in fertiliser prices, despite the ending of fertiliser subsidies as part of the reforms, whilst expansion of tubewell irrigation could complement increasing fertiliser use in raising rice production.
- In Chile the radical opening of the economy to international trade, combined with the removal of protection and reduction of public services, exposed the economy, and agriculture in particular, to the vagaries of international markets. The rapid reduction in public spending, high real interest rates, competition from international agricultural producers, and, crucially, the decline in the real exchange rate during 1978–82 damaged heavily Chilean agriculture. Consequently, farmers lobbied for protection and during 1984-90 the neo-liberal reform package was softened and made more pragmatic. Measures were introduced to achieve real devaluation of the exchange rate and regain competitiveness in international markets, in addition to the reintroduction of some price stabilisation interventions. Yet a fundamental challenge remained regarding the stabilisation of the real exchange rate, a variable a government can only influence indirectly since it is strongly determined by exogenous changes in terms of trade and world interest rates.[30]

[30] Since 1989 Chile has been experiencing declining competitiveness in agriculture, particularly in traditional crops (eg. wheat, rice

- In New Zealand devaluation of the dollar (NZ$) combined with rising international commodity prices to raise farm gate prices and farm incomes in 1984–85, the first year of reform, despite the first significant reductions in farm support payments. However, over the next two years movements in both the exchange rate and international commodity prices worked against producers, making the adjustment to the more competitive market environment considerably more difficult than it would otherwise have been.

This was less true for China, not only because reform focused on production for the domestic market, but also because the Chinese market was so large and closed that external conditions were minor considerations.

Should reform packages be comprehensive and swift — the **'big bang', or gradual** and phased? Big bang has the advantages of changing while there is the political will, often taking opponents by surprise and giving them little chance to obstruct change. If, however, producers are to respond to new incentives and opportunities it does require functioning markets and indeed a set of economic institutions in place. It also requires capacity and competence within the public service.

Gradual approaches, on the other hand, run the risks of being waylaid, and may just delay the adoption of key measures. But they have the advantages that they allow for some learning; they may be administratively feasible when the civil service has limited capacity; and if initial measures are successful, they may whet the appetite of leaders and the public for further reforms.

The choice may be more apparent than real. Some reforms are relatively simple and swift to carry out, requiring little more than high level policy advice and a ministerial decision — think, for example, of altering a tariff, changing central bank interest rates, or even adjusting government budgets. Others inherently require more time and more staff: think, for example, of restructuring a ministry, privatising a state-owned enterprise, or redistributing land. By and large, most measures for macro-economic stabilisation belong to the first category; structural changes, institution building, and many other measures that enhance supply response belong to the second.

Table 6.1 sets out the challenges seen in different aspects of agricultural reform. As can be readily seen from the third column, the challenges and difficulties of reform depend heavily on conditions that are particular to countries. Hence the feasibility of reform, the pace and sequencing of reform, are matters that require considerable adaptation to circumstances. There may then be less room to choose the pace and sequence of reform than may be imagined. Since political choices do not have to be rational, and rarely are fully informed, it is perfectly possible to misjudge the feasible range, pace and sequence of reforms.

Given such uncertainties, there is something to be said for a prior preference for gradual reform, since this avoids large mistakes and allows more time for learning and adjustment. It may be just coincidence, but the two countries that took a more gradual approach to reform took no longer to see the rewards of reform than the two that opted for big bangs.[31]

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and oilseeds), due partly to the fall in world prices.

[31] More generally in economic development, the appetite for drastic reform has been lessened by the experience in Russia and other transition economies where shock therapy was less successful than foreign advisors imagined. In marked contrast, the gradual reforms seen in China and India have been followed by dramatic increases in economic growth rates.

Table 6.1: The challenges of agricultural reforms

Policy measure	Challenges faced	Conditioning variables
Opening the economy to the international market	The fate of domestic sectors producing tradables that are not competitive Linking potentially competitive sectors to the international market, enabling or assisting them to realise their potential	Competitiveness of the economy Price levels and trends in international markets for products and inputs
Reducing the role of the state and increasing that of markets	Overcoming vested interests, both those that benefit from state support and entrenched ideas within public agencies	Political will
State agencies as regulators of markets	Building the competence of civil servants with little prior experience	Competence and experience of the public service
Increased role for the private sector in supplying inputs, marketing, and in financial intermediation	Ensuring that an enabling environment is in place for entrepreneurs, overcoming co-ordination failures, ensuring that institutions set standards, and in general that information is available to market participants	Experience and ability of established businesses in the economy The degree of development of economic institutions
Increased role for farmers in learning about markets and their demands	A stiff challenge when the markets in question are international	Experience of farmers in exporting. Farmer literacy, numeracy, access to information, and access to capital
Possible increased role for producer organisations	Building competent and accountable associations	Experience of farmer organisation

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