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New Zealand

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OECD ECONOMIC SURVEYS

2002-2003

New Zealand

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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BASIC STATISTICS OF NEW ZEALAND

THE LAND

Area (1 000 sq. km)	268.0	Urban population,[1] percentage of total (June 2003)	78.6
Percentage of total pasture and arable land, 1996	49.5	Population of major urban areas (June 2003, 1 000 persons):	
		Auckland	1 199.3
		Wellington	363.4
		Christchurch	358.0

THE PEOPLE

Resident population, June 2003 (1 000)	4 009.5	Civilian employment, 2002 (1 000)	1 876.8
Inhabitant per sq. km	15.0	*of which*:	
		Agriculture, forestry and fishing	159.8
		Manufacturing	289.9
		Trade (wholesale and retail)	420.5
		Education, health and community services	310.5

PARLIAMENT AND GOVERNMENT

Present composition of Parliament:			
Labour Party	52	Present Government : Labour Party	
National Party	27	Next general election: July 2005	
New Zealand First	13		
ACT New Zealand	9		
Green Party	9		
United Future	8		
Progressive Coalition	2		

PRODUCTION (2002)

Gross Domestic Product (NZ$ millions)	125 428	GDP per capita (NZ$)	31 842

FOREIGN TRADE (2002)

Main exports (percentage of total):		Main imports (percentage of total):	
Fish and seafood	22.1	Machinery and transport equipment	40.6
Manufactures	20.0	Manufactures	18.7
Dairy produce	16.7	Mineral, chemicals, plastic materials	25.6
Meat	13.8	*of which*:	
Wood and wood products	11.5	Mineral fuels, lubricants, etc.	9.3

THE CURRENCY

Monetary unit: New Zealand dollar	Currency unit per US dollar, average of daily figures:	
	Year 2002	2.1633
	November 2003	1.5915

1. Defined as the population in the 30 main and secondary urban areas.

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

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The economic situation and policies of New Zealand were reviewed by the Committee on 17 November 2003. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 26 November 2003.

•

The Secretariat's draft report was prepared for the Committee by Pietro Catte, David Rae, Paul O'Brien and Boris Cournede under the supervision of Peter Jarrett.

•

The previous Survey of New Zealand was issued in June 2002.

Assessment and recommendations

Past reforms are paying off, but not by enough to lift per capita income to the top half of the OECD

New Zealand has been one of the faster growing economies within the OECD during the past decade. From 1992 to 2002 it grew at an average annual rate of 3.6 per cent, and has maintained a robust pace of expansion during the more recent period of global downturn. This represents a marked improvement on the economic performance of the preceding two decades, during which per-capita income levels in New Zealand declined relative to the OECD average. Underpinning this improved performance has been the programme of reforms that began almost 20 years ago. Those reforms have provided the economy with several important strengths: a sound macroeconomic policy framework; low inflation and a fiscal surplus; a flexible labour market; high-quality public administration and regulation; and an education system that delivers top-class overall results for the majority. These reforms have boosted the economy's sustainable growth rate and its resilience to recent adverse shocks. However, some weaknesses and challenges remain: there is scope to further increase foreign trade; investment in equipment, R&D and information and communication technologies (ICT) is low, possibly because high foreign debt raises the cost of capital; the distribution of education outcomes is wide, with too many people having inadequate skills for a modern economy; and several infrastructure bottlenecks have developed. But the reforms have halted the decline in relative living standards observed since the 1960s, per-capita incomes having grown at an average annual rate of 2½ per cent over the past decade, a little faster than for the OECD as a whole. It is encouraging that this has reflected not only a recovery of employment rates but also, more recently, a pick-up in labour productivity growth. The traditional primary export industries have

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achieved efficiency gains, but manufacturing productivity has been disappointing, despite some success stories in a few niche products. Yet something is still missing, as potential output has not been rising fast enough for New Zealand to return to the top half of the OECD rankings, the government's announced objective.

Being small and far away may be handicaps, but gaps in fundamentals also need to be addressed

The key challenge is to boost productivity growth. The reasons why past reforms have not yielded larger productivity gains are not fully understood. Some further increase may still be in the pipeline, but it would be unwise to assume that it will be large. Attention has shifted toward specific handicaps that may be holding back New Zealand's growth, and in particular whether its small size and distance from markets may limit the scope for exploiting economies of scale and agglomeration externalities. Relatively small firm size and the fact that so few manage to lift employment and break into export markets appears consistent with this view. New Zealand faces the additional challenge that agriculture, in which it has a substantial comparative advantage, faces very high trade barriers abroad. But even if geography and trade barriers matter, their effects are not mechanical, as they interact with the other determinants of a country's comparative advantage. Addressing the residual weaknesses in fundamentals should thus be the top policy priority.

The most promising strategy is to strengthen global linkages

The government's *Growth and Innovation Framework* (GIF) is intended to help co-ordinate its growth policies. There are four main strands: increasing global connectedness, promoting the development of skills and talent, fostering innovation, and catalysing development in some "focus" sectors. A key element is the strengthening of global linkages in areas such as external trade, investment, human capital and research. The policy regime for trade and investment is already very open, and there are sizeable two-way flows of migration, but there is room to make the economy even more outward-oriented. For example, the recent decision to resume the process of unilaterally cutting tariffs from 2005 after the current freeze expires is welcome, though complete elimination would be even better. Further regulatory harmonisation with Australia and other trading partners would also facilitate trade integration. New Zealand has low

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regulatory obstacles to foreign direct investment (FDI), and the government has resisted the temptation to use tax breaks or subsidies to attract FDI, despite increasing international competition in this area. However, tax rates that are around the OECD average may not be attractive enough. The pressure to take a more active approach may increase in the future, particularly if the United States concludes a bilateral free trade agreement with Australia ahead of New Zealand. However, it is unlikely that lowering taxes for foreign investors (either across the board or more narrowly targeted) would generate sufficient gains to offset the associated fiscal and efficiency costs. The more neutral alternative of lowering the statutory corporate tax rate for domestic as well as foreign investors should be preferred.

Policies to promote exports would benefit from more programme streamlining

One way in which the government is acting to promote global linkages is by addressing the obstacles to exporting faced by small firms. There are many programmes offering information, training and consulting services (as well as some limited financial assistance), but a challenge has been to streamline and redesign them based on a clear definition of the market failures they should offset. The integration of enterprise support and trade promotion into a single agency has made it easier for users to access those services. However, overlap and fragmentation of programmes is still excessive, and low take-up for some suggests that they are not really filling a gap in the market.

Science and innovation policies are well designed, but the R&D tax regime could be further improved

Strengthening innovation capacity is a further key element of the government's growth strategy. Business expenditure on R&D is low in proportion to GDP. Small firm size and a prevalence of foreign subsidiaries are two reasons, but a complex tax regime for R&D may also be to blame. Its simplification should be a priority, although some steps have already been taken to this end. The competitive system for allocating public research money among Crown Research Institutes (CRIs), universities and industry is well designed, and the guidelines for managing intellectual property rights by CRIs and universities encourage commercialisation. CRIs play an important role in the science and innovation system: a large part of their research is commissioned by or performed in partnership with private firms.

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However, they should pay a share of profits back to the government's funding pool so that the overall allocation of funds can be made according to the public-good rationale of public-sector science. Universities are taking part in the effort to strengthen international research linkages, which is crucial for progress in biotechnology and other fields. Helping them achieve minimum efficient scale by forming consortia and centres of excellence seems the right approach.

Fostering cluster formation may be a good idea, but the government should refrain from "picking winners"

A controversial element of the government's strategy is its focus on actively assisting growth in three sectors: biotechnology, ICT and "creative industries" such as film production, design and fashion. The first two are relatively well established in New Zealand, even though they are still struggling to reach critical mass. Biotechnology can also count on potentially valuable synergies with agriculture and a strong public research base. Growth of creative industries, of which film production has been most notable, has been a more recent development. Support for screen production was initially in the form of a tax loophole, but has more recently shifted to a system of grants. While this is the only case so far where subsidies have been used, it sets an unhelpful precedent. Setting an uneven playing field may not only misallocate resources but would also create incentives for wasteful rent-seeking.

Regulatory reforms are needed to unblock infrastructure bottlenecks, especially in transport and electricity

Improving infrastructure would create an environment more favourable to both foreign and domestic investment, thereby strengthening global linkages. Two areas where bottlenecks have emerged are transport and electricity. In each case, a better regulatory environment is needed. R*oad policy* faces the challenge of maintaining a high-quality network in a sparsely populated country, while at the same time addressing localised congestion problems. In order to increase the resources available for road construction, consideration should be given to raising user fees (which at present mainly take the form of a petrol levy) and making them congestion-related through road pricing. Bringing road fees into line with the true social cost would also help the government assess the economic viability of the *rail service* and decide whether supporting it is justified. As regards *electricity*, recent dry-weather episodes have

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revealed problems on both the demand and supply sides of the market. Limited retail competition and the cost of time-of-use metering means that households face no price signal to cut back their consumption in times of shortage. With demand-side responses largely confined to major users of electricity, more backup generating capacity is needed. However, private investment in generation is discouraged by the uncertain return, a changing regulatory environment and difficulties in getting environmental approvals for some new projects. The government is addressing the supply-side issue by adding some ring-fenced dry-year capacity. A pre-announced price threshold has been set for activating this capacity, but some provisos around activation rules may create uncertainty. In addition, an improved regulatory framework is needed to encourage investment in order to overcome transmission bottlenecks.

The environmental approval process could be improved

Another factor holding back infrastructure projects and investment more generally has been the uncertainty and delays related to environmental consent procedures associated with the Resource Management Act (RMA). While the government has spent a small amount of money to speed up the process, it is difficult to judge whether more is needed. But if the business sector is right in claiming RMA administration to be a major barrier to investment – including FDI – then there could be a high payoff to a small further increase. Consent decisions, which are made at the local level, also need to place more weight on national interests. The government is currently considering measures to address this problem including introduction of a fast-track process for major infrastructure projects and better identification of national-interest considerations.

Immigration policy focuses on attracting skilled immigrants

Migration is another valuable link with the rest of the world. It is generally accepted that net immigration brings economic as well as social and cultural benefits and that significant inward migration will continue for the foreseeable future. Unlike most OECD countries, New Zealand has significant migrant flows in both directions. Thus, net flows oscillate considerably and have shifted from an outflow at the end of the 1990s to a record inflow over the past two years. Geographical factors mean that policy can concentrate

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on choosing among applicants, although it is more difficult to control net flows since these depend on emigrating and returning New Zealanders. Since the early 1990s selection policies have focused on immigrants' skills, rather than their country of origin. The majority of permanent settlers are admitted through a points test based largely on qualifications, age, work experience and English language skills. Family connections account for a further 30 per cent, and the remainder enter under the humanitarian programme, which includes quotas for Pacific Islanders.

Recent changes to admission rules should help improve immigrants' employment outcomes

Recent policy refinements have focused on boosting employment rates of skilled immigrants, which were disappointing in the 1990s. This was attributed mainly to insufficient English language skills, although cultural obstacles to "fitting in" to the close-knit work environment of small firms and employer discrimination may also have played a role. The minimum English language requirement has been raised twice, and several measures to improve integration have been introduced, including job-matching and employer-awareness programmes. Very recent changes have increased the emphasis on employability, with priority given to those with job offers, and a provision for candidates to be given temporary visas to determine their suitability on the domestic job market. These changes should help improve labour-market success, at least in the short run. However, putting too much emphasis on filling particular skill or industry shortages, or on priority sectors, should be avoided. Experience locally and overseas suggests this approach may not work well in a rapidly changing economy.

Immigration brings benefits and can offset the loss of human capital from emigration

It is difficult to quantify the gains from immigration for the existing population, though an important consideration is that, because many New Zealanders also emigrate, the population would stagnate or fall without immigration. Moreover, agglomeration effects or economies of scale at the national level may be important for a small and isolated country such as New Zealand. Immigration can help to maintain a critical mass of human capital to benefit from externalities at home – from expanding the labour force and domestic markets, with associated network and scale effects – at the same time as expanding connections

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with the rest of the world. The composition of migrant flows is also important. Emigrants tend to be relatively highly educated, but evidence suggests that the education and skill level of immigrants tends to match those of emigrants. Although it is encouraging that most emigrants eventually return, probably with higher productivity and earnings as a result of their overseas experience, it seems that fewer may be doing so than in the past, or that more are staying away longer.

Migration can strengthen global connections

Beyond any benefits connected to net inflows, the large size of migration flows in both directions is itself important because of the connections maintained by immigrants and New Zealand expatriates with their countries of origin. In addition to the likely favourable effects on trade, these movements mean increased opportunities for exchanging knowledge and ideas, a powerful driver of innovation. In this context, the ability of the domestic education sector to attract large numbers of foreign students is a promising development. Not only is it a flourishing export sector, but it attracts people who subsequently, if they decide to stay, will have few difficulties in integrating in the labour market. Strengthening the ability of universities to build on this base to create successful graduate programmes that can attract foreign researchers should be a further objective.

Labour-market performance is good overall but only average for marginal groups

While raising productivity growth is the foremost challenge facing New Zealand, a second is to extend to marginal groups the good labour-market outcomes that the majority of New Zealanders enjoy. While the employment rate is well above average, matching the OECD's best performers would go one-third of the way towards the goal of returning to the top half of the OECD. The labour market works well for the easily employable majority, but outcomes are less favourable for marginal groups such as the young, the less-skilled, and especially single parents, who have one of the lowest employment rates in the OECD. About 9 per cent of the working-age population has been on a benefit for more than a year. The gap between different ethnic groups is wide, partly reflecting low average education levels of Maori and Pacific Islanders, and their share of the working-age population is expected to reach one quarter by 2020.

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An in-work benefit would enhance incentives to move from welfare to work

Strengthening work incentives in the welfare system could improve employment and social outcomes for these groups. Income replacement rates for families with children and for the long-term jobless are above average, so many beneficiaries are better off on welfare unless they can move into a full-time job paying at least the average wage. The wedge between income from welfare and work needs to be increased, but the government has ruled out benefit cuts because of their potential impact on poverty. An alternative is therefore to make more use of in-work benefits. But in the presence of a budget constraint, there can be a trade-off between the objectives of income support and work incentives. The more weight is placed on the latter, the more effective it may be to target the policy at the groups with the greatest labour-market problems. A time-limited back-to-work benefit (as has been used in Ireland and Canada) is also worth considering, while an increase in childcare subsidies may be needed as well. Simply extending the existing but small in-work tax credit would provide greater income support for families but would not help the long-term unemployed, most of whom do not have children.

Financial incentives should be combined with stricter eligibility and enforcement of the work test

Experience in countries such as Denmark, Sweden and the Netherlands has shown that financial incentives work best when combined with stronger job-search obligations and other activation policies. The preferred approach in New Zealand is to use case management to assist people to become self-reliant, but the system remains too passive. Case loads per manager are too high, although recent funding increases should help reduce them, and contact with the public employment service can be infrequent. The government has taken some useful steps toward stronger activation policies, for example a firmer application of the work test for recipients of the unemployment benefit and the introduction of such a test for mature (aged 55+) unemployed (but it has moved against international trends by relaxing requirements on sole parents to look for work). However, further strengthening of activation policies is required. The government should also consider following Denmark's lead by extending a culture of mutual obligations, such as by making all beneficiaries out of work for a year participate in an employment or training programme.

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Labour market flexibility should be preserved

Although the labour market remains one of the most flexible in the OECD, recent years have seen a clear trend towards greater rigidities and higher labour costs. Further such changes are in the pipeline. Individually the measures have been fairly benign, but cumulatively their impact may be important. Industrial relations legislation is being reviewed, in part because it has not achieved its goal of increasing collective and multi-employer bargaining, which was hoped would enhance employee negotiating strength. This review will also examine the extent to which continuity of employment and working conditions should be protected when a business is sold or contracted out. While such "technical redundancy" provisions could increase rigidities and may not achieve their social goal of making workers better off, the consequences are unlikely to be dramatic. But going further by allowing employees to quit yet still receive severance payments, as some groups are calling for, could be more serious insofar as it would promote "gaming" strategies by employees. Personal grievance rules should also be clarified, and setting a minimum probation period for new employees should be considered in order to give marginal groups, such as young people and immigrants, a better chance of getting their foot in the door. Proposed legislation to lift the minimum annual leave from three to four weeks would also increase employment costs. While this is a matter of social choice, it is not consistent with the government's goal of raising per-capita incomes. Hence, social objectives need to be balanced against the benefits of labour market flexibility – namely, faster productivity growth and a more stable and resilient economy.

Recent cyclical strength has boosted the fiscal surplus

A third challenge is to maintain public spending discipline in the face of some larger than forecast operating surpluses. Strong economic growth has boosted tax revenues, but it is unclear how much of this windfall is merely cyclical. Although the trend rate of output growth has picked up, specific one-off factors have also played a part. Activity has expanded at an average pace of around 3½ per cent over the past two years, driven by export incomes – supported in 2002 by a weak exchange rate and high world prices for dairy and meat – and by a sharp increase in net immigration, which has fed a surge in consumption and housing construction. The

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first of these factors has already turned around, with the exchange rate up by 32 per cent since early 2002 and export prices back around long-term averages. But domestic demand remains robust and the economy is probably operating above full capacity. The contrast between domestic and external demand is also apparent in price developments, where a moderate headline inflation rate masks divergent trends for tradeables and non-tradeables. This persistent strength in domestic demand, as well as considerable buoyancy in the housing market could pose a challenge for the central bank, which cut interest rates earlier this year in the expectation of a slowdown but has now appropriately moved to a "wait and see" stance. It also poses a challenge for fiscal policy. Given the uncertainty as to how much of the fiscal improvement is cyclical, the government should be cautious about new permanent spending obligations. Moreover, health, education and infrastructure outlays are likely to keep rising faster than GDP in coming years. If, in addition, international competition increases the pressure for lowering taxes, especially those that dull incentives to work, save and invest, the headroom available for further initiatives may prove more limited than the government has forecast.

Although the current budgetary situation is healthy, population ageing trends call for continued fiscal prudence

The government's fiscal policy approach is aimed at maintaining structural fiscal surpluses in order to smooth the pressures arising from projected increases in public pensions. This places a constraint on spending increases. Long-term projections suggest a fiscal shortfall over a 50-year horizon of 1½ per cent of GDP, assuming that health and education expenditures rise in line with productivity. While this gap is smaller than in many other countries, it could be much larger if expenditure pressures in these areas persist, as is likely. The budgetary situation is healthy, with low and falling net debt, but preparing for these challenges and finding room for additional growth-supporting measures will continue to require careful fiscal management. Long-term planning will be enhanced by the proposed legal requirement to publish long-term projections every four years. On the other hand, some elements of top-down short-term fiscal control have been made more flexible. The policy of pre-announcing three-year caps on new

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spending (the "provisions") has been removed. Instead, the government is increasing its focus on the desired five- and ten-year tracks for the operating balance and debt. Although motivated by a desire to allow more effective decision-making, this change has removed a visible constraint that had worked well in the past and will require the government to find equally effective ways of containing future spending pressures.

The emissions charge envisaged to implement the Kyoto Protocol would be economically optimal if it did not include exemptions

Another challenge is to ensure that economic development is sustainable in both environmental and social terms. In ratifying the Kyoto Protocol, the government committed to keeping greenhouse gas emissions in 2008-12 to their 1990 level. It should meet this target comfortably through carbon capture in forests. However, emissions still have an opportunity cost because any further reduction below target will give rise to permits that can be sold on the world market. Recognising this, the government plans to introduce an emissions charge at a rate regularly adjusted to global permit prices. This approach is close to being economically optimal, but its efficiency is limited by two exemptions. Emission-intensive industrial firms exposed to foreign competition can negotiate special treatment in exchange for commitments to contain emissions. The scheme maintains the full marginal incentive to reduce emissions, but there is a risk that negotiated targets may be overly lax, as firms have superior knowledge of their own abatement costs. In addition, New Zealand, like all other Kyoto signatories, will exempt on-farm emissions from the tax, despite the fact that they account for half of all emissions. The government felt that the tax would have little impact on emissions but might have large distributional effects. Finally, credits for forest sinks and liabilities for deforestation should be devolved to landowners rather than being retained by the Crown. Doing so would internalise the value of carbon, encouraging greater afforestation.

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More reliance on economic instruments would help to reverse the deterioration of water quality at a lower cost

Water pollution could also restrict future development. Water quality is high, but deteriorating. Current policies focus on point sources, relying on discharge permits. Emissions have been contained, but in an overly costly way because permits cannot be traded. Sparsely regulated and diffuse runoffs from farms now constitute the main threat to water quality. A recent agreement between the dairy industry and the government asks farmers to comply with a range of technical measures, including keeping nutrient accounts. This accounting framework could be used to introduce economic instruments such as excess nutrient permits tradable within catchments, including by point-source permit holders. This would reduce abatement costs without compromising water-quality objectives. Also, water users should be billed according to their consumption so as to encourage efficient use of the infrastructure.

Policies on trade with developing countries are helpful, but development assistance should be increased once the aid framework has been reformed

All OECD countries have a responsibility to assist poorer nations in their development efforts. New Zealand provides favourable opportunities to developing-world exporters, especially since its agricultural markets are the least protected in the OECD. The most effective way to encourage their further development is to abolish remaining tariff barriers, and the decision to resume tariff reductions in 2005 is a positive step, although tariffs on some manufacturing goods will remain relatively high. While tariffs were removed for least developed country imports in 2001, and developing countries are entitled to tariff preferences, these are not always taken advantage of because of the administrative costs (associated with rules of origin). Some obstacles also arise from the stringent biosecurity regulations designed to protect New Zealand's natural resource base, but which can be a burden for developing countries. The aid programme is therefore increasing its emphasis on trade facilitation aimed at helping prospective developing-country exporters. Official development assistance is comparatively low, so completing the ongoing reform, particularly regarding evaluation and the focus on a core group of partner countries, should increase aid effectiveness, allowing a larger financial contribution in the future.

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Summary

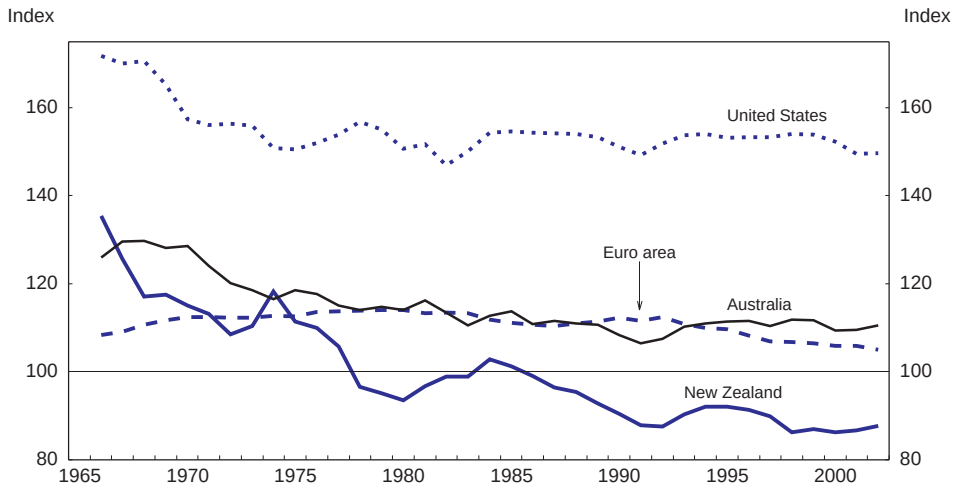
Past macroeconomic and structural reforms have been contributing to stronger growth for the last decade. The economy has also become more resilient, weathering the recent global slowdown well. Productivity growth has picked up, although not by enough to have yet moved New Zealand up the OECD income rankings. Its small size and remoteness may be factors, so encouraging global linkages is important, but more remains to be done to strengthen fundamentals. Recent economic performance has been encouraging: buoyant domestic demand has helped maintain output growth in spite of weak trading partner growth, an appreciating exchange rate and a fall in the terms of trade from recent high levels. Monetary policy will need to be vigilant, given that the economy is probably operating above potential and the housing market is strong. In considering fiscal policy options, the focus should be on those that contribute to the growth performance of the economy, whilst remaining firmly based on a prudent assessment of future revenues and of the long-term challenges connected to ageing. In its growth strategy the government appropriately emphasises fostering innovation, skills and talent, and developing global linkages, but it should maintain a level playing field and avoid sector-specific incentives. It should continue to remove regulatory obstacles to investment, particularly in the area of infrastructure, by improving and speeding up the environmental consent process. The decision to resume cutting tariffs is commendable and also furthers the objective of supporting development in poorer countries. Immigration helps to enlarge the pool of available skills and to develop global connections, both of which contribute to enhancing growth potential. Recent changes that focus admissions policy more toward skilled and more employable immigrants will help, though the temptation to link immigration policy too closely to manpower planning should be resisted. The labour market functions reasonably well, but the government should avoid measures that would reduce flexibility and raise labour costs. The employment rates of marginal groups could be improved by strengthening incentives to move from welfare to work. In short, only through this whole range of efforts to boost productivity growth and improve labour market outcomes can the nation meet its income aspirations.

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I. Key challenges

The government has set the goal of returning GDP per person to the top half of the OECD, a spot last occupied in the mid-1960s. In the past four decades, per-capita incomes have fallen from well above to about 12 per cent below the OECD average[1] (Figure 1). Low labour productivity is the main explanation of this income shortfall, as employment rates and hours worked are relatively high when compared with other countries (Figure 2). The key economic challenge is therefore to boost productivity growth by enough to begin climbing the OECD ladder. But the country faces other challenges as well. While the performance of the labour market has been impressive, employment rates are still 5-10 percentage points shy of the OECD's star performers. Lifting employment rates to their levels would go a third of the way to achieving the government's goal. It also has the rather pleasant challenge of

Figure 1. **Real GDP per person relative to the OECD average**
At 2002 purchasing power parities, OECD = 100

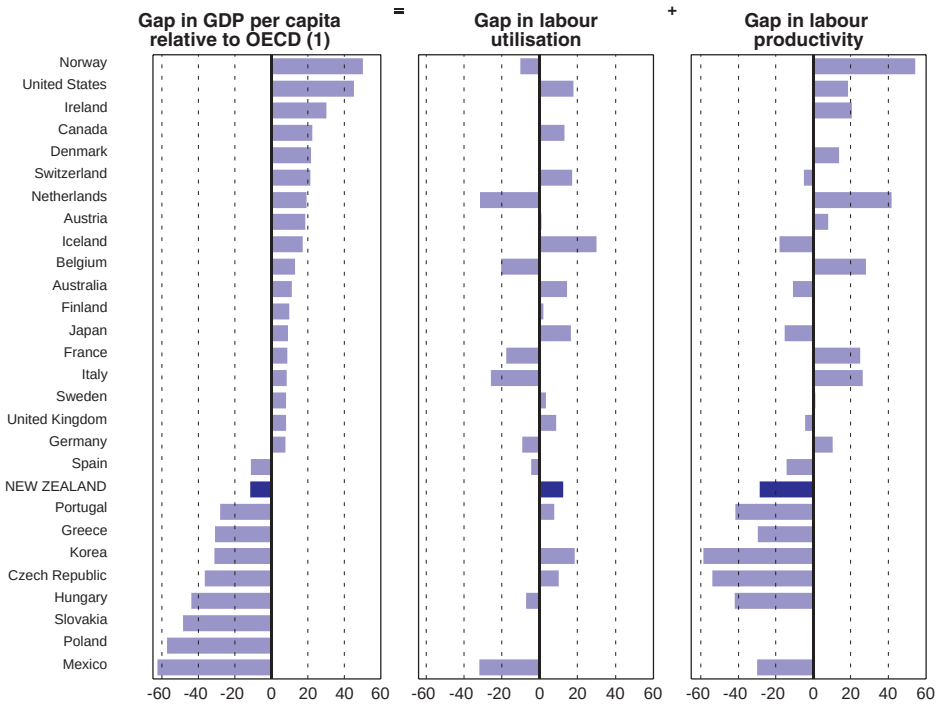


Source: Statistics New Zealand and OECD.

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Figure 2. **Decomposing the income gap**

Percentage point differences in GDP per person relative to the OECD average, PPP-adjusted, 2002



1. The gap in GDP per capita is only approximately equal to the sum of the two components shown as there is a small additional demographic effect (differences in the share of population that is of working age). Productivity is measured on a per-hour basis.

Source: OECD.

maintaining public spending discipline in the face of some surprisingly large budget surpluses. And in all its policies, the government must ensure that economic development is sustainable in both environmental and social terms. This *Survey* discusses those key challenges, concentrating on policies to build a more globally connected economy as a way of achieving these objectives.

Understanding the productivity performance

It is becoming increasingly clear that significant progress is being made towards the goal of raising productivity growth. In the decade to 2002, output grew

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by a respectable 3.6 per cent per year on average, or 2.5 per cent per capita. Labour productivity did not contribute much to growth in the first few years of that period, with growth being "job rich" as the economy re-absorbed workers who had been made redundant by the earlier economic restructuring (Table 1). In particular, the unemployment rate has halved in the past decade to around 4½ per cent, and the labour force participation rate has recovered to its pre-reform peak. But in the second half of the decade, labour productivity growth began to make a more significant contribution.

While the growth performance has been impressive, some of it was a cyclical bounce-back from the deep recession in 1991.[2] However, it is hard to know how much has been cyclical and how much is sustainable because the past decade has been so turbulent. External shocks have included: a global slowdown in 1991; an immigration surge in 1995-96 followed by a policy-induced slow-down in 1998; the Asian crisis later in 1998, the effects of which were compounded by the central bank's initial tightening response; a terms-of-trade spike in 2001-02; another immigration surge that began in 2001 and is still in train; two severe droughts and three periods of electricity shortage. So bearing in mind the considerable uncertainty around estimates of potential output for New Zealand, it seems that after being well below the OECD average for at least two decades, the trend rate of productivity growth recovered over the 1990s and is now close to the middle of the pack (Figure 3).[3]

The aggregate productivity improvement reflects a mixed bag of successes and failures in different industries. The agriculture, mining, transport and communications sectors have done particularly well (Table 2), while the utilities sector, which was restructured early on, had its main productivity burst from 1988 to 1993. The biggest disappointment has been manufacturing, which has shown only weak labour productivity growth and no multifactor productivity growth over the past 14 years.

It is also revealing to contrast New Zealand's productivity performance with Australia's (Table 2). M*ultifactor* productivity growth in the two countries has been similar since 1998, although Australia may have had a slight edge depending on technicalities such as the definition of the business sector and the measurement of capital. The difference, however, lies in Australia's much more impressive rate of *labour* productivity growth, due to its higher rate of investment (a point that is discussed in more detail below). The story at the industry level is surprisingly similar to New Zealand's. Bearing in mind the difficulties of making reliable industry-level comparisons between countries, it seems that Australia's labour productivity growth has been higher than New Zealand's in most broadly defined sectors and, like New Zealand, has been strongest in the primary, utilities, and transport and communications industries. Unlike New Zealand's, however, Australian manufacturing has done well.

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Table 1. **Medium-term potential output growth**

Annual average, percentage points

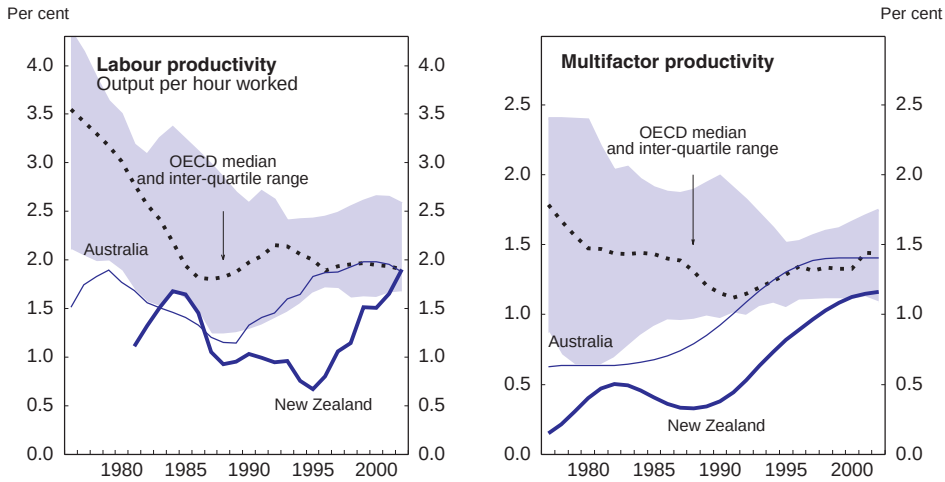
	Potential GDP growth		= Potential labour productivity growth (output per hour worked)		+ Potential labour input growth (hours worked)		Contributions to trend labour input growth							
							Working-age population		Trend participation rate		Change in structural unemployment		Total hours worked per person	
	1992-2002	2003-09	1992-2002	2003-09	1992-2002	2003-09	1992-2002	2003-09	1992-2002	2003-09	1992-2002	2003-09	1992-2002	2003-09
New Zealand	**2.7**	**3.3**	**1.0**	**2.1**	**1.6**	**1.2**	**1.4**	**1.1**	**0.2**	**0.1**	**0.1**	**0.0**	**–0.1**	**0.0**
Actual[1]	3.3	3.1	0.9	2.1	2.4	1.0	1.4	1.1	0.4	0.0	0.5	0.0	0.1	0.0
Australia	3.2	3.5	1.8	2.0	1.5	1.4	1.2	1.4	0.2	0.0	0.1	0.0	–0.1	0.0
Austria[2]	2.3	2.0	1.8	1.8	0.5	0.3	0.4	0.2	0.1	0.0	0.0	0.0	. .	. .
Belgium	2.1	2.0	1.9	1.7	0.2	0.4	0.1	0.3	0.5	0.4	0.2	0.0	–0.6	–0.3
Canada	3.0	3.0	1.3	1.8	1.6	1.2	1.2	1.0	0.2	0.2	0.2	0.0	0.0	0.0
Denmark	2.2	2.2	1.9	2.1	0.3	0.1	0.2	0.1	–0.1	0.0	0.2	0.0	–0.1	0.0
Finland	2.3	2.4	2.6	2.8	–0.3	–0.4	0.3	0.2	–0.1	–0.3	–0.2	0.1	–0.3	–0.4
France	2.0	1.9	1.9	1.6	0.1	0.4	0.3	0.4	0.4	0.0	0.0	0.1	–0.6	–0.1
Germany	1.8	1.6	1.9	1.7	–0.2	–0.1	0.0	–0.2	0.4	0.4	–0.1	0.0	–0.6	–0.3
Greece	2.6	3.5	2.1	3.2	0.5	0.2	0.4	0.0	0.3	0.3	–0.1	0.1	0.0	–0.1
Iceland	2.3	2.8	1.4	1.6	0.9	1.2	1.1	1.2	0.0	0.0	–0.2	0.1	0.0	0.0
Ireland	7.0	4.7	4.5	3.4	2.4	1.2	1.8	1.0	0.7	0.4	0.9	0.1	–0.9	–0.3
Italy	1.7	1.5	1.6	1.1	0.1	0.4	0.0	–0.1	0.3	0.5	0.0	0.2	–0.2	–0.1
Japan	1.7	1.3	2.2	1.6	–0.5	–0.3	0.0	–0.4	0.4	0.3	–0.1	0.0	–0.8	–0.2
Netherlands	2.7	1.7	1.8	1.4	0.9	0.2	0.5	0.4	0.8	0.4	0.3	0.0	–0.7	–0.6
Norway	2.7	2.0	2.2	1.6	0.5	0.4	0.6	0.5	0.2	0.0	0.1	0.0	–0.5	–0.1
Spain	2.9	2.6	1.2	0.8	1.7	1.7	0.6	0.3	0.9	1.1	0.2	0.3	–0.1	0.0
Sweden	2.2	2.2	1.9	1.9	0.2	0.3	0.4	0.6	–0.3	–0.3	–0.1	0.0	0.3	0.0
Switzerland	1.1	1.1	0.8	0.6	0.3	0.4	0.5	0.5	0.0	0.0	0.0	0.0	–0.2	0.0
United Kingdom	2.6	2.4	2.1	1.9	0.4	0.5	0.3	0.4	0.1	0.0	0.3	0.0	–0.2	–0.1
United States	3.1	3.1	1.6	2.1	1.4	0.9	1.2	1.1	0.2	–0.2	0.0	0.0	0.0	0.0
Euro area	2.1	1.9	1.8	1.5	0.3	0.4	0.2	0.1	0.4	0.4	0.1	0.1	–0.3	–0.1
Total OECD	2.5	2.4	1.8	1.8	0.7	0.5	0.6	0.5	0.3	0.1	0.0	0.0	–0.4	–0.2

1. This line shows actual and forecasts rather than potential (or trend) growth in GDP and its components.
2. On a per-worker rather than per-hour basis.

Source: OECD.

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Figure 3. **Trend productivity growth**
Annual per cent change, cyclically adjusted



Source: OECD.

Looking forward, there is only limited scope in the absence of policy changes to boost income growth further by bringing more people into work. Participation rates are already high and the labour market is tight (the unemployment rate fell to 4.4 per cent in September 2003, the fifth-lowest standardised rate in the OECD). Moreover, demographic changes are more likely to depress than to raise participation rates over the medium term. For example, the *ageing* of the population is projected to lower participation rates by more than one percentage point by the end of the decade and by four percentage points by 2020.[4] The impact of *cohort effects*, however, could go either way. In most countries, rising education levels mean that today's 40 year-olds, for example, tend to have higher participation rates than their counterparts did in the past. It is unclear whether this is also true of New Zealand. Male participation rates for all age groups below 55 are lower now than they were in 1987. The cohort effect for men may therefore be a drag on participation, but this will be offset by the rising female participation. A third effect is the rising Maori and Pacific share of the labour force, with both groups having relatively low participation rates (see below). The overall impact of these three inter-related effects is uncertain. On balance, however, increases in labour utilisation are likely to contribute less to GDP growth over the next few years than they have done in the recent past (Table 1). In the absence of further productivity increases, the income gap with the rest of the OECD is not projected to decline noticeably over the medium term.

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Table 2. **Productivity growth by sector in New Zealand and Australia**

Market sector, annual average growth rate, per cent

	Labour productivity						Multifactor productivity[2]					
	New Zealand			Australia			New Zealand			Australia		
	1988- 1993	1993-2002	1988-2002	1988-1993	1993-2002	1988-2002	1988-1993	1993-2002	1988-2002	1988-1993	1993-2002	1988-2002
Total excluding services[1]	**2.5**	**1.6**	**1.9**	**2.1**	**2.4**	**2.3**	**0.5**	**1.4**	**1.1**	**0.8**	**1.3**	**1.1**
Agriculture	1.0	3.6	2.6	4.3	3.2	3.6	–0.5	2.4	1.4	3.5	3.9	3.7
Mining and quarrying	6.3	2.0	3.5	6.7	4.6	5.3	–1.9	0.7	–0.2	2.9	0.8	1.5
Manufacturing	2.4	–0.1	0.8	4.0	3.3	3.5	0.3	–0.2	0.0	1.8	1.5	1.6
Electricity, gas and water	9.9	1.7	4.6	7.6	4.1	5.4	1.1	–0.9	–0.2	4.5	0.7	2.0
Construction	–2.5	0.1	–0.9	–0.3	0.5	0.2	–4.6	0.2	–1.5	–1.2	0.5	–0.1
Retail and wholesale trade	0.1	1.6	1.0	–0.3	3.1	1.9	–0.4	1.4	0.8	–1.1	2.3	1.1
Transport, storage and communications	8.6	5.6	6.7	5.6	3.5	4.2	6.7	5.5	6.0	2.9	2.3	2.5
Business services	–2.0	0.3	–0.5	. .	. .	. .	–2.5	0.7	–0.4	. .	. .	. .
Personal and community services	1.2	1.5	1.4	. .	. .	. .	0.8	1.5	1.2	. .	. .	. .
Finance and insurance	. .	. .	. .	3.9	3.1	3.4	. .	. .	. .	–0.4	0.5	0.2
Cultural and recreational services	. .	. .	. .	1.4	–0.9	–0.1	. .	. .	. .	–1.3	–3.6	–2.8

1. New Zealand data excludes business and property services and personal and community services, and ownership of dwellings. Australian data excludes property and business services, government administration and defence, education, health and community services, personal and other services, and ownership of dwellings. This data also differs from that shown in Figure 3 as it is not adjusted for cyclical effects and does not cover the whole economy.
2. New Zealand and Australian multifactor productivity estimates are not entirely comparable. In particular, Australia's capital stock includes inventories, land and livestock (New Zealand's does not) and it uses a different aggregation approach.

Source: Black *et al.* (2003*a*); Australian Productivity Commission; OECD.

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Lifting productivity growth

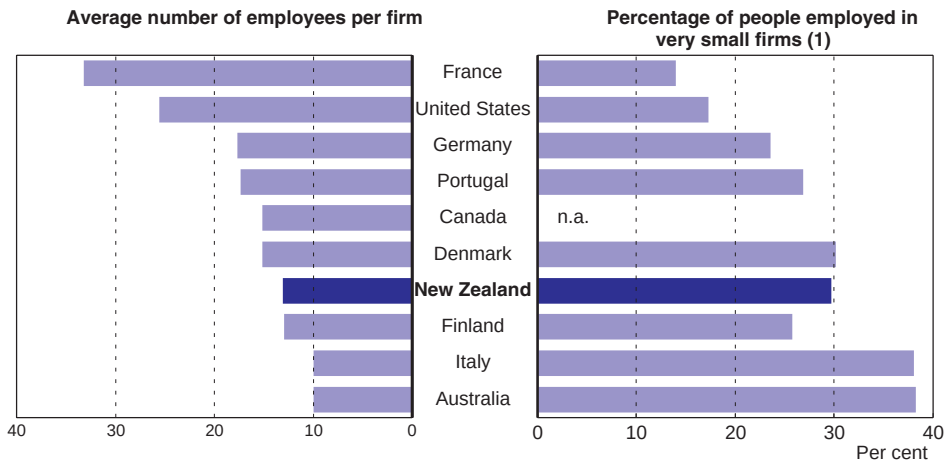
While trend productivity growth has picked up to a rate at which per-capita incomes can keep pace with the OECD average growth path, it has not yet risen by enough to appreciably close the gap. The mystery is why a country that seems close to best practice in most of the policies that are regarded as the key drivers of growth is nevertheless just an average performer.

An optimistic answer is to argue that the benefits of reform take time and that further improvements in productivity growth are in the pipeline. This possibility should not be discarded lightly, since some of the most important reforms were put in place only recently. In particular, the uncompetitive market structure that continued to characterise some key primary export sectors until the dismantling of producer boards a few years ago provided little incentive for innovation in those sectors. New Zealand's biggest merchandise export sector, the dairy industry, was reformed as recently as the 2002 season and will retain some monopoly rights until 2007.

However, there may be country-specific factors which are partially offsetting the benefits of the economic reforms. The two most commonly cited are size and remoteness. A growing literature argues that size and distance can be important because the interaction of transport and communication costs with economies of scale and agglomeration effects – as well as with the more traditional factors such as resource availability – plays a decisive role in determining the location of economic activity. A small, remote economy is likely to have more difficulty becoming competitive in sectors with significant economies of scale; for the same reason it will be a less attractive location for export-oriented FDI, it will have less scope for gains deriving from the agglomeration of economic activity in large urban areas, and it will tend to have smaller firms, which are less able to exploit economies of scale. While these factors are no doubt important contributors to the level of per-capita income, the relevant questions are whether they are becoming more important over time and whether they affect not just the level but also the growth rate of GDP. On the first question, the balance of evidence suggests that broadly defined transactions costs have been falling over time (McCann, 2003). However, there are countervailing forces such as the trend towards more frequent "just in time" production methods, for which the handicap of isolation may have intensified in those types of industries. It is clear that communication has also become cheaper and easier, but the importance of face-to-face contact may have increased in areas where goods and services are complex and thus trust becomes a factor (though it will have fallen where products have become more commodotised). Moreover, falling transactions costs may actually benefit large centrally located economies and harm peripheral ones if economies of scale exist at the economy-wide level (McCann, 2003), although the evidence on this is not clear. The question of whether size and distance affect the level or the growth rate of income is still hotly debated.

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Figure 4. **Average size of firms**
Excluding sole proprietorships



1. Less than 20 employees.
Source: New Zealand Treasury, Australian Bureau of Statistics and OECD.

Balancing these theoretical arguments is the evidence from comparing New Zealand and Australia. From 1988 to 2002, NZ GDP per person grew by an average 1.5 per cent per year, compared with 2 per cent in Australia and 1.7 per cent in both the United States and in the median OECD economy. Yet in terms of isolation, Australia is not that much closer to its main markets than is New Zealand, and in one sense may be more isolated because it doesn't have the advantage of having a big, fast-growing economy next door. When it comes to size, Australia's population is 5 times as large, yet its cities are not particularly big by OECD standards.[5] More importantly, its firms are on average no larger in employment terms than New Zealand's (Figure 4). There are two main reasons why a small domestic market can constrain growth. First, it reduces spillovers or agglomeration externalities, such as the dissemination of marketing information and the transmission of tacit knowledge. Second, it results in smaller firms who face larger barriers to exporting (because of the fixed costs of breaking into foreign markets), to investment (new technology has a larger minimum efficient scale), to expansion (finance constraints due to signalling problems in capital markets), and to profitability (regulatory compliance costs may hit small firms harder). On the first point, it is unclear whether spillovers or agglomeration effects have become more important over time, nor is it obvious how big an agglomeration needs to be to achieve critical mass. Attributing New Zealand's poorer performance to city size

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implicitly assumes that the roughly two million people living in reasonable proximity in the upper North Island are insufficient, yet the Melbourne metropolitan area's 3-4 million, for example, is enough. On the second point, the potential problems stemming from small firm size do not appear to have been significant barriers to productivity growth in Australia, with the possible exception of the difficulty that small firms have at breaking into export markets. In principle, the high degree of economic and labour market integration between the two countries should mean that NZ firms can treat Australia as part of their domestic market, in which case the handicap of small size may not be as serious as it looks. But the fact that in practice the two markets have not become one implies that the main obstacle for firms is related to exporting, not to distance *per se*. In other words, a national border reduces trade by much more than does physical distance.[6] If it is exporting itself that is the major barrier, rather than the actual distance over which goods and services are shipped, then New Zealand's geographic isolation places it at not much more of a disadvantage than many other well-performing small economies.

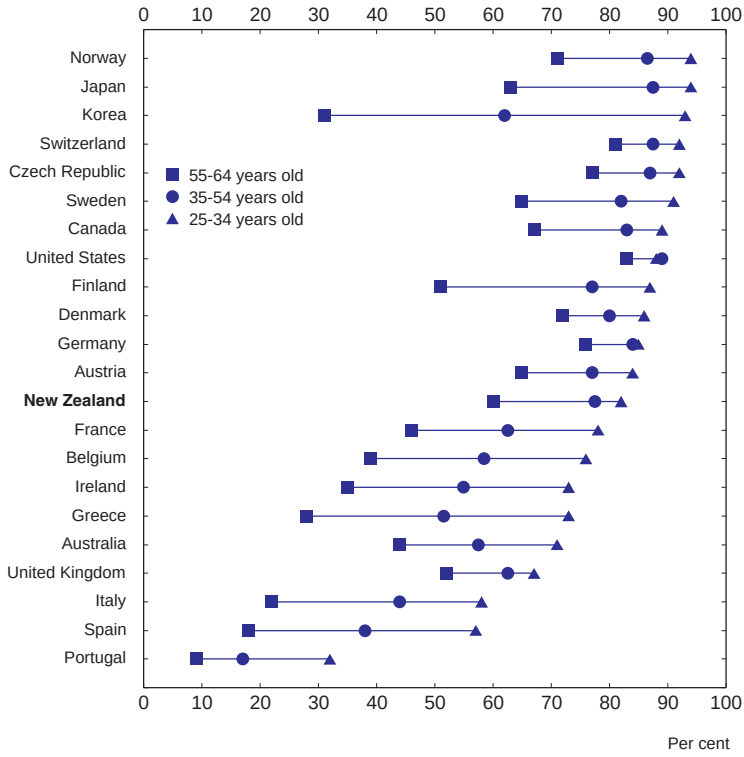
In sum, policymakers should be wary of attributing too much to these handicaps, given that Australia has performed well with handicaps of size and distance that, superficially at least, appear only a little less severe than New Zealand's. And if geography does matter, its effects are not mechanical as they interact with the other fundamental determinants of a country's comparative advantage. Policy should therefore not lose sight of the fundamentals, such as those highlighted in the OECD's *Growth Study* (OECD, 2003*a*), where continuing progress needs to be made. These include upgrading skills and human capital, boosting investment in physical capital (especially new information technology), removing barriers to trade and investment, encouraging innovation, stimulating firm creation, improving the regulatory environment and strengthening the economic and social fundamentals. Focussing on improving global linkages can be an effective way to make progress in each of these areas. For example, inward foreign direct investment (FDI) and immigration are not ends in themselves but are ways of boosting innovation, productivity, competition and human and physical capital. To attract them, the economic fundamentals need to be strong, and that will benefit domestic firms as well. This *Survey* concentrates on the ways in which stronger global connections may contribute to the policy recommendations highlighted in the OECD *Growth Study*. The following few sections assesses New Zealand's relative strengths and weaknesses in this regard, while Chapter II then looks at the specific policies that might help lift its rankings.

Investing in human capital

The first and probably most important area is to continue to improve on the already-good human capital performance. Older New Zealanders are fairly well educated by OECD standards – a large proportion of older age groups has at

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Figure 5. **Population with at least an upper-secondary qualification**
2001, Per cent



Source: OECD.

least an upper-secondary qualification (Figure 5), and the average number of years of education of 1970's working-age population was among the highest in the OECD. That said, adult literacy is an area of concern. While prose literacy is high compared with other countries, quantitative and document literacy are on the low side (OECD, 2000*a*), and the spread of outcomes from best to worst is very wide. In addition, the country has not matched the significant gains in education levels that have occurred elsewhere, despite high tertiary enrolment rates. With drop-out rates remaining high,[7] the proportion of younger New Zealanders with at least an upper-secondary qualification is now in the middle of the pack.

However, those who succeed at school succeed well. The OECD's PISA study found NZ 15 year-olds to be among the best in the world, ranking third in reading and

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maths and sixth in science (OECD, 2001*a*). But as with the adult population, the spread of outcomes between the best and the worst achievers is unusually wide, with Maori and Pacific Islanders faring particularly badly relative to Pakeha (those of European descent). These performance gaps become apparent at an early age[8] and widen as students go through school.[9] A distinctive feature of the NZ education system is that schools are relatively similar to each other in terms of their student mix[10] and their educational outcomes, but have to deal with a wide range of abilities within each school (the average spread in student achievement within individual schools is the highest in the OECD). This suggests the problem is more likely to be a generic feature of the school system rather than failures of individual institutions or problems caused by the segregation of students into "poor" and "wealthy" schools. Looking within the schools themselves, differences in socio-economic standing do not explain the entire performance gap between ethnic groups. Remarkably, Maori and Pacific Island students from the most advantaged households (those at the 95th percentile) do no better at school on average than Pakeha children from the *least* advantaged Pakeha families.[11]

Thus the main skills challenge is to raise the performance of under-achievers, both the youngsters who are currently at school and the adults who have already left. For young people, that includes basic literacy and numeracy, participation in school, attainment of qualifications and progress on to tertiary education. For adults, an adult-literacy strategy could usefully be tied into labour market programmes as half of the unemployed are at the very lowest level of literacy. Projected demographic changes make the challenge particularly pressing. Maori and Pacific Islanders currently make up approximately a quarter of 15 year-olds, and on average they have schooling outcomes that would place them among the bottom few countries in the OECD. By 2020, their proportion is expected to rise to a third. Over the same period, the number of Maori and Pacific Islanders of working age is projected to increase by nearly half, while the number of working-age Pakeha will fall.

Immigration can also contribute to boosting human capital. Large outflows of New Zealanders and sizeable inflows of immigrants have been long-standing features of the country's population dynamics. Since 1970, for example, more than 650 000 NZ citizens have permanently left the country, and they have been largely replaced by 620 000 foreigners, amounting to a fifth of the average population over that period.[12] The majority of emigrants are young and well educated. There is no shortage of people with medium or low skills who would like to migrate to the country, but policy has typically restricted such flows to those with family links or entitlements under humanitarian or regional policies. Immigration policy has been focussed on attracting skilled migrants and making the most of them by ensuring they integrate well. The immigration rate is high (more than 1 per cent of the population each year), which underscores the need for immigrants to be skilled and to integrate well. Recent policy has had its weaknesses in these two areas. While the majority of immigrants enter under a points system, formal education

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requirements have probably been too stringent (a university degree was *de facto* required to get enough points to enter under the General Skills stream), and insufficient attention was paid to language skills before the mid-1990s. Also, pre-1995, points were awarded for formal qualifications without the applicant having first to obtain recognition of those qualifications by the New Zealand registering body. Some skilled immigrants have had trouble integrating into the labour force, especially those whose expertise was not in high demand or whose English language skills were poor. As a result, skill shortages in professions and technical areas have existed alongside unemployment of university-educated migrants. The government announced further reforms in July 2003 which retain the main aspects of the existing system but give higher priority to those with a job offer. These proposals, and the impact of migration more generally, are assessed in Chapter IV.

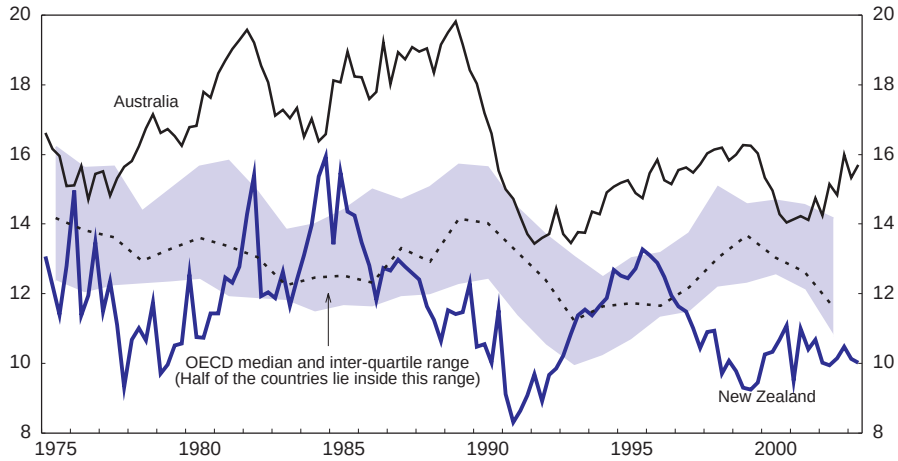
Investing in physical capital

The importance of investment in physical capital as a way of lifting labour productivity is well established. But because technological innovations are often embodied in new equipment, investment has the potentially more significant benefit of improving global connections, innovation and knowledge diffusion. These factors may explain why countries with higher investment rates (relative to GDP) also tend to have higher rates of multifactor productivity growth (albeit with causality flowing in both directions). In any case, New Zealand's investment performance has been poor. The investment rate has been in the bottom quartile of OECD countries for some time and, as noted earlier, has been well short of the high rates seen in Australia (Figure 6). Comparing across sectors, investment in manufacturing has been especially weak, with no capital deepening since 1993. In contrast, the capital-to-labour ratio in Australia's manufacturing sector has increased by a quarter, and it has shown significantly more capital deepening than New Zealand in wholesale and retail trade and in other service sectors. ICT investment has been relatively low in New Zealand, mainly because of modest expenditure on software (Figure 7). This is a concern given the accumulating international and local[13] evidence that ICT investment is an important source of firm-level productivity growth. A higher cost of capital compared with other OECD countries may provide some of the explanation for the investment performance but it cannot be the whole story, as Australia's capital cost is similar.

A second area where more investment is needed is in basic infrastructure. Problems have arisen to differing degrees in several areas, including road transport, electricity generation and transmission, the rail network, water supply, wastewater disposal and broadband telecommunications. The most pressing needs are in land transport and electricity supply. Road congestion in Auckland has increased significantly in recent years because road investment

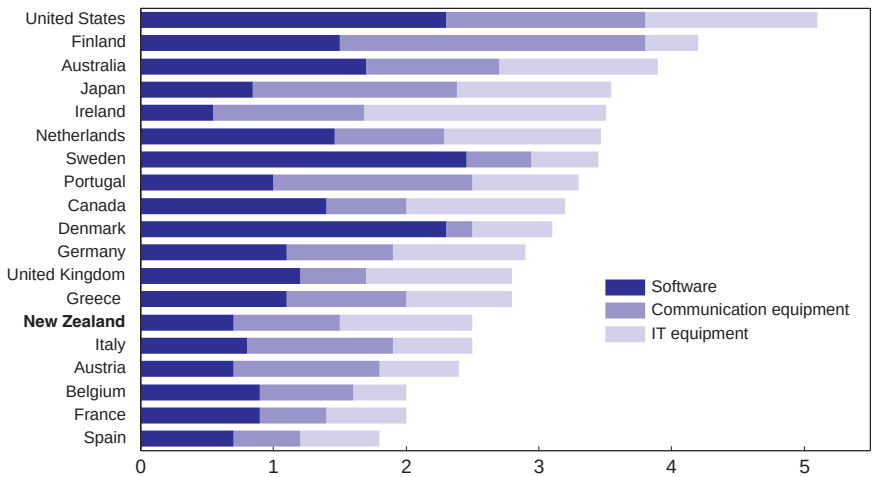
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Figure 6. **Business investment rate**
Per cent of GDP



Source: Statistics New Zealand and OECD.

Figure 7. **ICT investment rate**
Per cent of GDP, 2000



Source: Statistics New Zealand and OECD.

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has not kept pace with economic and population growth (and on current policies is unlikely to do so in the future[14]). While congestion is not dire by the standards of large and fast-growing cities elsewhere, it is often cited by businesses as a constraint on growth. Regarding the electricity industry, three power shortages in the past decade point to problems in generation, transmission and the role of prices in managing household demand. Beyond these two areas, there is probably no common factor that explains why bottlenecks are appearing in various spots, although difficulties in getting environmental consents for major projects may be a factor for some of them. The policy response in recent years has been consistently towards greater intervention, either through expanded state ownership (airlines, rail, electricity generation) or tighter regulatory controls (electricity, telecommunications). As a result, policy has in some cases been addressing the symptoms rather than the causes, a point that will be amplified later in this *Survey*.

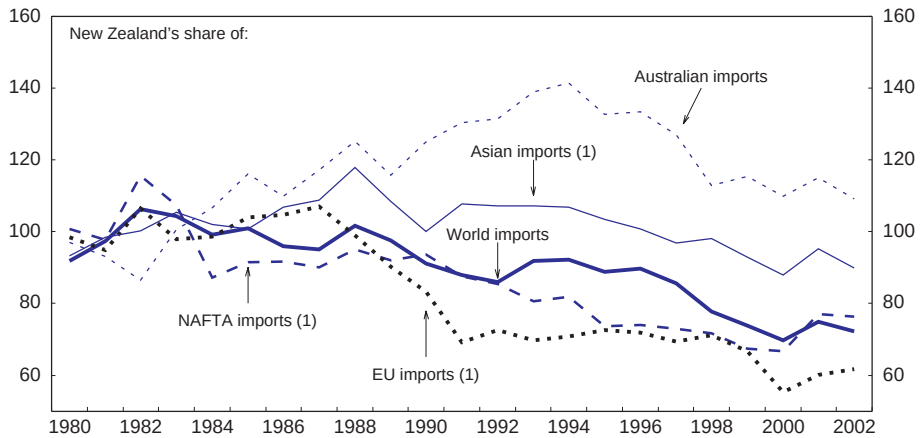
Foreign trade

In the export arena, New Zealand continues to rely on its resource sector. Primary products still account for around two-thirds of merchandise exports, although the fraction that has left the shores unprocessed has halved since 1987 (Black *et al.*, 2003b). Because it has a comparative advantage in food and fibre products, for which world demand, at least in commodified forms, is growing relatively slowly, and which are restricted by trade barriers, New Zealand's share of world trade has been falling over time. It has lost market share in all major markets except Australia, even after adjusting for the explosion of intra-regional trade (Figure 8), while the number of companies involved in exporting has fallen since the mid-1990s. However, moderate growth in the volume of primary exports need not be a drag on the economy so long as productivity growth is adequate and producers extract more value-added from their exports. This does seem to have been the case in the agriculture sector in recent years. For example, in 1992 the typical lamb-slaughter chain employed 56 workers and processed 3 000 lambs a day; now, half that number of people processes 5 500 carcases a day – a roughly four-fold increase in productivity. The statistical evidence described earlier also points to strong productivity growth in the primary sector.

By contrast, there has been a lack of in-roads in the manufacturing sector. New Zealand's share of OECD manufacturing exports has been falling since the economic shakeout in the 1980s and, while most OECD economies have also been losing out to the newly industrialising economies, New Zealand's relative decline has been steeper. Moving out of some of those manufacturing industries was necessary as they were wealth-destroying enterprises erected behind tariff walls, but since then there has been a relative lack of success in shifting towards more

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Figure 8. **Export market shares**
Exports of goods relative to regional imports of goods, Index 1980-85 = 100



1. Excludes intra-regional trade.
Source: International Monetary Fund and OECD.

productive manufacturing niches, although with individual success stories. Export market share has also fallen because the country has to some extent missed out on the global trend towards the internationalisation of production chains and vertical specialisation, which may be a function of its distance from major markets. Intra-industry trade in manufacturing is small (OECD, 2002a), while the import content of exports is considerably lower than in other OECD countries of comparable size and, unlike most other countries, has not been increasing. While the value-added component of exports linked to globalised production processes is typically low, the concern is that the country may be missing out on the potential spin-offs in the form of higher productivity growth that may come from greater international connections, exposure to more vigorous competition and the diffusion of new technology through imports of capital and intermediate goods that are used in manufacturing exporting industries.

The key obstacle to boosting export performance in manufacturing seems related to the size of the domestic market: local firms must go global when they are relatively small and young. The one-off fixed costs of breaking into export markets can be an insurmountable barrier for such firms. These costs could take several forms, but anecdotal and survey evidence suggests that establishing a distribution channel is the major stumbling block (Simmons, 2002; Infometrics, 2002).

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Foreign investment

In addition to trade, foreign investment is an important mechanism for improving global linkages. Local firms may be able to increase their own productivity as a result of knowledge spillovers from FDI, such as through forward and backward linkages with multinational firms, imitation of foreign technologies, or the learning by doing that takes place when local workers are hired and trained by multinationals. Indeed, being wholly or partially bought out by a foreign partner has often been a key route to successful growth and is a common way of overcoming the fixed costs of exporting and R&D. The policy of being "open for business" without actively using financial incentives to entice foreign investors has been relatively successful. The stock of inward FDI in relation to GDP is second only to Belgium and Ireland. Moreover, the pattern of investment flows does not suggest that New Zealand is one of the marginal countries in global investors' portfolios – it is a "low beta" country in the sense that FDI inflows are less volatile than the world FDI cycle (a country at the mercy of "hot money" would expect to have a high beta).[15] Most of the flow consists of mergers and acquisitions rather than "greenfield" investments, but that can still enhance global linkages and bring knowledge spillovers. Moreover, most has been directed toward non-exporting sectors, partly because single-desk marketing boards in the dairy, pipfruit and kiwifruit sectors, and their co-operative structures, have until recently left limited room for independents to enter the market. As explained in Chapter II, the FDI tax and regulatory regime is about average within the OECD. The key policy question is whether average is good enough given the potential handicaps of being small and remote. The question is more pressing now that Australia looks likely to secure a free-trade deal with the United States, potentially making New Zealand significantly less attractive for FDI compared with its neighbour.

Innovation

Research and development spending by the business sector is low but has been growing fast. This is especially true of manufacturing, where few businesses spend more than 5 per cent of sales on R&D. The primary reason, as in Australia, is the small size of firms, but a relatively unfavourable tax treatment of R&D may also be a factor. To compensate for the inability of most companies to support a commercially viable research team, firms are able to contract out their research to universities and government labs (Crown Research Institutes, or CRIs). By OECD standards, links between industry and CRIs are strong, but links with higher education are not. However, technology transfer mechanisms may not be working as well as they could. There is also a tension between the needs of primary industries to be at the forefront of biotechnology research and the country's environmental and bio-security goals (see Box 4). Research in this area has been held back by the recently expired three-year ban on releases of GMOs.

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Regulations and the business environment

The quality and administration of regulations is generally good. By the mid-1990s, international competitiveness surveys typically put New Zealand among the best places to do business. However, a slowdown in the momentum of reform has led to a decline in its relative position, even though in absolute terms the regulatory environment is still strong (Nicoletti *et al.*, 1999). The major exception is environmental legislation. The administration of the Resource Management Act (RMA) is patchy, with some local authorities (and applicants) not devoting sufficient resources to timely and rigorous decision making. The consent process can involve long and costly delays, especially when cases are finally referred to the Environment Court, and it is too easy for competing firms to use the RMA process as a way of blocking competition.

It is difficult to quantify the impact the RMA may be having on growth or whether problems balancing environmental and development objectives are any worse than elsewhere. However, it is certainly creating a lot of debate, and surveys of smaller firms point to regulation – and the RMA in particular – as the single biggest problem they face. There is also anecdotal evidence that difficulties getting resource consents may be deterring foreign investment.[16]

Ensuring that economic growth is sustainable

While boosting growth is the central objective, this needs to be balanced against other environmental and social objectives if policies are to be sustainable. New Zealand is already one of the worst greenhouse gas emitters (measured relative to the size of its population or economy), largely due to methane emissions from the livestock sector. However, it is also a significant absorber of carbon *via* its large forest plantations. Recognising this, the government has signed up to its global responsibilities under the Kyoto agreement on climate change. Its challenge is to reduce greenhouse gas emissions without unduly harming farming, which under existing technology cannot reduce emissions except by shrinking the industry. But the agricultural sector, especially dairy farming, is also polluting freshwater in some locations. Steps need to be taken to ensure that high water quality is maintained in the face of economic growth. In addition, all OECD nations have a responsibility to help in the development of the world's poorest countries. This involves reducing or eliminating price-distorting subsidies, especially in agriculture (which New Zealand did long ago), and improving market access by eliminating tariffs and quotas on developing country exports such as textiles and clothing (New Zealand completed the removal of import licensing protection in 1992 and removed tariffs on least developed country imports in 2001, but still has some scope to reduce remaining tariff barriers). These three issues of sustainable development (climate change, water quality and assistance to developing countries) are discussed in Chapter VI.

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Raising employment rates of marginal groups

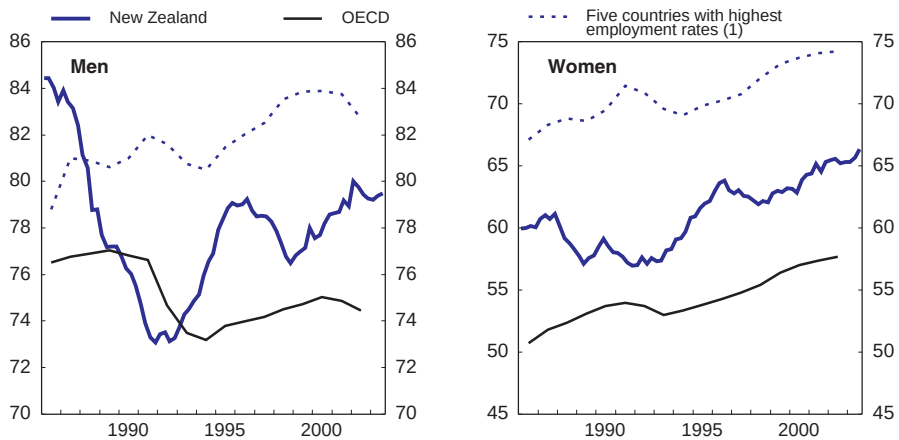
While raising productivity growth is the main way of sustainably closing the gap in per-capita incomes, policy reforms aimed at boosting employment still have a role to play. Male and female employment rates are currently both several percentage points above the OECD average (Figure 9) and those who work clock up a relatively large number of hours each year. Employment rates of all age groups have climbed progressively since their trough a decade ago, reflecting a combination of cyclical bounce-back and the effects of labour-market and welfare reforms. However, the employment rate for men is still below the level it reached in the mid-1980s when the protected manufacturing industry was employing many of the less skilled. But employment rates of older workers (aged 60 and over) are particularly high.

Although average performance is good, New Zealand does have aspects of a dual labour market. There is close to full employment for some groups, but others face various labour market problems. For example:

– There are hefty differences in employment rates between ethnic groups, largely reflecting their different educational outcomes. For example, in the first half of 2003 employment rates for Maori and Pacific Islanders were 16 percentage points below those of European descent.

Figure 9. **Employment rates**

Percentage of the working-age population that is employed



1. Japan, Iceland, Netherlands, Norway and Switzerland for men; Denmark, Iceland, Norway, Sweden, and Switzerland for women. Working-age population refers to those aged 15-64.

Source: OECD.

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– The above-average labour market performance is mainly restricted to people with upper-secondary qualifications. Compared with other OECD economies, employment rates are only average for people without school qualifications or with tertiary qualifications.
– Sole parents have one of the highest rates of joblessness in the OECD. The disparity in employment rates between sole parents and other mothers is higher than in any other Member country.
– The number of very long-term jobless has continued to rise despite an improving labour market. While the number of people receiving the unemployment benefit for 1-3 years has fallen recently, the number that has been jobless for at least five years has increased by 40 per cent in the two years to June 2003, to 6½ per cent of total jobless. Most long-term recipients of the unemployment benefit are young and unskilled.
– As in most countries, immigrants have employment rates a few percentage points below locals but with enormous variation between groups. Skilled immigrants with good English skills seem to integrate quickly, while others can take a very long time.

In sum, the labour market performs well for the easily employable majority, but outcomes for marginal or disadvantaged groups are average at best. This reflects more than just a lack of job opportunities, since business surveys currently report a high level of difficulty in finding both skilled and unskilled workers. As discussed in more depth in Chapter IV, the main labour market challenge is to improve the ability and incentives for the jobless to move from welfare to work. The improvement in labour market outcomes that should follow from these types of policies would have significant social spin-offs that go well beyond and are surely more important than the narrow economic benefits.

Maintaining fiscal prudence

A third challenge is to maintain expenditure discipline in the face of some surprisingly large fiscal surpluses. The "underlying"[17] operating surplus in the 2002-03 fiscal year doubled to 4.4 per cent of GDP, more than 2½ percentage points higher than had been forecast when the budget for that year was set. The discrepancy reflects higher-than-expected receipts from taxes and SOE and Crown entity profits, while core expenditure slightly overran budgeted levels. The government, along with most forecasters, had been expecting the strongly growing economy to slow to more sustainable rates of growth. There are few signs so far that it is doing so. As described in more detail in Chapter IV, the economy has shown remarkable resilience to the global economic slowdown over the past couple of years. This reflects in part the long-awaited pick-up in the trend rate of productivity growth, but some temporary factors have also played a role. Key factors since 2001 have been high export earnings and an immigration surge. Export

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incomes were extraordinarily high in 2001 and early 2002 due to high world prices for its main commodity exports combined with strong volume growth and a significantly undervalued exchange rate. Since then, prices have eased back and the currency has appreciated by nearly 40 per cent in effective terms. However, export earnings of goods and services are still high, and will probably remain so until the majority of foreign currency hedges expire later this year. Farm incomes have fallen by a third, but this follows a 100 per cent increase over the previous three years. The second factor, the immigration surge, has added 1½-2 per cent per annum to the growth rate over the past two years (according to central bank estimates). The migrant influx continues and should stay high for a while yet. On balance, the economy has until recently being growing at an unsustainable pace and much of the observed slowdown in the middle of this year has been due to one-off factors such as the impact of SARS on tourism and a temporary electricity shortage. Labour and capital resources are stretched, and output is most likely above its potential level.

The implication of this economic strength is that it is difficult to assess how much of the fiscal windfall is cyclical, and may therefore evaporate when activity slows. To demonstrate the range of uncertainty, Table 3 presents some illustrative model simulations that show the impact of different economic scenarios on the fiscal accounts. They show, for example, that the surplus might currently have been up to NZ$ 2-3 billion lower were it not for migration and for the terms of trade spike and the weak exchange rate a couple of years ago. So at least half the surplus is structural. However, the government is also facing spending pressures over the medium term, especially for capital. There is high demand to upgrade infrastructure, especially roads, rail and electricity generation. In addition, around 1½ to 2 per cent of GDP is to be set aside each year to partially pre-fund old-age pensions, expenditure on health care continues to rise inexorably, and the government wants to spend more on income support for low-income and middle-income families as part of a package to improve work incentives. Prudently, however, this latter policy is conditional on the fiscal room being available. Over the longer term, population ageing will put considerable pressure on public finances, although the rise in the old-age dependency rate is projected to occur later than in most OECD countries and should be smaller. Even so, there still appears to be a non-negligible "fiscal gap" over a 50-year horizon if debt levels are not to exceed their currently low level (general government net debt is around 20 per cent of GDP). The gap will be even higher if health care spending cannot be reined in more securely than New Zealand – or indeed any other OECD country – has managed to achieve over the past decade.

Summary

To sum up, raising productivity growth is by far the most important economic challenge. That involves boosting skills, raising business investment rates,

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Table 3. **Alternative fiscal scenarios**
Impact on fiscal accounts of different economic scenarios,[1] deviations from baseline, NZ$ billions

	2000	2001	2002	2003	2004
	Unchanged terms of trade[2]				
Current receipts	–0.03	–0.28	–0.54	–0.42	–0.83
Current payments	–0.04	0.11	0.03	0.17	–0.11
Net lending	–0.03	–0.46	–0.94	–0.56	–0.64
Net debt (percentage points of GDP)	0.19	0.65	1.09	1.73	2.33
	Unchanged terms of trade and exchange rate[3]				
Current receipts	–0.47	–2.49	–4.49	–3.63	–1.54
Current payments	–0.01	–0.66	–1.64	–2.42	–2.02
Net lending	–0.34	–1.56	–2.64	–1.15	0.46
Net debt (percentage points of GDP)	1.21	3.93	5.44	5.12	4.26
	Unchanged terms of trade, exchange rate and migration[4]				
Current receipts	–0.68	–2.81	–4.91	–4.12	–2.06
Current payments	–0.01	–0.70	–1.69	–2.47	–2.03
Net lending	–0.58	–1.84	–3.01	–1.60	–0.05
Net debt (percentage points of GDP)	1.50	4.52	6.35	6.29	5.73
Baseline values					
Net lending (general government)	1.50	2.01	2.65	2.65	2.23
Central government operating surplus (OBERAC)[5]	1.50	2.43	4.17	4.67	4.12
Net debt (percentage points of GDP, general government)	20.9	20.6	18.1	14.8	11.8

1. The table is based on simulations with the OECD's Interlink model. All simulations assume that monetary policy responds to the changed economic conditions.
2. World export and import prices held fixed at their 1999 levels (except for the oil price).
3. As above, but assuming the exchange rate remained at its 1999 level (52.9 US cents to the NZ$).
4. As for the second scenario, but with no net migration and with household consumption being approximately 1 per cent lower throughout the simulation period.
5. Figures for 2003 and 2004 are government forecasts.

Source: OECD.

attracting foreign direct investment, improving the innovation framework and removing unnecessary regulatory barriers. Becoming a more globally connected economy is an important way of moving forward in each of these areas, and of reducing the possible handicaps of being a small and remote country. The next Chapter takes a selective look at ways to increase productivity growth, concentrating on policies that will help to enhance global linkages. It does not, for example, discuss solutions to the problem of failure in schools, which deserves a chapter in its own right. That is followed by an examination of the role of migration in boosting international linkages, human capital and economic performance. The second

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key challenge is to extend to marginal groups the good labour market performance that the majority of New Zealanders enjoy. This is taken up in Chapter IV. Following that are Chapters dealing with the challenges of maintaining fiscal discipline over the medium and long term and ensuring that economic development remains sustainable in the broadest sense. Finally, Table A1 provides an overview of progress on policy recommendations from this and previous *Surveys*.

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II. Building an innovative and globally connected economy

As discussed in Chapter I, the key policy challenge confronting New Zealand is how to achieve faster labour productivity growth. Almost 20 years have passed since the country first embarked on a broad-ranging programme of structural and macroeconomic reforms. From a starting point of being one of the most regulated economies in the OECD, those reforms were among the most comprehensive and consistently market-oriented implemented in OECD countries. In spite of this, New Zealand continued to lose ground in income per capita terms relative to other countries into the 1990s, and only toward the end of that decade did it witness a sustained pick-up in trend labour productivity. The slide in relative living standards *vis-à-vis* the OECD average seems to have been arrested, but a further acceleration – necessary if New Zealand is to move back into the top half of the OECD ranking, as the government is intent on doing – is still not in sight.

Two categories of explanations have been suggested for this less-than-overwhelming performance. One is that the series of market-oriented reforms did not go far enough. For example, according to this view, the uncompetitive market structure that continued to characterise some key primary export sectors up until the dismantlement of producer boards a few years ago provided little incentive for innovation in those sectors. Labour-market and welfare reforms and privatisation efforts stalled after the initial push, and some reversals have occurred since 1999. Moreover, it is sometimes argued that the ratio of public expenditure to GDP could have been brought down further, which would have allowed larger cuts in taxes. None of these problems seems serious enough in themselves to be a sufficient explanation for the disappointing productivity gains, but cumulatively they could be important. However, there is also a widely held view that both the relative decline over the past thirty years and the difficulty encountered in turning it around are due in part to some handicaps specific to New Zealand. This is the second category of explanations. Among the possible culprits, three in particular have been often mentioned: the combined effect of the small size of the New Zealand economy and its distance from its main markets; its comparative advantage in agricultural products, whose world market tends to grow relatively slowly and is encumbered by trade barriers (Briggs and Ballingall, 2001); and the adverse

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effects on investment of a higher cost of capital, possibly connected to the high level of external debt. Among these, the influence of New Zealand's small size and remote location is the one that has received the greatest emphasis lately, partly because academic economists have been paying greater attention to geography as a determinant of trade and growth.

In the analytical framework underlying the government's policy framework, the potential handicaps connected with size and distance – in particular, the more limited scope for local firms to benefit from economies of scale and agglomeration effects – are regarded as instances of market failure requiring specific offsetting interventions. As mentioned in Chapter I, it is difficult to identify and to measure the actual impact of these factors in the case of New Zealand, but it is clear that these effects interact with those connected to the more traditional fundamentals, which, for example, influence the incentives for firms to invest and innovate, and the efficiency of investment allocation. Therefore, policies aimed at strengthening fundamentals and more specific interventions attempting to offset market failures need to be seen as complements rather than alternatives.

The government's Growth and Innovation Framework

The *Growth and Innovation Framework* (GIF), presented in early 2002, provides the basis for the co-ordination of growth-oriented policies across all government agencies. It is predicated on the view that while sound fundamentals are a necessary condition for achieving stronger economic growth, they may not be sufficient. Therefore, while the government intends to continue with its efforts to consolidate New Zealand's position in the areas where past reforms have already given it a strong basis for growth (macroeconomic stability; openness to foreign trade and investment; well regulated and competitive markets; a healthy and highly skilled population; a modern cohesive society; sound environmental management; and a solid R&D and innovation framework), these need to be complemented by more pro-active interventions in a number of areas, which include:

- *increasing global connectedness* through more effective trade and investment promotion, by making New Zealand more attractive for foreign highly skilled workers and by encouraging the creation of networks with New Zealanders working overseas;
- *enhancing the existing innovation framework*, for example by strengthening linkages between public, academic and private research activities, creating centres of research excellence, fostering the development of a venture capital market and supporting the development of "incubators";
- *developing skills and attracting talent*, by increasing participation in tertiary education, better focussing the skill mix according to the requirements of a knowledge-based economy, strengthening the international linkages of tertiary institutions and developing a flexible immigration policy;

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– *focussing effort* to promote innovation and removing barriers to growth in three key sectors (biotechnology, ICT and creative industries), identified on the basis of the growth potential and because of their potential spillover effects on productivity in the rest of the economy.

The first of these objectives, boosting global linkages, is in fact a key theme of the whole framework, since it is expected to assist in all its other aspects. What distinguishes the GIF from traditional policies aimed at increasing an economy's outward orientation is the belief that it may not be enough to be "open for business" by having the appropriate trade, investment and regulatory policies, but in order to "activate" the potential trade and investment linkages it is necessary in some cases to remove the specific obstacles that condition the behaviour of economic agents. To a large extent the GIF, rather than introducing new measures, represents a conceptual framework for reassessing the appropriateness of existing policies as well as an effort to rationalise their implementation and improve policy coordination. Offsetting well-identified market failures is regarded as the necessary justification for government intervention. A continuous assessment of the results achieved and of the effectiveness of individual programmes is planned. For this purpose the government has recently published a preliminary set of benchmark indicators (Ministry of Economic Development, 2003a) and has announced a schedule for reviewing existing programmes over the next three years.

The sectoral focus: picking winners?

The most controversial element of the GIF is the focus on three broadly defined sectors. The government has so far proceeded prudently in articulating this sectoral policy in an effort to dispel the notion that it is engaged in "picking winners". The sectors have been identified as those where the potential for high growth already exists in New Zealand and that, because of their linkages with other sectors of the economy, are likely to have the greatest potential spillover effects (they are therefore called "enabling sectors"). In all three cases task forces composed of industry experts and entrepreneurs were set up and asked to identify obstacles to growth and to make policy recommendations. The task force reports, all recently published, recommended a number of sector-specific measures but also highlighted more general issues (obstacles to exporting due to small firm size, tax treatment of R&D, access to venture capital, expected shortage of skilled workers). This was in line with the government's intention to draw on these reports both to define sector-specific strategies and to obtain insights valid for all sectors, which would help improve the design of its more general development policies.

Of the three sectors, biotechnology and ICT are already relatively well established in New Zealand, while among "creative industries" screen production has recently received a boost from the realisation of the world-scale "Lord of the Rings" project. Both the biotechnology and the ICT sector seem to have made

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Table 4. **EPO patent applications: total and share of ICT and biotechnology**

	Total EPO patent applications				Share in total EPO patent applications			
	Number of patents		Per million population		ICT		Biotechnology	
	1991	1999	1991	1999	1991	1999	1991	1999
Canada	548	1 493	19.6	48.9	20.6	36.6	6.5	11.2
Mexico	14	40	0.2	0.4	7.2	12.5	3.1	9.1
United States	17 401	28 109	68.7	100.7	31.4	38.5	6.4	9.3
Australia	399	885	22.9	46.4	15.8	39.5	8.3	8.7
Japan	11 804	17 454	95.3	137.8	45.9	42.9	2.8	3.3
Korea	168	972	3.9	20.9	43.2	45.6	3.7	5.5
New Zealand	**44**	**135**	**12.5**	**35.5**	**9.2**	**23.2**	**2.3**	**12.9**
Austria	655	1 043	83.9	128.9	11.9	17.9	4.3	4.0
Belgium	596	1 277	59.6	124.9	14.3	22.7	6.9	10.6
Czech Republic	28	60	2.7	5.8	1.2	8.5	2.1	6.1
Denmark	364	802	70.7	150.7	9.7	24.2	13.0	11.3
Finland	417	1 367	83.1	264.6	31.7	59.5	3.2	2.8
France	4 961	7 050	84.9	116.9	24.3	28.6	2.9	4.2
Germany	11 285	20 397	141.1	248.5	17.2	23.4	1.9	3.1
Greece	25	48	2.4	4.4	23.1	16.3	8.5	2.6
Hungary	56	107	5.4	10.5	1.8	16.1	1.8	7.4
Iceland	10	35	39.7	125.6	0.0	49.2	0.0	16.3
Ireland	64	216	18.1	57.5	26.8	41.3	4.1	5.2
Italy	2 285	3 638	40.3	63.1	11.8	14.4	2.1	1.6
Luxembourg	30	60	77.4	138.5	12.5	12.0	0.0	0.3
Netherlands	1 439	2 873	95.5	181.7	34.0	43.4	3.6	4.8
Norway	173	356	40.6	79.7	18.4	22.7	.0.8	6.3
Poland	19	32	0.5	0.8	16.8	14.8	12.6	4.9
Portugal	10	36	1.1	3.5	14.4	13.5	0.0	8.4
Slovak Republic	0	15	0.0	2.9	0.0	21.1	0.0	17.8
Spain	322	714	8.3	18.0	13.5	18.4	3.5	4.9
Sweden	923	2 119	107.1	239.2	18.3	36.9	2.7	3.1
Switzerland	1 593	2 424	234.3	339.2	18.0	20.9	2.8	3.9
Turkey	4	22	0.1	0.3	0.0	18.2	11.8	0.0
United Kingdom	3 452	5 492	60.1	93.8	23.3	34.4	5.2	7.7
European Union	26 827	47 130	73.0	125.0	19.7	27.5	3.0	4.2
Total OECD	59 089	99 268	56.0	88.4	28.3	33.5	4.0	5.7
World	60 020	101 731	. .	. .	28.2	33.5	4.0	5.7

Note: The patent data presented here refer to the patent applications to the European Patent Office (EPO) by inventor's country of residence (using a fractional counting procedure) and priority date (the date when the patent was first filed worldwide).

Source: OECD, STI *Scoreboard*.

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significant progress in innovative capacity, as witnessed by the significant growth of their respective shares in patent applications originating in New Zealand, although the country still has a relatively low total number of patents (Table 4). The potential sources of strength of the biotechnology sector lie in the uniqueness of the New Zealand biosphere, in the sector's links with the large and technically advanced agricultural and forestry industries and in the existence of a strong research base in Crown Research Institutes (CRIs) – most of which specialise in fields connected to agriculture, biology and natural resources – and universities. According to the Biotechnology Taskforce (2003), the most promising sectors in New Zealand include animal and plant-based biotechnologies, innovative foods and "nutraceuticals", and a number of niche areas in biomedical research. Companies cite access to capital, difficulty in finding qualified staff and regulatory obstacles as the main factors constraining the sector's growth (Statistics New Zealand, 2001). In its *Biotechnology Strategy* the government has undertaken to address these issues as part of its broader policies to support innovation and strengthen tertiary education (see further below). As regards regulation it intends, for example, to streamline the approval process for low-risk GMOs and for medicines containing new organisms. But the compliance costs connected with the very strict regulations protecting New Zealand's bio-security remain a problem for the sector.

As regards the ICT sector, its sources of comparative advantage in New Zealand are not equally well established. At present, they probably lie in a comparatively low-cost, well trained and innovative work force, but it is not clear that this will be enough to sustain the sector's growth in the future given that, for example, the proportion of computer graduates is relatively low (OECD, 2003d).[18] The sector is estimated to employ 2 per cent of the workforce and to generate 4.3 per cent of GDP, but there are only 16 firms exceeding NZ$ 100 million in sales (half of them foreign multinationals), which account for almost two-thirds of the sector's total value added, while most other firms are very small (ICT Taskforce, 2002). Most successful ICT firms specialise in end-user niche products, but exports are still very modest: those of ICT equipment and software are only 10 per cent as large as the corresponding imports, while those of computer and information services are equivalent to 80 per cent of imports and represent 1.8 per cent of all service exports (OECD, 2002d). Computer consultancy services are the ICT field that has recorded, by far, the fastest growth in employment over the last ten years (Statistics New Zealand, 2002).

Among the "creative industries", the film industry is so far the one that has attracted most attention,[19] but still benefits from government subsidies. The realisation of "Lord of the Rings" received as the result of a tax loophole a subsidy amounting to NZ$ 300-400 million, very large not only relative to the government budget but also as a proportion to the total cost of making the movie, reported to have been NZ$ 675 million.[20] It is an open question whether the subsidy yielded New Zealand a net benefit. Assessing this is difficult, as it depends on whether or

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not the film would have been made in New Zealand in its absence, as well as on how the possible spillovers from it – for example, in terms of capacity building in the fledgling film industry and of international publicity for the country as a production location and as a tourist destination – are measured. That tax loophole has been closed but in 2003 the government decided to establish a grant scheme for the screen production sector. This scheme, for which NZ$ 40 million a year has been set aside, targets large productions, that is, productions with at least NZ$ 50 of New Zealand production expenditure, or for films between NZ$ 15-50 million, with 70 per cent or more of their budget spent in New Zealand. It will provide grants equivalent to 12.5 per cent of a film's New Zealand production expenditure. Although this is so far the only sector for which the government has departed from policy neutrality, it sets a precedent that could open the way to similar claims by other sectors, and result in a tilting of the playing field and inter-sectoral resource misallocation. For example, the ICT and screen production task forces have already included among their recommendations that they receive "full and fair" opportunity under government purchasing policies. The government will have to resist pressures to introduce, explicitly or *de facto*, any sort of preferential treatment for domestic producers, and should consider sunsetting the subsidy to screen production.

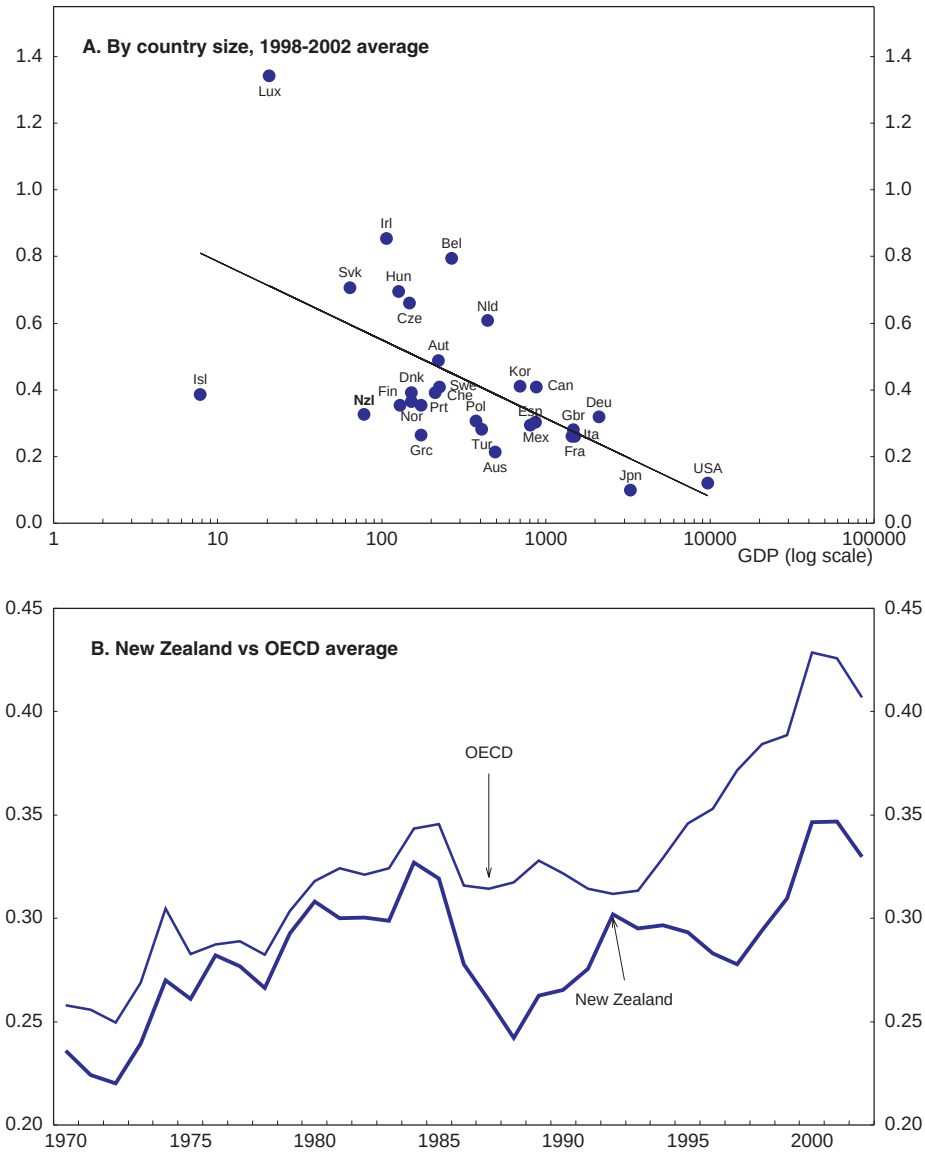
Strengthening global linkages

New Zealand's economy is very outward-oriented in terms of policies, but if one considers the intensity of its actual links with the rest of the world the picture is mixed. Trade intensity is relatively low for a small country, and it has not been increasing as much as it has for most other OECD countries (Figure 10). On the other hand, New Zealand is a relatively large recipient of foreign direct investment in proportion to its GDP (Figure 11). Inflows have fluctuated in recent years, partly in connection with the privatisation programme, which attracted significant foreign capital during the 1990s but has since been halted. By contrast, FDI outflows are rather small, consistent with the fact that there are relatively few large New Zealand-based international companies. Finally, the labour market is highly integrated with Australia's as a result of the absence of work or residence restrictions between the two countries and New Zealanders' high labour mobility, and gross migration flows (of non-New Zealanders as well as nationals) are comparatively large (see Chapter III).

New Zealand's traditional comparative advantage in primary exports, together with past import protection policies, is one of the factors underlying the low trade intensity. The opening up undertaken in the 1980s could have been expected to spur a substantial change in the sectoral composition of New Zealand's exports, but this has been taking place rather gradually. The key traditional primary exports (dairy, meat, wool and forestry products) are still dominant, although with a gradual move

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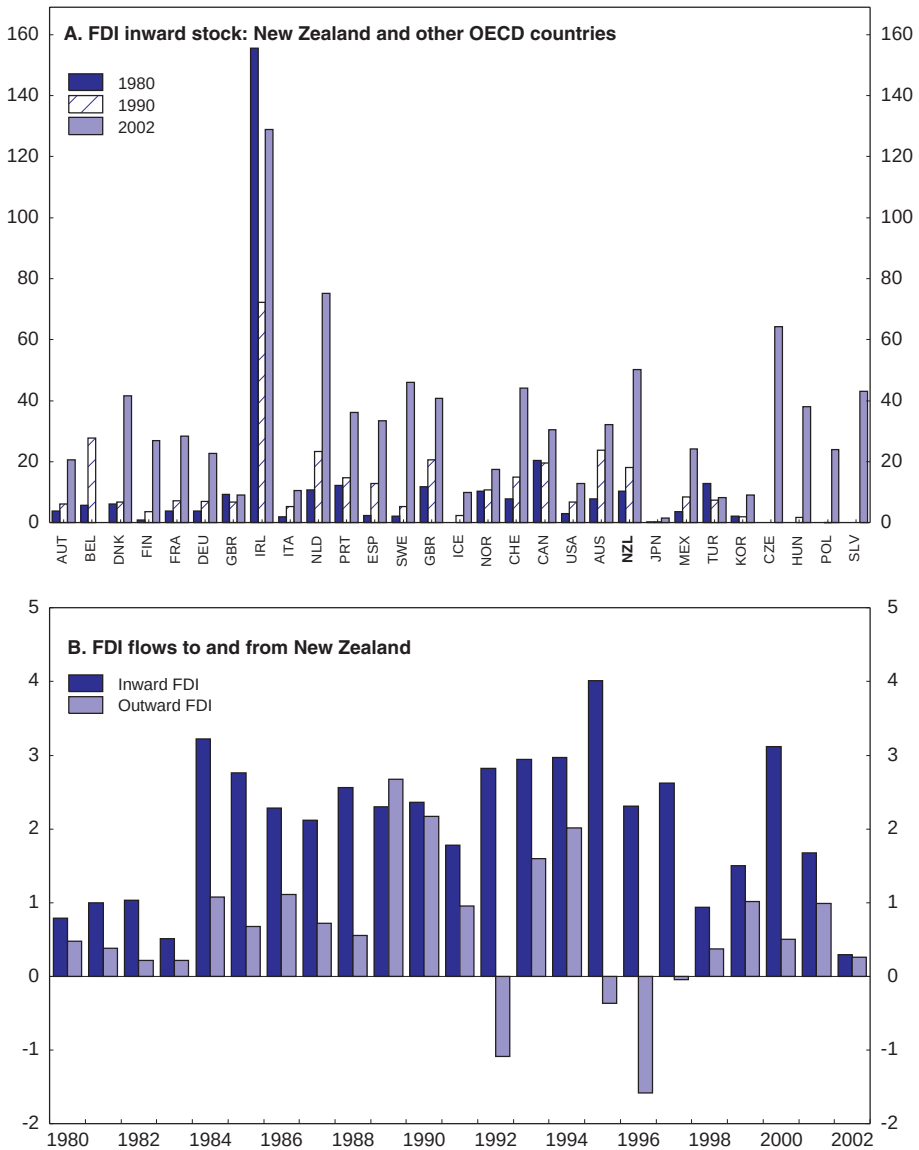
Figure 10. **Trade intensity**[1]



1. (Exports of goods and services + imports of goods and services) / 2 * GDP.
Source: OECD.

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Figure 11. **Foreign direct investment**
Per cent of GDP



Source: UNCTAD.

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toward higher-value-added primary-based products such as more sophisticated food products and wine. The manufacturing sector has undergone a significant restructuring, and a number of high-technology niche-market exports have emerged. But they are still small, so that manufacturing exports are still mostly in low-technology products (Table 5). However, it should be kept in mind that in the table all manufactured food exports, some of which for New Zealand are quite sophisticated, are classified as low technology. Even though the shares of high and medium-high technology industries have risen a little over the past ten years, they remain among the lowest in the OECD. And the overall growth rate of manufacturing exports is not impressive. All in all, although New Zealand's basic policy settings are appropriate to helping develop stronger global linkages, something seems to be still missing for those linkages to be activated. This section looks at the traditional policy instruments that can influence an economy's degree of external orientation: trade and foreign investment policies and regulatory harmonisation with other countries (policies toward international migration are discussed in Chapter III). The more pro-active policy approaches being developed by the government to offset the obstacles to accessing global markets faced by small enterprises are discussed in the next section.

Trade policy

While in earlier decades trade integration was held back by trade barriers, since the liberalisation drive of the 1980s New Zealand has been relatively open. Its average bound tariff levels tend to be higher than those of most other OECD countries, but average applied tariffs are below the OECD average and New Zealand is one of the few countries where agricultural markets are not protected.[21] The government has recently decided to resume tariff reductions from 2005 when the current freeze, introduced in 2000, expires. The highest tariffs (17-19 per cent), which apply to the textiles and footwear sectors, will be reduced to 10 per cent and those on other goods to five per cent by 2008. Another review to be conducted in 2006 will determine whether any further reductions should take place from July 2009, taking into account the extent of progress in international trade negotiations. The government decision was informed in part by a study (Infometrics, 2002b), which had concluded that further tariff reductions would yield relatively small gains (of the order of 0.1 per cent of GDP) but would nevertheless help to cut costs for importing sectors, and recommended therefore a pre-announced, phased elimination of the remaining tariffs. While the decision to resume tariff reductions is encouraging, it would be preferable to go further and signal the intention to gradually reduce them to zero.

New Zealand is also pursuing a number of bilateral trade agreements: it concluded a *Closer Economic Partnership* (CEP) agreement with Singapore in 2001 and is now negotiating a trilateral agreement with Singapore and Chile. It is also at different

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Table 5. **Manufacturing exports: industry shares and growth rates, by technology level**

	Industry shares by technology level								Export value growth rates (1992-2001)				
	High[1]		Medium-high[2]		Medium-low[3]		Low[4]		Total	By technology level			
	1992	2001	1992	2001	1992	2001	1992	2001	Manufacturing	High[1]	Medium-high[2]	Medium-low[3]	Low[4]
Canada	11.3	14.3	43.0	43.5	18.4	16.6	27.2	25.6	7.7	10.5	7.8	6.4	6.9
Mexico	21.2	29.9	50.1	46.7	13.4	8.1	15.4	15.3	16.5	21.0	15.6	10.2	16.4
United States	32.4	37.9	39.1	37.1	11.1	10.6	17.3	14.3	6.6	8.5	6.0	6.1	4.4
Australia	9.9	13.5	15.2	19.8	40.7	32.5	34.2	34.2	3.9	7.5	7.0	1.3	3.8
Japan	30.1	30.8	51.9	52.2	11.7	11.4	6.2	5.6	1.6	1.8	1.6	1.2	0.4
Korea	. .	32.4	. .	29.4	. .	22.9	. .	15.4	n.a.	n.a.	n.a.	n.a.	n.a.
New Zealand	**2.1**	**3.0**	**8.8**	**13.0**	**12.6**	**10.9**	**76.6**	**73.1**	**4.0**	**8.3**	**8.7**	**2.3**	**3.4**
Austria	9.8	15.6	41.2	40.5	22.0	18.3	27.0	25.7	4.2	9.7	4.0	2.1	3.7
Belgium	8.3	15.0	40.0	42.0	22.3	18.3	29.3	24.8	5.2	12.3	5.7	2.9	3.2
Czech Republic	. .	12.1	. .	45.0	. .	23.5	. .	19.5	n.a.	n.a.	n.a.	n.a.	n.a.
Denmark	13.4	20.6	26.6	29.0	15.7	12.9	44.3	37.4	2.1	7.1	3.1	-0.1	0.2
Finland	9.7	24.4	25.4	25.4	21.1	18.9	43.9	31.4	7.2	18.8	7.2	5.9	3.3
France	18.3	25.4	40.2	39.8	17.0	14.7	24.4	19.7	3.2	7.0	3.1	1.6	0.8
Germany	14.7	20.6	52.3	51.1	15.9	14.6	17.0	13.7	3.2	7.1	3.0	2.2	0.8
Greece	2.0	9.0	8.9	15.1	26.6	34.8	62.5	41.1	1.0	19.4	7.1	4.1	–3.6
Hungary	8.1	28.3	28.6	40.5	19.4	11.3	43.5	20.0	13.3	30.1	17.8	6.6	3.9
Iceland	0.3	3.4	0.8	3.7	14.0	27.0	84.9	66.0	3.7	37.7	22.4	11.6	0.9
Ireland	32,7	58.2	21,7	23.9	7.4	3.0	38.2	15.0	11.8	19.2	13.0	1.0	0.8
Italy	10.6	11.8	37.4	38.8	18.5	18.0	33.5	31.3	3.8	5.2	4.3	3.5	3.0
Netherlands	16.6	29.8	30.1	29.0	20.0	17.3	33.3	23.9	3.6	10.6	3.2	1.9	–0.1
Norway	8.6	12.0	24.5	25.8	43.6	39.3	23.3	22.9	3.1	6.9	3.7	1.9	2.9
Poland	3.7	6.8	27.0	33.3	35.6	27.1	33.7	32.8	13.7	21.5	16.4	10.3	13.3
Portugal	6.3	11.2	20.9	31.6	13.2	13.3	59.6	43.8	3.2	10.1	8.1	3.3	–0.3
Slovak Republic	. .	6.0	. .	42.7	. .	29.3	. .	22.1	n.a.	n.a.	n.a.	n.a.	n.a.
Spain	9.3	10.2	46.9	46.8	21.9	19.2	22.0	23.8	6.9	8.1	6.9	5.3	7.9
Sweden	17.6	23.5	36.1	36.3	19.5	17.4	26.9	22.8	3.6	7.0	3.7	2.3	1.7
Switzerland	28.3	37.1	42.7	38.0	11.8	12.0	17.2	12.9	2.8	6.0	1.5	3.0	–0.4
Turkey	2.8	6.6	13.8	22.5	24.1	23.1	59.3	47.8	9.9	20.9	16.0	9.4	7.3

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Table 5. **Manufacturing exports: industry shares and growth rates, by technology level** (*cont.*)

	Industry shares by technology level								Export value growth rates (1992-2001)				
	High[1]		Medium-high[2]		Medium-low[3]		Low[4]		Total	By technology level			
	1992	2001	1992	2001	1992	2001	1992	2001	Manufacturing	High[1]	Medium-high[2]	Medium-low[3]	Low[4]
United Kingdom	25.7	40.3	38.4	33.3	15.6	11.9	19.4	13.8	4.7	10.1	3.1	1.7	0.9
European Union	15.5	23.5	41.1	40.2	17.7	15.3	25.7	20.8	4.1	9.1	3.9	2.5	1.7
Total OECD	20.0	26.4	41.8	40.7	16.2	14.2	22.0	18.6	4.8	8.1	4.5	3.3	2.8

1. Includes: Aircraft and spacecraft; Pharmaceuticals; Office, accounting and computing machinery; Radio, television and communication equipment; Medical, precision and optical instruments.
2. Includes: Electrical machinery and apparatus, n.e.c.; Motor vehicles, trailers and semi-trailers; Chemicals excluding pharmaceuticals; Railroad equipment and transport equipment, n.e.c.; Machinery and equipment, n.e.c.
3. Includes: Coke, refined petroleum products and nuclear fuel; Rubber and plastic products; Other non-metallic mineral products; Building and repairing of ships and boats; Basic metals and fabricated metal products.
4. Includes: Manufacturing, n.e.c. and recycling; Wood and product of wood and cork; Pulp, paper, paper products, printing and publishing; Food products, beverages and tobacco; Textiles, textile products, leather and footwear.

Source: OECD, STI *Scoreboard*.

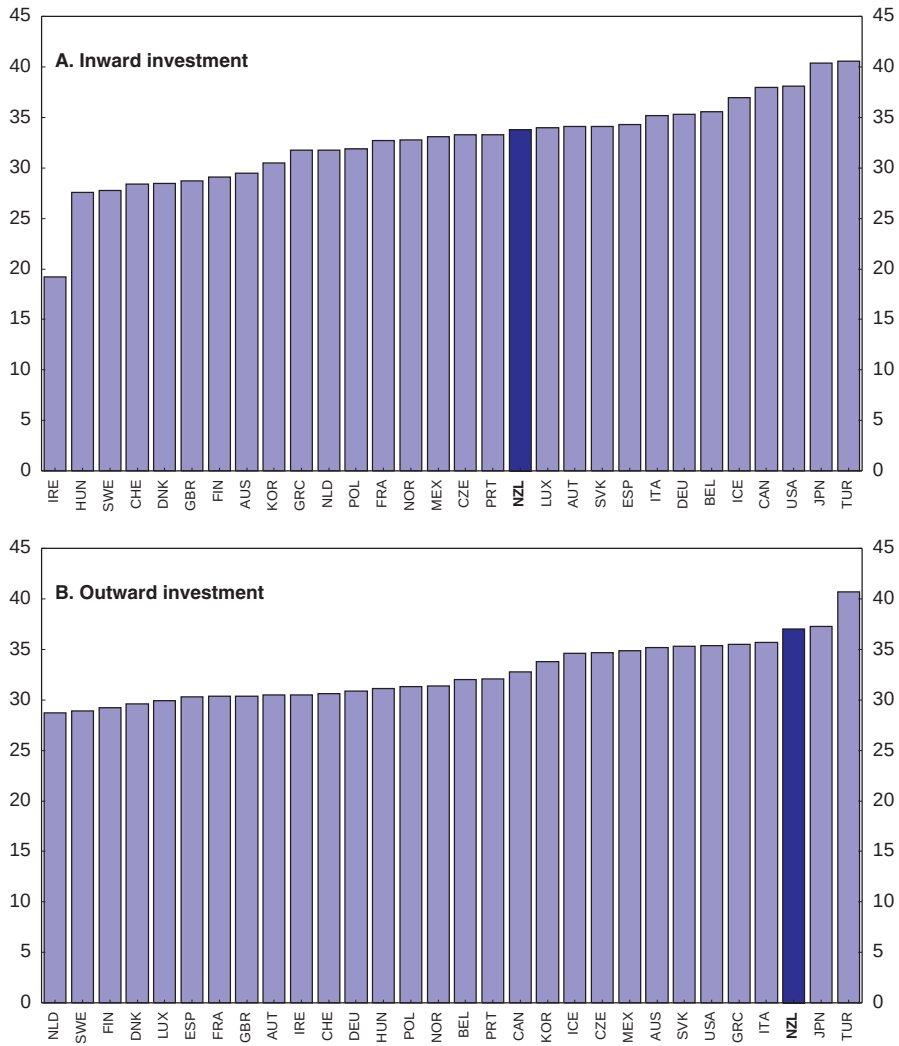
stages of engagement with Mexico and Thailand (studies are underway on possible CEPs) and Hong Kong (negotiations have been suspended pending the outcome of the recent tariff review). The government has also expressed interest in negotiating a free trade agreement with the United States, but a starting date for negotiations has not yet been set. A key source of concern at present is the fact that Australia seems likely to conclude such an agreement before New Zealand does, which would tend to divert trade and investment flows to the detriment of New Zealand. A study (Scollay, 2002) estimated that the net trade effect would probably be negative but small: NZ exporters would lose market shares in the US and Australian markets, but would gain in third markets as Australian exports are diverted away from them. On the other hand, the effects on FDI flows could be potentially much larger: the possibility of easier access to the US market from Australia and the local content rules attached to an FTA would tend to influence the location decisions not only of new potential investors but also of some existing exporting firms, many of which already have operations on both sides of the Tasman. These effects are very difficult to quantify, and in any case would depend heavily on how comprehensive such an FTA would be, particularly in the area of agriculture. Another study (NZIER, 2002), based on a survey among firms, suggested that they would be potentially largest in some traditional export sectors (especially dairy), while exporters operating in specific niche markets would be less affected.

Policies to attract foreign direct investment

The attractiveness of New Zealand's FDI regulatory and tax regime is about average within the OECD. Although foreign investments above a modest threshold are subject to government screening, the procedure is very transparent with virtually no scope for discretionary use.[22] Cross-country comparisons of the tax treatment of the repatriated profits of foreign-invested enterprises are notoriously complex, since the overall tax burden is the result of the interaction of the home and host country international taxation regimes. OECD indicators, constructed for a benchmark set of assumptions on the level of the pre-tax rate of return on investment and on how the investment is financed, show that in spite of a higher-than-average statutory corporate tax, the tax burden on inward FDI is close to the OECD average (Figure 12, Panel A). Because of interactions with the investor's home-country international taxation regime, effective average tax rates on investment from countries that have a tax-credit system (which include the United States, Japan and the United Kingdom) tend to be higher than the OECD average, although the difference is small.[23] By contrast, tax burdens on investments to New Zealand originating in countries that have a tax-exemption system (such as Australia, Canada and Hong Kong) tend to be lower than the OECD average (Yoo, 2003). New Zealand's tax regime is even less favourable, in relative terms, to outward FDI (Figure 12, Panel B). Being able to use outward FDI to optimally allocate production and establish partnerships with foreign companies

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Figure 12. **Effective average tax rates on cross border investment, 2001**[1]



1. The effective average tax rates show the degree to which the corporate tax systems scale down the real post-tax rate of return earned on so called an infra-marginal investment. They are measured as the difference between pre-tax and post-tax economic rent for a given pre-tax rate of return (20 per cent is assumed here) as a proportion of the net present value of pre-tax income stream. See Table 3 in Yoo (2003) for a description of the assumptions under which effective tax rates are calculated.

Source: OECD.

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could also be important to increase the competitiveness of New Zealand firms and develop their international linkages.

A relevant question is whether in an increasingly competitive global market for the location of FDI, being just "average" will be enough for New Zealand, given the potential handicap of being small and far away and the additional disadvantage it might face in the future in the event of a US-Australia FTA. New Zealand has until now maintained one of the most neutral tax systems in the OECD, in the belief that this is the best way to maximise the benefits from international capital flows. In 2001 the government's Tax Review Panel proposed that it consider reducing the corporate tax rate for foreign investors, either across the board or only for new activities. However, ring fencing "new" investment (however defined) is unlikely to be effective for very long, while an across-the-board tax incentive to all foreign investment would be expensive in terms of revenue forgone. Moreover, for investment originating from countries with a tax-credit system (which accounts for about half of total inward FDI positions in New Zealand) the reduction in New Zealand tax would be largely offset by higher home-country taxes on repatriated profits, with little incentive effect on investors. For these reasons, a preliminary government study (NZ Treasury, 2002) concluded that, even under favourable assumptions regarding FDI behaviour, tax incentives would be unlikely to generate sufficient benefits to New Zealand to offset the associated revenue cost. This seems a prudent conclusion. International evidence suggests that although tax incentives do play a role on the margin in influencing investment flows, fundamentals (macroeconomic stability, good governance, resource and infrastructure endowments, an educated labour force and a favourable business environment) remain their main determinants (Blomström, 2002). Moreover, while in principle tax incentives should be targeted at investments generating positive externalities, thereby correcting a market failure, this is hard to do in practice (OECD, 2003c). Spillover effects from FDI are not automatic and vary considerably depending on host country and sectoral conditions, which for example influence local firms' ability and motivation to learn from their foreign-owned counterparts. They are more likely to be positive in countries with strong fundamentals and in sectors where foreign companies find effective local competition (Blomström, 2002). Furthermore, because in practice tax incentives to foreign investors cannot be limited to precisely where there is market failure, they always entail a departure from a level playing field between foreign and domestic firms. In general, the policies that are most effective in attracting foreign investment and maximising its benefits are the same ones that help support domestic investment and its efficient allocation (OECD, 2002c). New Zealand already has most of these conditions in place, but there is room for improvement in a number of areas such as education, infrastructure and regulatory compliance costs, as discussed further below. Efforts to improve the country's relative attractiveness should concentrate in those directions. In addition, an option that should at least be considered is reducing the statutory corporate tax rate for domestic as well as foreign investors (OECD, 2001b).

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Regulatory harmonisation

Potential obstacles to greater integration in international trade and capital flows include those deriving from regulatory differences with other jurisdictions. For businesses operating across borders, having to learn about and then conform to different national standards and laws is costly. This adds to the obstacles faced by local firms wanting to "go global", but it may also discourage foreign businesses from operating in New Zealand. This problem is partly alleviated by the fact that in New Zealand the quality of regulation is generally high by international standards. Moreover, since 1983 New Zealand is part of a *Closer Economic Relations* (CER) agreement with its main trading partner, Australia, which is the basis for a number of more specific regulatory coordination agreements. In particular, the 1997 *Trans-Tasman Mutual Recognition Agreement* provides for the mutual recognition of product standards and of occupational registrations. Joint authorities exist for setting common food standards and for the accreditation of certification bodies. Given the underlying broad similarity between Australian and New Zealand regulatory systems, this mutual recognition framework is rather successful, and there is relatively little pressure for full harmonisation. Nevertheless, further progress is being made in a number of areas. In 2000 New Zealand and Australia signed a memorandum of understanding on the coordination of business law. Of the areas originally identified as requiring further convergence, new legislation has since been enacted on competition policy (amendment of the *Commerce Act* provisions on mergers and acquisitions, in 2001), electronic commerce, securities market supervision and insider trading, and the government has recently presented legislative proposals on bankruptcy law. Some new areas have been added. For example, following Australia's decision to adopt *International Financial Reporting Standards* by 2005, New Zealand has also decided also to adopt the international standards over the period 2005-2007.

The approach taken to achieving convergence with Australia on business law is a flexible one. Australian law is used as a starting point, but without necessarily aiming for full harmonisation, while also taking into account international best practice and specific New Zealand conditions. In the context of mutual recognition arrangements, some scope for regulatory competition should remain, although economic integration will continue to increase pressure for convergence. Since regulation continues to evolve, greater cooperation at the policy development level would help make the coordination process more efficient. An area where the government should press ahead is the harmonisation of securities regulations, which can help reduce the costs NZ issuers face in accessing the Australian capital market. Provisions to ensure the independence and appropriate conduct of external auditors did not require major adjustments, being already exempt from the distortions that emerged in other countries. Nevertheless, the government should continue to review them to ensure that they remain in line with the

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evolution of international best practice. In the case of competition law, on the other hand, the benefits from harmonisation need to be balanced against the need to address the specific challenge facing small countries like New Zealand, where domestic markets are often characterised by a limited number of competitors that, however, must struggle to reach minimum efficient scale. Relative to larger countries, it is therefore necessary to attach greater weight to economic efficiency considerations (Gal, 2003), at the same time ensuring that the lower number of rivals is offset by a sharper threat of entry through an open trade and investment regime. New Zealand legislation, which explicitly indicates as its purpose "to promote competition in markets for the long-term benefit of consumers within New Zealand" provides sufficient scope for doing so (McLeod, 2003), which seems to have been the approach taken by the competition regulator (Berry and Pickford, 2002).

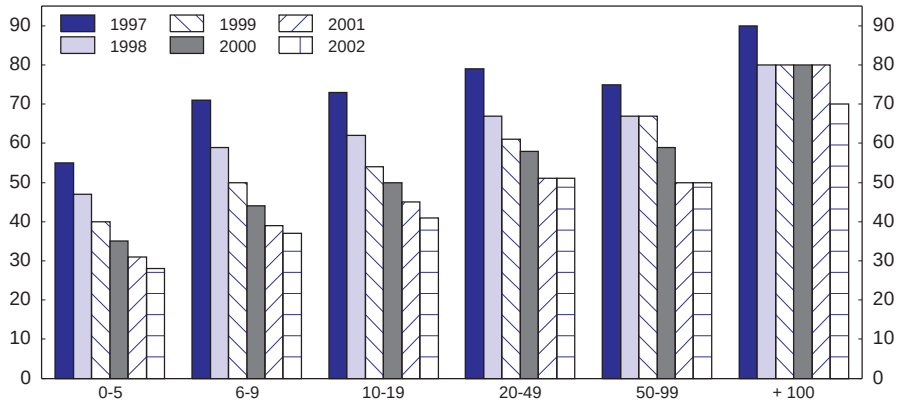
Creating a more supportive environment for small businesses

Whether or not the combined effect of New Zealand's small market size and distance from the main other markets provides a valid explanation for its historically low growth rate, it does represent a key factor behind the small average size of local firms (see Figure 4 in Chapter I). New Zealand is not alone in having a prevalence of small and medium-sized firms. Australia has a similar structure, and so do a number of European countries. However, unlike New Zealand, most of these countries have either regulatory or tax advantages for SMEs that encourage firms to remain small.

If small firm size reflects binding external constraints rather than the dimensions of their minimum efficient scale, this can represent a handicap in a number of ways. F*irstly*, the limited size of the domestic market forces firms to turn to exports at an earlier stage of their development in order to grow. But smaller firms face proportionally greater obstacles to exporting than larger ones, since that requires substantial investment in gathering information about foreign markets and setting up distribution channels; distance from markets adds to the cost of achieving this. Moreover, becoming an exporter often involves a discrete jump in the size of production and the need to adapt some product characteristics, which can put simultaneous pressure on the production side and on the management capabilities of the firm. S*econdly*, small firms may depend more on informational externalities (*e.g.* the dissemination of marketing information and the transmission of tacit knowledge), but in a small, distant and sparsely populated country there is less scope for such positive externalities and for the backward and forward economic linkages (variety of specialised input suppliers and of customers) connected with large agglomerations. One example is the more limited availability of the specialised skills required to develop new and innovative products. T*hirdly*, the existence of capital market imperfections (*e.g.* proportionally higher monitoring costs connected to informational asymmetries) makes it more difficult

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Figure 13. **Survival rates of firms, by size**[1]
Firms born in 1995



1. Size expressed in full-time equivalent (FTE) employees.
Source: New Zealand Ministry of Economic Development, SMEs in New Zealand: Structure and Dynamics (2003).

for small firms to access financing in order to expand. Together with constraints on the supply side, often there is also resistance by owners of small firms to taking on the risks connected to larger debt and to diluting their equity share by accessing outside capital, especially if that means losing control. Fourthly, small firms may find it more costly to hedge against foreign exchange risk. In New Zealand, only 20 per cent of firms with less than 25 employees have any hedging, while over 90 per cent of firms with over 50 do (Grimes *et al.*, 2000).

It is difficult to prove that many small firms are unable to reach their minimum efficient production scale. As in other countries, small firms tend to have a higher turnover rate than larger ones (Figure 13). A high turnover is not necessarily a bad thing – after all, the natural selection weeding out the least productive firms and reallocating resources to new ones is one of the basic mechanisms through which aggregate productivity is raised – but it is not reassuring that only relatively few small firms manage to grow in terms of the number of employees. In addition, relatively few firms export. In 2001, only about 4 per cent of them did. Of these, 151 firms (0.06 per cent) accounted for 78 per cent of all exports, while most others sold very small amounts abroad or exported only occasionally. However, similar "stylised facts" apply to many other countries, and because consistent cross-country comparisons are not available, it is difficult to know whether obstacles to firm growth and to exporting are stronger in New Zealand than in other countries.

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There are a number of strategies that NZ firms have followed to overcome obstacles to exporting. One of the main hurdles, as already mentioned, is establishing effective distribution channels. Surveys indicate that many firms spend considerable time and resources before they manage, by trial and error, to find the most appropriate solution. Given the prohibitive cost of developing one's own overseas distribution network, some NZ firms have used acquisitions. Pooling resources among a cluster of firms in the same sector is another option, which has been used mostly in resource-based industries. Alternatively, a number of successful export firms have preferred to focus on one product – often an innovative niche product – when they first undertake to export. An advantage of niche products is that, being addressed to specialised customers, they are easier to distribute. Similarly, some NZ companies have specialised in customised products. But in many cases the solution has involved finding a foreign partner, whose involvement can take different forms. An extreme case is the foreign partner taking over the NZ firm. Indeed, there have been several cases of successful NZ firms that have been able to become truly global only after being taken over by a foreign investor. And unless the more knowledge-intensive activities in the production of the firm taken over are transferred offshore – which fortunately does not seem to be the more general case – the spillover effects for New Zealand can be strongly positive.[24] This process, which can be described as "capitalising the export revenue", may not be a problem as long as the firms that become multinational or are taken over by offshore companies continue to locate in New Zealand the activities most likely to generate positive spillovers. In this regard, it is interesting that an in-depth survey among exporting firms (Infometrics, 2002c) found that an increasing number of them had shifted at least part of the production offshore and concentrated their New Zealand operations on higher value activities (R&D, design, prototype or custom production).

Offsetting obstacles to growth and access to exports

In this context, the government's activities aimed at supporting small and medium-sized enterprises tend to focus primarily on business training, technology assistance, information dissemination (especially on export markets) and facilitating the formation of networks and clusters, although some programmes also provide limited financial assistance. A good example is the BIZ programme, run by Trade and Enterprise New Zealand, which includes an information and referral service (BIZ*info*), a scheme to help businesses prepare business plans and identify the most appropriate sources of funding (I*nvestment Ready*), and the BIZ E*nterprise Awards*, which provide early-stage financial assistance to small businesses on a 50:50 basis. The various components of the programme are delivered through contracts to private providers, which should help ensure flexibility in responding to actual needs. Both the focus of these programmes and the choice of delivery channels seem to be broadly in line with international best practice (see

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OECD, 1997 and 2002*e*). Proceeding with the reassessment and rationalisation of existing programmes is particularly important, since their large number tends to give rise to overlaps and inconsistencies. The government has already merged the two agencies previously in charge of business support (Industry NZ) and of trade promotion (Trade NZ) into a single entity, Trade and Enterprise New Zealand, which also includes an investment promotion branch. And the creation of a one-stop entry point for all the various programmes should facilitate access. However, ensuring that publicly-provided services do not crowd out private supply should remain a concern. In this regard, providing basic information and orientation for free but asking businesses to pay for more specific or customised services seems a valid approach.

Making greater use of e-commerce

The use of e-commerce obviously holds great potential for helping small firms overcome the costs of isolation. Relative to other OECD countries, New Zealand has a relatively high proportion of firms with access to the Internet, but comparatively few of them have their own Web site, and the percentages of firms using the Web for purchasing and selling are also on the low side (OECD, 2003). As in other countries, both Internet access and use of e-commerce tend to be lower for smaller firms, and the gap is no wider than in most other countries. One of the reasons for the low propensity to use e-commerce in New Zealand is that broadband service prices tend to be higher than in other OECD countries, so that take-up is not particularly widespread among businesses (especially taking into account that in most cases it is low-speed broadband) and is very low among residential customers.[25] The degree of competition is likely to increase in the future if the Commerce Commission's recommendation on unbundling the local loop is implemented (New Zealand is one of the few remaining OECD countries where this has not occurred). In any case, the growing availability of wireless technology for providing broadband access is already increasing competition, putting pressure on the incumbent provider to offer users more attractive conditions.

Improving access to capital markets

It is not clear to what extent access to capital represents a particular constraint for New Zealand firms. There is some evidence that the cost of capital has traditionally been higher in New Zealand than in the United States, but it is not much higher than in Australia. High average real interest rates and an illiquid stock market are the main underlying factors. The real long-term interest differential with the United States has been of the order of 1½ to 2 percentage points on average over the past ten years. It reflects in part a liquidity premium, but probably also a risk premium connected to New Zealand's high external indebtedness and

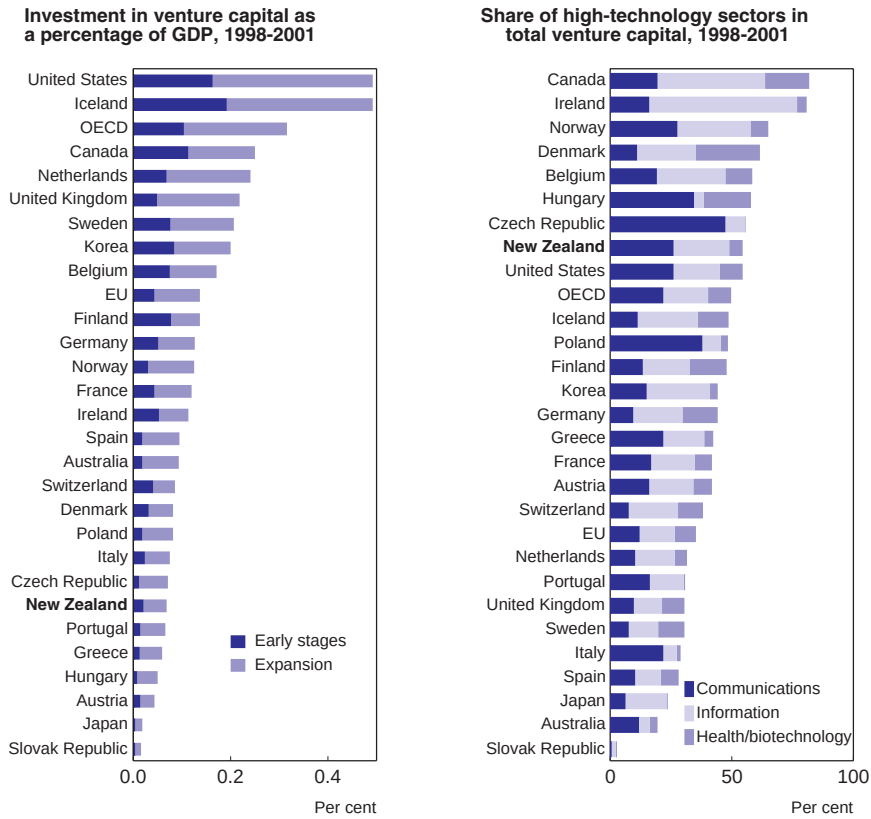
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persistent current account deficit (see CChapter V). New Zealand's main stock market has a very low capitalisation, also in proportion to GDP. A New Capital Market (NCM) for new, high-growth companies was opened in early 2000, but was hit almost immediately by the global market downturn. Following a review by the New Zealand Stock Exchange it was decided that the NCM would be replaced by the NZAX market, which favours a simpler approach to listing and capital raising for small companies. The NZAX market opened in November 2003, with 11 listed issuers. Meanwhile seven of the companies formerly listed on the NCM market have graduated to the main market. Access to more liquid foreign capital markets such as the US NASDAQ is a theoretical option for NZ companies, but in practice is difficult given their small size relative to those markets' *de facto* minimum entry thresholds. Thus, there are only two New Zealand based companies listed on the NASDAQ, against 26 for Ireland and 70 for Israel. As regards access to bank lending, a recent study (PriceWaterhouse Coopers, 2003) found that the bank lending conditions and risk assessment practices of New Zealand banks *vis-à-vis* SMEs were comparable with international ones, and that access to bank lending was not a significant constraint for most SMEs except in the case of start-ups and SMEs that have intellectual property as their main asset. In those cases, however, it suggested that some form of equity, and in particular venture capital, would be more suited to their needs.

Particularly for emerging knowledge-intensive sectors such as biotechnology and ICT, access to risk capital in the early stages of a firm's development represents a significant constraint. In the case of biotechnology, the average time likely to elapse until profits are generated tends to be particularly long. However, the venture capital market has developed relatively slowly in New Zealand (Figure 14). A study conducted a few years ago (Infometrics, 2000) attributed this in part to informational problems – probably connected with firm size and business culture – and to uncertainty regarding the tax treatment of capital gains.[26] Removing any ambiguities in the existing rules should be a priority. To support the venture capital market's development in 2001 the government created the New Zealand Venture Investment Fund (VIF), with a capital of NZ$ 100 million to be invested in privately managed Seed Funds, with private investors participating on a 1:2 basis. The funds, each of which will operate for ten years, after which it will be terminated and distribute profits to investors, will invest in NZ enterprises in the seed, start-up and early expansion phases. Two elements that make them attractive to private investors are a buy-out option on the VIF share and the tax advantage connected to the funds' unincorporated nature, given the fact that in New Zealand individuals are not taxed on their capital gains. The four seed funds initially established had attracted NZ$ 90 million in private capital by mid-2003 and were about to stop seeking further investors (some additional ones will be created, including one dedicated to the biotechnology sector. But actual investments in start-up firms were proceeding much more slowly (less than NZ$ 15 million in total deals concluded), which indicates that some of the underlying factors of weakness of the New Zealand venture capital market remain.

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Figure 14. **Venture capital**



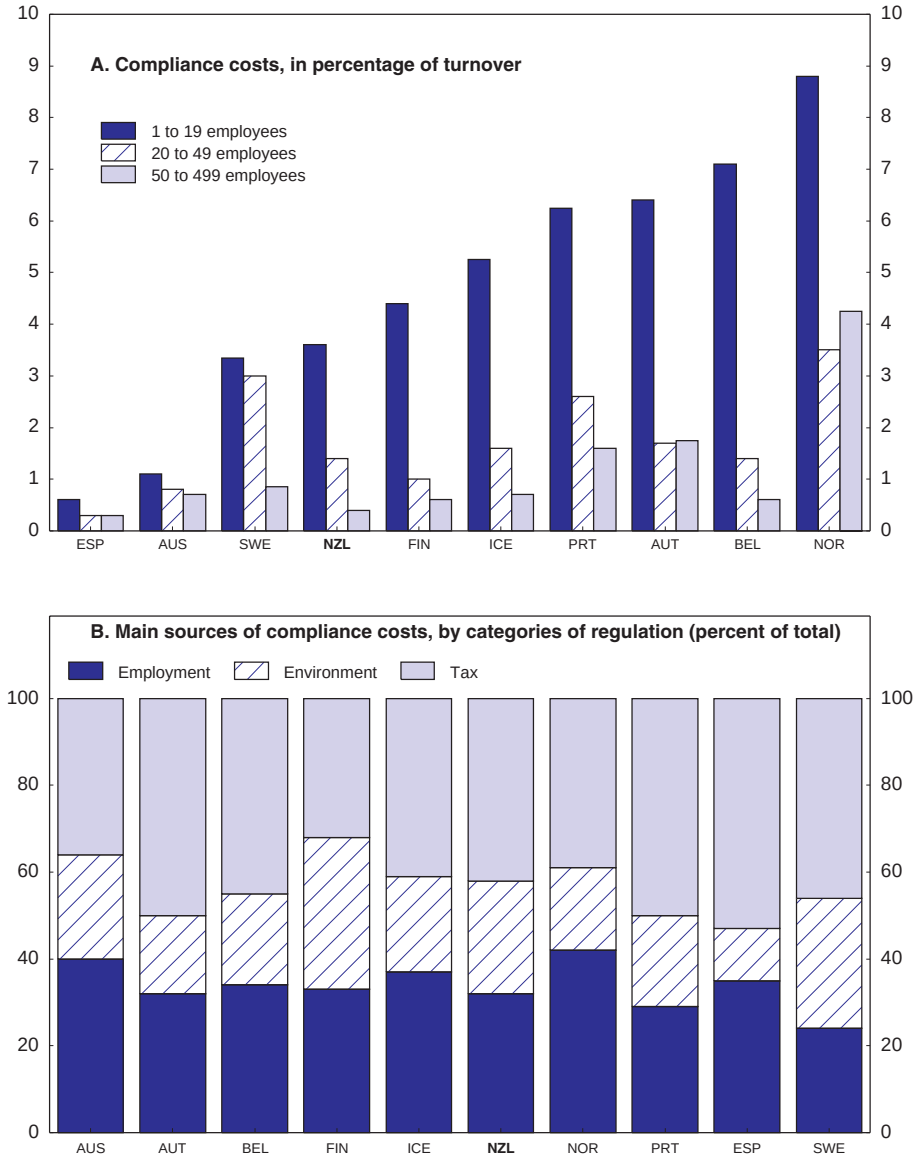
Source: OECD, *STI Scoreboard*.

Reducing business compliance costs

In New Zealand, government regulation is generally of good quality, and compliance costs are not high by international standards (Figure 15). Nevertheless, compliance costs have been for some time a source of concern for small businesses, for which they represent a proportionately much larger burden than for larger firms.[27] In 2001 a Ministerial Panel presented a report with a large number of recommendations for reducing existing compliance costs and for improving the regulatory process so as to limit the unnecessary introduction of new ones. The government responded in December of that year accepting in part or in full most of those recommendations and has since started implementing them; a "Report Back"

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Figure 15. **Compliance costs for small firms**[1]



1. The data are based on a survey among small and medium enterprises conducted in 11 OECD countries.
Source: OECD, Businesses' views on red tape, 2001.

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on the status of implementation was presented earlier this year. A number of initiatives addressed in particular to small businesses have recently been taken, such as proposals to simplify tax compliance for small firms and self-employed people and the setting up of a one-stop business portal using e-technology to provide easy access to information on compliance requirements.

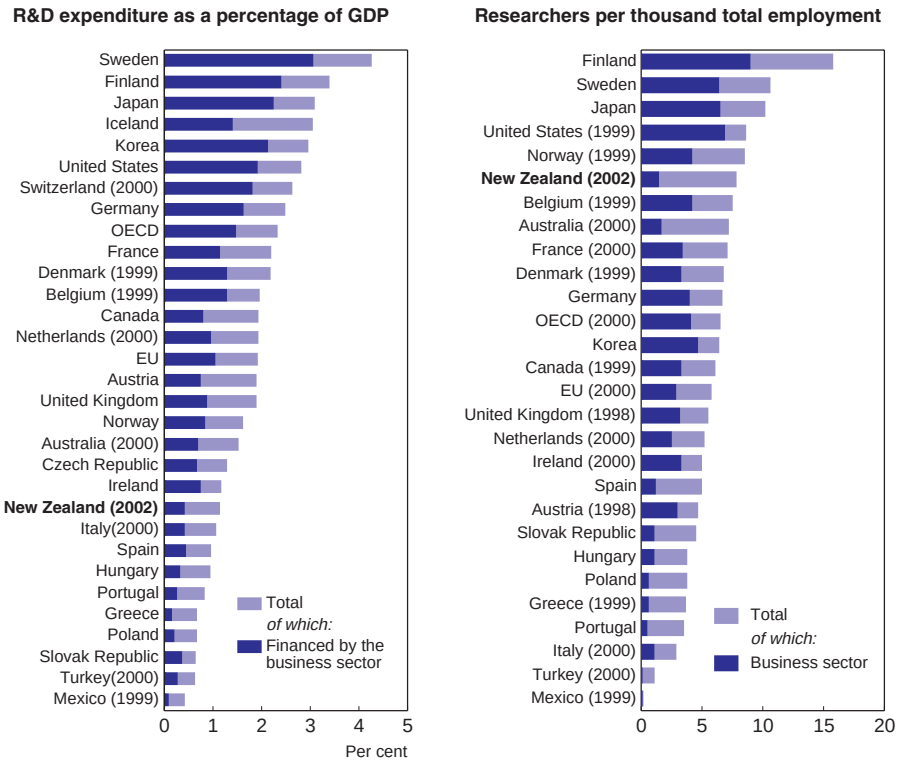
One of the main issues identified at the time of the 2001 report, which affects large as well as small businesses, concerned the implementation of the Resource Management Act (RMA), in particular the process whereby consent for investment projects is given by local or regional councils (or by the Environment Court, if the case is referred to it) on the basis of an environmental impact assessment. By the government's own estimate, major investment projects take on average four years from when the application is lodged to final Court ruling. The long delays are due in part to the Court's lack of resources and local councils' inadequate capacity, but also to a large extent to the scope for objections of a frivolous or anti-competitive nature allowed by the existing procedures. The government has taken a number of actions to address these issues, for example by providing local councils with better guidance, training and performance benchmarks and by increasing the Environment Court's financial resources in order to reduce its backlog of cases to an acceptable level. Additional funding of about NZ$ 2 million per year over four years is expected to achieve this purpose (the case backlog has already been cut by 40 per cent in one year). The government should consider further increasing resources, since this could have a potentially high payoff. The introduction of "limited notification" procedures should also help, but other ways to further limit the scope for frivolous objections – such as redefining what constitutes a "valid interest" and requiring the posting of forfeitable bonds – should also be explored.[28] More importantly, the government has so far resisted changing procedures in ways that would limit the local councils' ultimate decision-making prerogatives as presently established in the RMA (*e.g.* the recommendations for setting time limits or cost standardisation for consent decisions and for allowing a direct referral to the Court in major cases). The issue of how to ensure that the broader collective interest is taken into account in cases of national significance will have to be addressed. The government is currently looking at how to "fast track" consents for major infrastructure projects and to provide more direction to local councils on matters of national interest. This is potentially relevant both for business investment (including FDI) and for major infrastructure projects such as roads and power stations, which at present can be held hostage to "not in my backyard" opposition of local interests.

Supporting innovation

New Zealand has a relatively low overall expenditure on research and development (R&D) as a proportion of GDP (Figure 16). This is due essentially to

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Figure 16. **Resources used in R&D**
2001 or latest available year

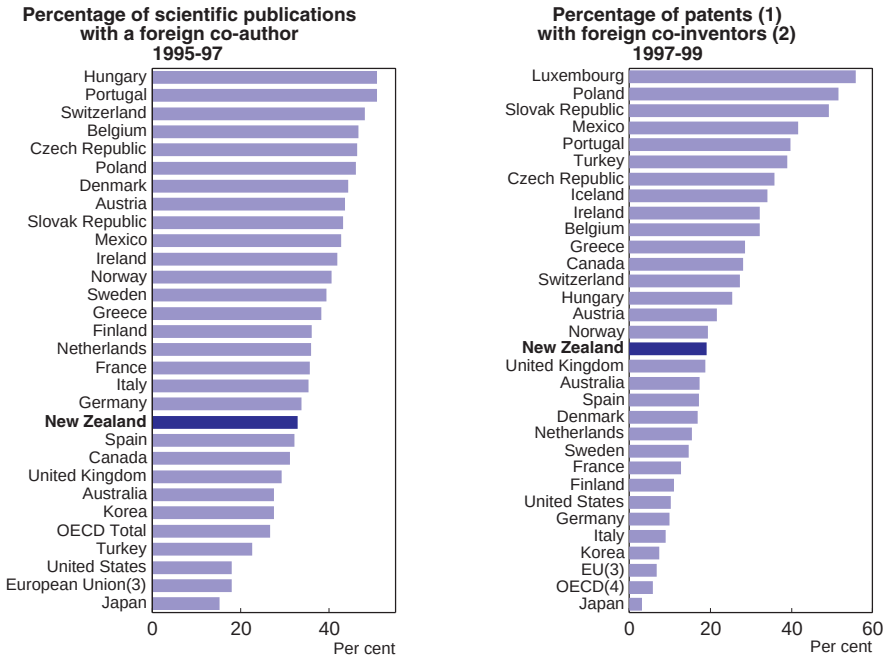


Source: Statistics New Zealand, Research and Development in New Zealand (2002) and OECD, *STI Scoreboard*.

a very low business component, since the public sector's and universities' R&D expenditures are close to the OECD average. It is true that measured business R&D may be affected by statistical distortions, since the tax treatment is less favourable than in most other countries and therefore firms have less incentive to report expenditures as R&D. But the phenomenon seems to be confirmed by a broader range of indicators. For example, not only the expenditure level, but also the total number of researchers in the business sector as a proportion of total employment is low by OECD standards (see Figure 16), and the share of those in the public sector is higher than average. Nevertheless, the quality of research

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Figure 17. **International co-operation in science and technology**



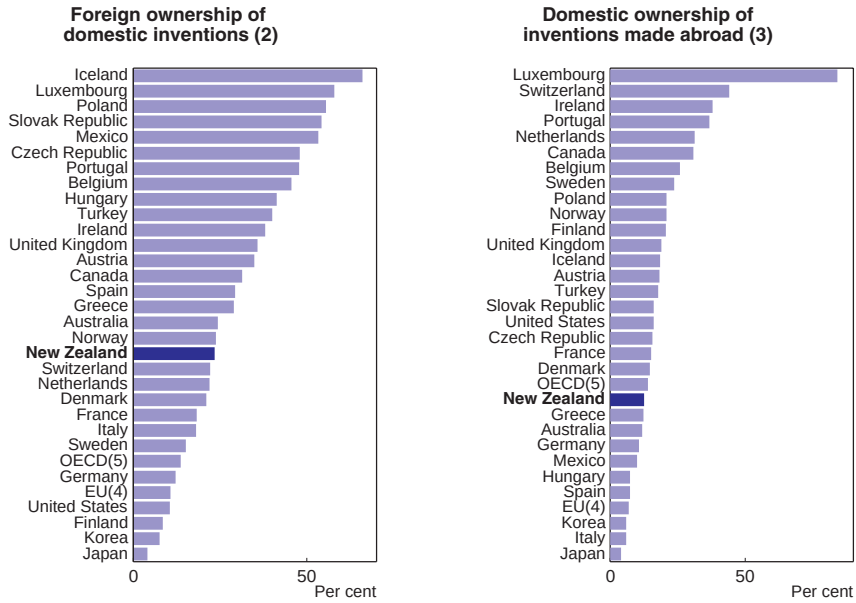
1. Patent applications to the European Patent Office (EPO).
2. Priority years.
3. The EU is treated as one country, intra-EU co-operation has been netted out.
4. OECD residents' patents that involve international co-operation.

Source: OECD, *STI Scoreboard*.

conducted in New Zealand is generally high, and so are indicators of international linkages, such as co-authored publications and cross-border ownership of inventions (Figures 17 and 18). Among the most often mentioned explanations for low private sector R&D activity are the small average scale of New Zealand firms and the fact that many of the larger ones are subsidiaries of foreign-based companies, which tend to locate most of their knowledge-intensive activities where their head offices are. However, foreign ownership is not by itself a good reason for low R&D activity, and in New Zealand there have been several examples of firms that after becoming foreign-owned have maintained their research activities in the country. Ultimately, what matters is whether New Zealand can offer a favourable environment for conducting knowledge-intensive activities, which require top-class researchers and favourable tax and regulatory regimes.

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Figure 18. **Cross-border ownership of inventions, 1997-99**[1]
Percentage



1. Priority years.
2. Share of patent applications to the European Patent Office (EPO) owned by foreign residents in total patents invented domestically.
3. Share of patent applications to the EPO invented abroad in total patents owned by country residents.
4. The EU is treated as one country, intra-EU co-operation has been netted out.
5. OECD residents' patents that involve international co-operation.

Source: OECD, *STI Scoreboard*.

The publicly funded science and innovation system

The framework for allocating public funding for research and technology is one of the best designed and most sophisticated among OECD countries. Public funding is managed by the Foundation for Research, Science and Technology (FRST), the Royal Society of New Zealand, and the Health Research Council, and is allocated – for the most part on a contestable basis – between universities, public labs (Crown Research Institutes, or CRIs) and private enterprises, which can bid for public research grants. Research consortia between CRIs, universities and private firms are encouraged, and can also bid for FRST funding. The framework for the allocation of public funds is explicitly based on a public good rationale: projects are to be financed according to the anticipated benefit to New Zealand over and

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above the market gains that can be appropriated through the commercialisation of the output. The guidelines used to rate projects focus explicitly on knowledge spillovers and capacity building, although it is recognised that quantifying these effects is difficult in practice.

As a general policy, the intellectual property rights (IPRs) resulting from all the research funded by FRST are vested in the research provider, which however must commit to making sure that these rights are exploited in a way that benefits New Zealand. In the case of CRIs this can be achieved in several ways – through a licensing agreement, by selling the rights, or by creating a new spin-off – but always preferably with a New Zealand private partner. The guidelines for the management of IPRs are relatively flexible and focus mainly on setting the right incentives and ensuring accountability, in recognition of the fact that conditions can differ considerably across sectors and from case to case. Universities and CRIs are encouraged to share the benefits with the individual contributing researchers. This approach is in line with international best practice: research providers are usually in the best position both to establish and defend IPRs (which can be expensive) and to negotiate their exploitation, which is easier if fragmented ownership is avoided (OECD, 2003b). At the same time, it is good policy to align the incentives of individual researchers with those of their employer. Although there is no general guideline on the share of royalties given to researchers, 10 to 15 per cent seems to be common, at least at CRIs. This seems to be low by international comparison: in other countries where such sharing exists a share of one-third is more common, although there is a wide variation (OECD, 2002b).

CRIs represent a very large part of the New Zealand science system, with a combined number of researchers that is approximately equal to that employed by universities. They carry out a combination of basic and applied science, with the emphasis gradually shifting toward the latter. They receive about 60 per cent of the total funding allocated by the FRST and other government agencies (Table 6), but this money now represents only little more than half of their total revenue. The fact that all but approximately 5 per cent of that funding is allocated on a contestable basis reinforces the incentive to seek other sources of revenue.[29] Traditionally, one additional source has been the research work CRIs perform under contract from private businesses (including small firms that do not have their own R&D capabilities), as well as other government agencies. But in recent years they have also been encouraged to actively manage the intellectual property resulting from their activity. This effort and a closer contact with business partners have started to change the CRIs' culture, with an increased emphasis on achieving commercial success by finding commercial applications for their scientific output. As state-owned enterprises, CRIs are expected to earn a return on their assets that covers the cost of capital;[30] moreover, at least in principle they are expected to pay the state dividends. However, because during most of the time since the CRIs were created in 1992 the priority was to strengthen their balance sheets and to

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Table 6. **R&D expenditure, by funding and performing sector**
2002 data, NZ$ million

Funding sector	Performing sector			
	Government	Business	Universities	Total
	NZ$ (million)			
NZ government[1]	355.7	47.1	264.2	667.0
NZ business[2]	96.7	415.5	23.2	535.4
NZ universities	1.8	0.1	113.2	115.1
Overseas	18.6	61.8	14.3	94.7
Other funding sources	1.2	4.5	20.9	26.6
Total	**474.0**	**529.0**	**435.8**	**1 438.8**
	Per cent			
NZ government[1]	75	9	61	46
NZ business[2]	20	79	5	37
NZ universities	0	0	26	8
Overseas	4	12	3	7
Other funding sources	0	1	5	2
Total	**100**	**100**	**100**	**100**

1. Includes local government agencies.
2. Includes state-owned enterprises.
Source: Statistics New Zealand, *Research and Development in New Zealand* 2002.

build up their capability, only in a small number of cases did the government actually ask for a dividend to be paid. Allowing CRIs to retain all their earnings represents a capital subsidy that could potentially distort competition between them and other research providers. It would be preferable to have CRIs regularly pay dividends and then re-allocate them on a contestable basis within the science and innovation system according to criteria consistent with the public-good rationale for using public funds to support it. Because of New Zealand's unusual situation where public sector research providers represent such a large part of the total, it is particularly important to avoid policies that could inadvertently crowd out private-sector research. Indeed, it is part of the aims of the government's innovation policy that CRIs' growing links with private firms should contribute to strengthening the latter's research and technology take-up capabilities.

The tax treatment of business R&D *expenditures*

While many OECD countries provide either tax credits or tax allowances for business R&D expenditures (that is, they allow a firm to deduct more from its taxable income than is actually spent on R&D), New Zealand has preferred to

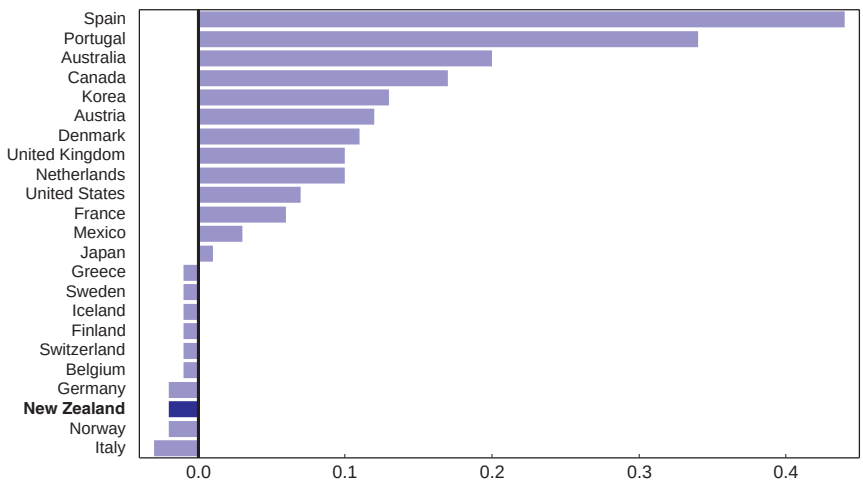
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maintain its tax system as neutral as possible, using grants instead to support business R&D. There are potential advantages to this approach: it allows the government to target projects expected to have larger spillover effects, while tax incentives tend to involve large dead-weight losses if they are level-based or to be complex to administer if they are increment-based; at the same time, it maintains the simplicity of the tax code, thus containing both compliance costs and the scope for tax avoidance. Grants are allocated on a competitive basis, with projects assessed by the Foundation for Research Science and Technology (FRST). Given this approach to encouraging business R&D, it is not surprising that taking into account tax credits or allowances the New Zealand R&D tax regime tends to be among the least favourable compared to other countries (Figure 19). However, when public R&D expenditure as a whole is considered, New Zealand is close to the OECD average.

New rules introduced in 2001 simplified the tax regime by bringing the definitions for tax purposes in line with those used for financial reporting. The objective was to clarify the capital/revenue boundary in R&D so as to provide greater clarity on the R&D items that qualified for immediate deduction. This was hoped to increase certainty for taxpayers. A Private Sector Liaison Group, which consists of private sector representatives, was formed to monitor the new rules and draw issues of concern to the government's attention. The Liaison Group has

Figure 19. **Tax subsidies for R&D**

Rate of tax subsidy for 1 US dollar of R&D expenditure
Large firms, 2001



Source: OECD, *STI Scoreboard*.

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endorsed the increase in certainty arising from the reform. Nevertheless, unlike in many other OECD countries, spending on capital inputs used in R&D is neither immediately deductible nor does it benefit from more accelerated depreciation than for other capital assets, and current development expenses still need to be capitalised if they are expected to generate assets with sufficiently certain economic benefits. The exclusion of capital inputs may not be very damaging considering that they typically represent only about 10 per cent of total R&D expenditures (although the proportion can be much higher in some sectors, including biotechnology) and that making them deductible would probably require more elaborate rules on accounting for multiple-use capital inputs. However, limiting tax deductibility to the riskier development activities inevitably requires an element of subjective assessment and therefore introduces some uncertainty in the tax calculations of those undertaking them. In addition, as pointed out by the Liaison Group (2003), there remain some unresolved issues with the implementation of the new tax rules, including "black holes" (some types of development expenditures that can neither be deducted nor give rise to depreciable assets). These issues are currently under active consideration and the Minister of Finance has announced that he hopes to include "black hole" expenditure, like failed patent applications and failed management consent applications, for immediate deduction in the next tax bill.

Tertiary education

New Zealand's tertiary education system delivers excellent outcomes – the proportion of tertiary graduates in the working-age population is above the OECD average and the quality of education is comparatively high – for a cost that until recently was close to the OECD average in proportion to GDP (OECD, 2003d).[31] Nevertheless, the government sees building a stronger tertiary education system as an essential element of its growth strategy and has increased funding for tertiary education by 30 per cent over the last two years. Several of the broad medium-term objectives of the *Tertiary Education Strategy* 2002/07 (TES) presented last year – such as building the generic and specialist skills needed for a successful knowledge economy, focussing research efforts toward clusters and networks that can achieve critical mass, strengthening links with industry and enhancing universities' global linkages – are explicitly connected to the government's growth objectives.

The tools the government has given itself to implement the strategy include a new tertiary funding system. The newly established Tertiary Education Commission (TEC) is the funding agency as well as the regulatory body for tertiary education providers, both public and private. The government has replaced the tuition fee freeze imposed in 2000 with a system of ceilings (differentiated by discipline) and maximum admissible yearly increases. While there may be justifiable grounds for setting minimum transparency standards for tuition fees, this does not

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require regulating their levels, which risks stifling competition between private and public providers, particularly since the government has also moved away from treating them equally on the funding side. In fact, the cap on public funding for private training establishments (PTEs) originally set in 2001 has been maintained, although its level was raised in 2003. Public funding for tertiary providers has three components: for teaching, research and strategic development.[32] The teaching component is mostly allocated in proportion to the number of equivalent full-time students, at rates that vary according to the type of course to reflect costs,[33] although the government is studying the possibility of adding a performance-related element. The research component, which is new (in the past providers were bulk-funded, with no distinction between teaching and research), is intended to reward excellence through a performance-based allocation mechanism modelled in part after its British counterpart. This mechanism, to be phased in by 2007, will assign research funding according to three factors: quality of researchers (assessed by peer panels), research degree completions and external research income gained, with weights of 60, 25 and 15 per cent, respectively.[34] As the UK experience indicates, a key challenge is to devise a system not too cumbersome to manage but flexible enough to reward emerging research teams as well as the top performers. Finally, the third component, funding for strategic development, is intended to be used to strengthen the tertiary system's capabilities both generally and in specific areas (e-learning; regional polytechnics; linkages with business) and will be mainly allocated on a contestable basis.

Even though the government's tertiary strategy calls for developing skills forecasting capabilities and for the tertiary system to deliver highly specialised technical skills in "high-priority development areas", and although several elements of the above described funding system could in principle be used to steer resources towards specific areas, the government has so far refrained from taking an explicit "manpower planning" approach. Rather, it is addressing these issues through a number of initiatives that include, for example, gathering and disseminating information on existing skill shortages, encouraging tertiary providers to use closer contact with local employers to select the mix of courses offered and course contents more in line with labour market needs, and providing students with better information on employment and earnings outcomes for tertiary graduates in the different fields. This approach is commendable, since it focuses on enabling participants to make more informed choices, while it is not clear that the government can have superior information on where future skill shortages are going to arise nor would it be in a position to address them effectively in the face of rapid structural change and a high international mobility of graduates.

An objective for which the government has taken a more pro-active approach is the effort to build critical mass in fields where a strong research capability already exists. It has done this through the creation of Centres of Research Excellence (CoRE). Tertiary institutions are encouraged to form partnerships among themselves, as well as with other research organisations, enterprises or

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research users, and to pool resources in specific research areas. Significant financing has been provided to support the establishment of the first seven CoRE (NZ$ 40 million over the first three years and NZ$ 24.6 million ongoing funding for operating expenses, plus another NZ$ 40 million for capital expenses). Another initiative, the Partnerships for Excellence facility, is intended to attract greater private resources to tertiary teaching and research by providing public matching funds to partnerships between tertiary institutions and business. This policy is sensible, since reaching critical mass can be important not only to achieve economies of scale, particularly in certain resource-intensive research fields, but also to enable NZ-based institutions to attract top-level foreign researchers and graduate students and to take full advantage of international linkages. The fact that New Zealand already attracts a significant number of foreign tertiary students, as discussed in the next chapter, represents a favourable starting point. Furthermore, having stronger research capabilities of its own would improve New Zealand's chances of gaining from the increasing mobility of its own students and researchers, since it would provide them with attractive opportunities to return.[35]

Addressing gaps in infrastructure

Although New Zealand generally has high-quality infrastructure, a number of problems have emerged in recent years, most acutely in the case of electricity shortages and road congestion. These may be the result of inadequate past investment, due in part to stringent expenditure control during the 1990s, but it is not clear that the existing regulatory system provides the right incentives for investment. The government is appropriately reviewing these regulatory questions and has also ordered an overall survey of infrastructure. In both the areas discussed here, electricity and land transport, two aspects should not be forgotten: the need to address demand-side as well as supply-side issues, in particular by ensuring that the pricing structure promotes efficient use of the infrastructure; and the importance of removing unnecessary regulatory obstacles to infrastructure investment, such as those deriving from the implementation of the Resource Management Act.

Electricity

Being heavily reliant on hydro power generation (about 60 per cent of total capacity, with the remainder accounted for by mainly gas and some geothermal and coal), New Zealand is vulnerable to spells of dry weather and needs to have a combination of spare non-hydro capacity and demand-management mechanisms to cover any resulting shortfall. Two episodes of power shortages due to unusually dry weather have occurred in a short period (in mid-2001 and again early in 2003).[36] In both cases the wholesale electricity market worked relatively well, and blackouts were avoided, but the economic cost was significant. Because most retail users had

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fixed-price contracts, large industrial users had to bear the brunt of the rise in wholesale prices, leading to production stoppages. The recent episodes may have been a matter of bad luck, but uncertainty regarding future power security risks becoming a factor that discourages investment. There are three aspects to the problem. First, the price elasticity of demand at the retail level could be better exploited to reduce peak loads when water reserves are low. Second, bottlenecks in the transmission grid prevent an optimal use of existing generating capacity. And third, there may not be enough non-hydro generating capacity that could be activated in a dry year, although in order to assess how large is the shortfall, if any, the first two problems would need to be addressed.

The three issues are interconnected. If most retail customers have fixed-price contracts it may be in part because they prefer price stability and are willing to pay for this "insurance", but the absence of vigorous competition in the retail market has put little pressure on retailers to extend time-of-use metering, which would make it possible to limit peak loads through variable prices. As a result, the overall price elasticity of demand is very modest,[37] and the cost is inefficiently allocated, falling almost entirely on industry (except for some voluntary conservation programmes). An important reason for the inadequate retail competition is that transmission bottlenecks create an incentive for generation capacity to be located close to the retail markets, creating geographical monopolies. In turn, insufficient investment in upgrading the transmission grid seems to be due to the use of a contractual model for grid investments, whereby grid users have to contract with Transpower, the state-owned grid owner and operator, for new investment. This mechanism has high transaction costs and is fraught with "free rider" problems. The grid bottlenecks also tend to segment the wholesale spot market, with different prices prevailing at different nodes. This reinforces the incentive for vertical integration between generators and retailers, makes it more difficult for a liquid market for financial hedges to arise and causes price signals to be less transparent. Unreliable price signals and uncertainty about the government's plans have also contributed to holding back private investment in additional generating capacity. But an important additional impediment to investment are the delays associated with the environmental consent process (the RMA, already discussed above).

Just two years after implementation of a new legislative framework for the sector, some of its key elements have been modified. The government has established the Electricity Commission as the sector's regulatory body. It has also proposed several measures intended to improve the functioning of the wholesale market. One empowers the Electricity Commission to require power generators to play the role of market makers in the market for financial hedges. Another is to create a market for Financial Transmission Rights, which will provide grid users with a way of hedging against nodal price differences connected to transmission losses and constraints. These measures should help increase market transparency, thus providing a better guide to investment decisions. In addition, the government has outlined

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the regulatory framework for transmission services. The Electricity Commission has been given responsibility for setting quality and reliability standards and for approving Transpower's proposals for grid investments, as well as for determining the pricing methodology for recovering the cost of such investment, while the Commerce Commission will continue to regulate Transpower's overall revenue requirements. Transmission pricing is to be based on the user-pays and full-cost-recovery principles, and the pricing structure will have to correctly signal the trade-off at the margin between investment in the grid and in generating capacity at different locations. However, it is still unclear how these principles will be translated into practice. Ensuring adequate investment in upgrading the transmission grid should remain one of the government's priorities. Its allocation should take into account the potential benefits in terms of market efficiency as well as security of supply.

Finally, the government has announced how it intends to create a capacity reserve for dry years. Since private investment in dry-year capacity was unlikely to be forthcoming, mainly because of its inherent riskiness (the plants would be used very rarely, and there is always some uncertainty as to whether the government may intervene to cap prices in a crisis situation), the government decided to step in. Nevertheless, because the possible gains from demand-side measures have not been fully explored, the extent to which additional capacity is actually needed is unclear. The objective set by the government is to have a reserve energy supply of 1 200 GWh over a four-month period, which requires generating power of around 400-500 MW (equivalent to around 13-16 per cent of existing non-hydro capacity), consisting preferably of low-fixed-cost plants (either new plants or old ones that would otherwise be retired). One plant for 155 MW has already been agreed. The cost of the reserve will be financed with a levy whose structure is still to be decided but which would ultimately fall on power users. They would in practice be paying an insurance premium to avoid future power crises.[38] An important concern has been to ring-fence the reserve, *i.e.* to clearly define the conditions under which it will be activated so as not to discourage private investment in ordinary capacity. Setting a price threshold, as the government has decided to do (at 20 cents/kWh, *i.e.* about four times the average wholesale price in normal periods), is the most economically efficient solution. However, a clause has been included allowing the Electricity Commission to activate the reserve even at prices below that threshold if the level of hydro storage is particularly low, a provision that seems to reflect concern about information imperfections in the market. In addition, there is the risk that in the presence of market power in the wholesale market the trigger price could serve as a coordinating device for collusive behaviour. Nonetheless, such a clause risks reintroducing uncertainty and should be either more clearly restricted or removed as soon as the market functions well enough to allow reliance on a straight price trigger. In any event, the government should further explore demand-side conservation options, in particular encouraging retailers and users to install time-of-use meters. This is important not only to address dry-year risks but also, more generally, to

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increase energy efficiency in view of challenges posed by the projected expansion of energy demand associated with economic growth.[39]

Land transport

As a country with relatively low overall population density, New Zealand faces the challenge of maintaining a high-quality road infrastructure, some parts of which are not intensively used, while at the same time providing for the growing needs of cities. The significant congestion problems that have emerged in the Auckland area, where about 40 per cent of the nation's population lives, are increasingly perceived as a constraint to business growth (Infometrics, 2003). These constraints to urban growth could be particularly damaging to the extent that they limit the potential for benefiting from the favourable spillover effects from agglomeration discussed in Chapter I.

Underlying these problems are the two connected issues of what should be the appropriate level of funding for road construction and of how price mechanisms should be used to ration road use in an economically efficient way. Road building is funded by a petrol tax, distance charges on diesel vehicles, local property taxes and vehicle registration fees. However, only about half of the money collected from these sources (excluding local property taxes) goes to road maintenance and construction, as the rest covers other transport services and about one-quarter is diverted to general revenues. Even though the transport share of the petrol tax was raised by 30 per cent in 2002, the total funding actually available (which includes additional resources from local governments) has continued to be under pressure to cover road maintenance and accommodate the expansion of demand in line with economic growth. In principle, these resources could be complemented in several ways: by building new toll roads; through public-private partnerships (PPPs); and by introducing user charges, which could be congestion-related, on existing roads. The government, which until recently had not been encouraging any of these options, is now actively considering all three of them. The new Land Transport Management Bill introduced in December 2002 should make it easier to build new toll roads, either publicly owned or through PPPs, although ministerial rather than local approval continues to be required for any such project. To address Auckland's problems the government has also increased its share of public funding and has set up a panel with a broad mandate to consider all options, including various forms of road user charges; it will report at the end of 2003. International experience indicates that congestion-based user charges, where technically feasible, should be the preferred option.

A valuable aspect of the new land transport management framework is the decision to extend the responsibilities of the funding agency to rail as well as road transport. An integrated approach could provide the basis for better allocation of resources and for assessing the viability of the troubled rail system. Earlier this

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year the government intervened in support of the rail operator, Tranz Rail, which was facing financial problems. Shortly afterwards Tranz Rail received a takeover proposal from an Australian company, Toll Holdings, which was then successfully completed in October. With an agreement reached in advance with the new owner, the government has promised to take over the track network and to invest NZ$ 200 million to rebuild it, while Toll, which will operate the rail freight services, has committed to investing NZ$ 100 million in rolling stock and will have exclusive access to the track on a full-cost-recovery basis. Although the rescue package turned out to be less costly to the taxpayer than appeared likely before the take-over offer, there is still a need to reassess the economic viability of rail freight.[40] An assessment based on the true relative social cost of rail and road transport, however, would require road user charges to be set at a level that fully reflects the cost of supporting the road infrastructure, in addition to any fuel taxation based on environmental considerations (including greenhouse gas emissions). The current Surface Transport Cost and Charges Study being undertaken by the Ministry of Transport is addressing these issues.

Conclusions

The government's growth strategy appropriately focuses on achieving faster productivity gains by fostering innovation and enhancing global linkages. In implementing it, the main challenge is to both preserve and build upon New Zealand's existing strengths resulting from the wide-ranging reforms of the past two decades. Thus, the efforts to remove the specific obstacles faced by NZ firms to innovating, investing and exporting should not involve departing from the present, still admirably neutral tax and regulatory system. A priority should be to address some remaining gaps in fundamentals, such as in the areas of import tariffs, infrastructure, RMA compliance costs and the R&D tax regime. More pro-active and selective policy measures should be used only where there is clear evidence of a market failure and the measures can be effectively targeted to it, so as to avoid the risk of inadvertently introducing new distortions. With few exceptions, the government policies have been consistent with this approach. The focus on activating global linkages so as to offset the possible handicaps deriving from small size and isolation is well placed. Policies toward international migration, discussed in the next chapter, are an important element of this policy orientation. The main structural policy assessments and recommendations contained in this chapter, together with those of other chapters and a follow-up of recommendations made in previous *Surveys*, are presented in Table A1.

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III. The economic impact of migration

Introduction

International migration is a phenomenon that touches a very high proportion of New Zealanders: about 20 per cent of New Zealand's resident population of some 4 million were born abroad, and it is thought that over half a million citizens are resident in other countries. Unusually for an OECD country, issues relate to both immigration and emigration, as the causes and consequences of both these phenomena are important for NZ policymakers.

Over the past 30 years, immigration has been largely balanced by emigration, with no substantial net impact on population change. But the net flow has been variable, with periods of large net immigration alternating with net emigration. Most recently there has been a rapid shift from net emigration (as recently as 1999-2000) to very high levels of net immigration. Issues for policy include whether – and how – policy might seek to moderate this variability, the extent to which immigration policy should be linked to the labour market situation or other factors, and whether emigration of New Zealanders should be seen as a problem or an advantage.

This chapter first outlines the main elements in the history of migration flows in New Zealand and describes the main elements of migration policy. The main part of the chapter is devoted to a discussion of the experience of migrants in the labour market and their impact on economic developments.

The final section concludes that the recent emphasis on policies to improve labour market outcomes is appropriate. What form a more "active" recruitment policy may take is unclear, and it remains to be seen whether the new mechanism for managing skilled migrant inflows introduced in response to the recent surge in applications will prove sufficiently flexible if applications decline in the future. It is noted that, despite the successful integration of many groups, employment and earnings outcomes for immigrants of Pacific Island origin and their offspring remain inferior. More generally, given the wider diversity of regional and ethnic origin of immigrants over the past 20 years, successful integration will depend both on successfully selecting immigrants who will "fit in" economically and on flexible attitudes among local employers. While emigration occasionally

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arouses concerns about a "brain drain", it seems likely that immigration flows replace any "lost" human capital, and that New Zealanders who return (it seems that most do so) bring considerable benefits with them; there is little role for active policy in this area, other than providing an attractive economic environment. Fluctuations in net migration flows may be influenced by the economic cycle, and may help to cope with it by buffering variations in labour demand. The possibility that fluctuations also have short-term pro-cyclical consequences does not, on the evidence available, seem to justify systematic short-term intervention to control migration flows on these grounds.

History and recent developments in migration flows

Although the current population owes its origins largely to migration over the past century or so, the history of migration in New Zealand is different in some important ways from that of other traditional immigration countries such as Australia and Canada. As in Australia, immigration was for a long time dominated by inflows from the British Isles. This domination continued for longer than in Australia, with no substantial inflows from other European countries (apart from the Netherlands) in the 1950s and 1960s (though significant numbers of Pacific Islanders did arrive in this period). Australia, meanwhile, was attracting numerous immigrants from countries such as Greece and Italy. Until 1974 migrants from the United Kingdom and Ireland were admitted freely. The range of source countries has since broadened (Figure 20).

The more important difference is in the mobility of the NZ-born and in the (related) variability of net migration flows. New Zealanders themselves are quite mobile within the country – over half the population will change address in a five-year period. But they also have a high propensity to emigrate – usually temporarily but for periods of several years. While the pattern of country origin of inflows has changed quite substantially over the last 20 years, that for outflows has changed less.

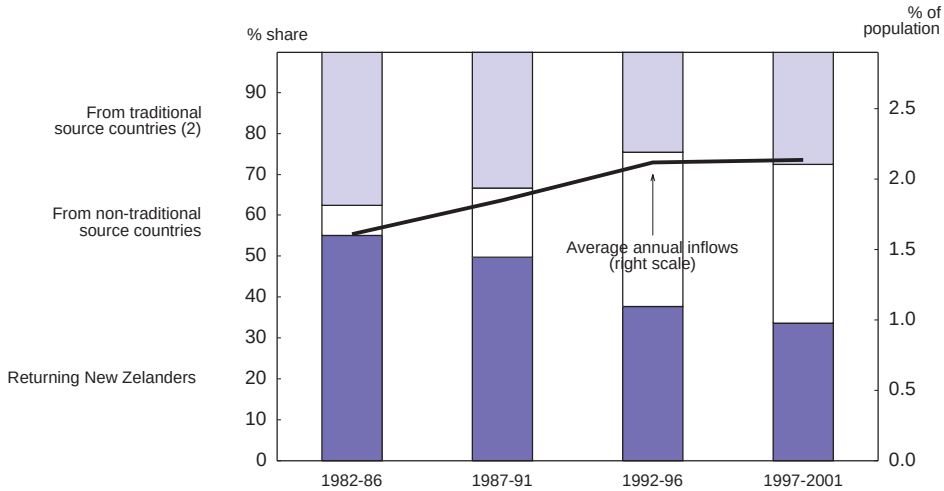
It is also the case that both inflows and outflows are quite variable, so net immigration often swings from significantly positive to significantly negative (Figure 21) with fluctuations being higher than in most OECD countries (Figure 22). These variations are reflected in population growth, whereas the contribution of natural increase to population growth shows little variation, though is declining steadily (Figure 23). The age distribution of the stock of immigrants to New Zealand shows much higher concentrations of people over the age of 30 (including the elderly) (Figure 24).

This variability makes it difficult to predict population growth both in the short and long term; it is not clear whether the recent strong net inflows suggest an increase in the underlying trend or are, as some suggest, a short-term response to a combination of significant global uncertainty and buoyant economic conditions

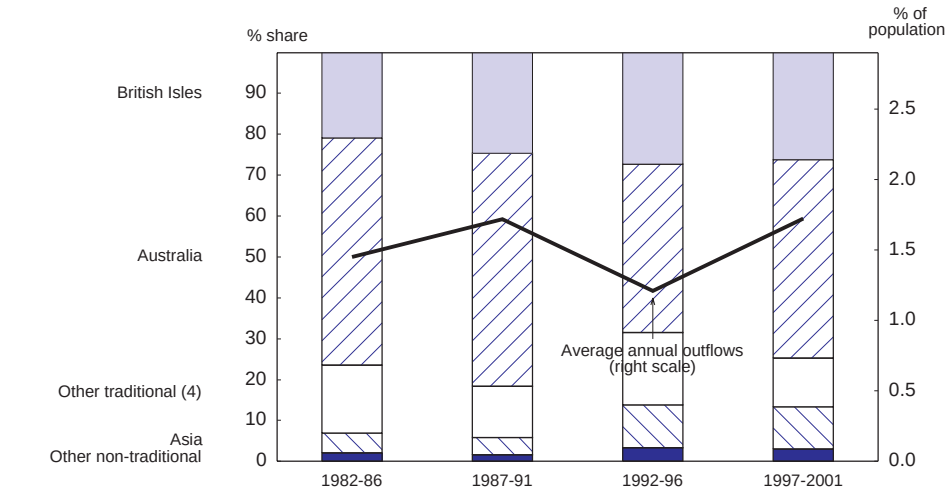
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Figure 20. **Country shares of migrant flows**

A. Changing pattern of origin of inflows
Permanent and long-term arrivals (1)



B. Destinations for outflows
Permanent and long-term departures (3)

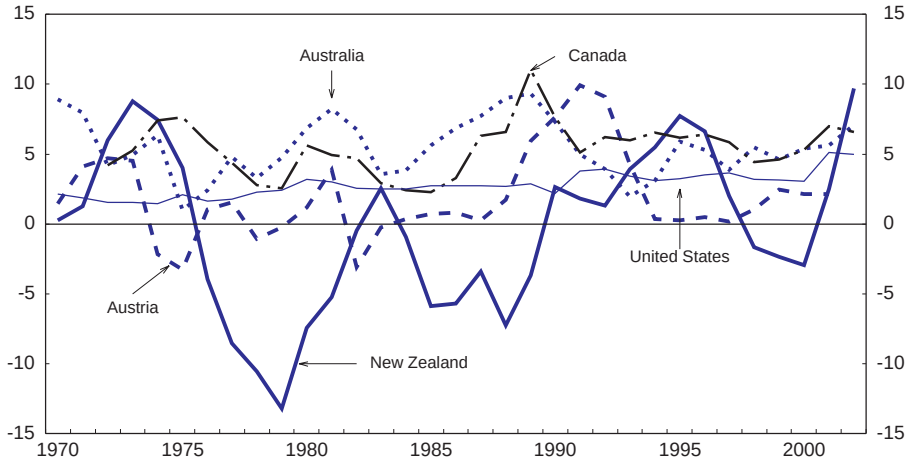


1. People stating their intention to stay for one year or more.
2. Australia, Pacific Islands, British Isles, North and Western Europe, North America.
3. People stating their intention to remain abroad for one year or more.
4. Pacific Islands, North and Western Europe, North America.

Source: Bedford *et al.* (2002).

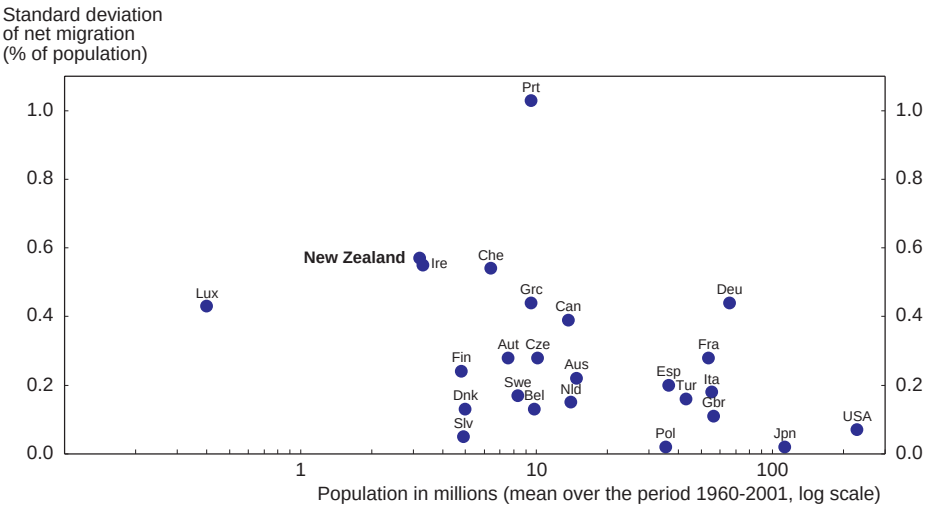
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Figure 21. **Net migration rates, New Zealand and selected OECD countries**[1]



1. Net migration per 1 000 inhabitants.
Source: OECD, *Labour Force Statistics.*

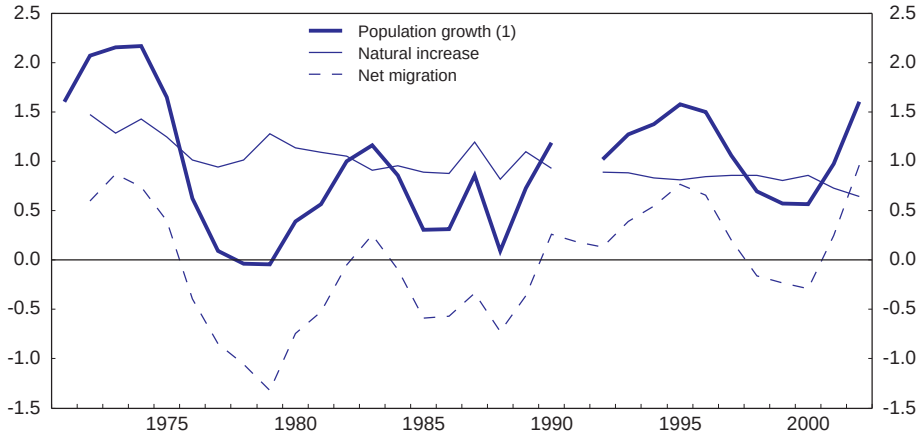
Figure 22. **Migration variability since 1960 *versus* population size**



Source: OECD.

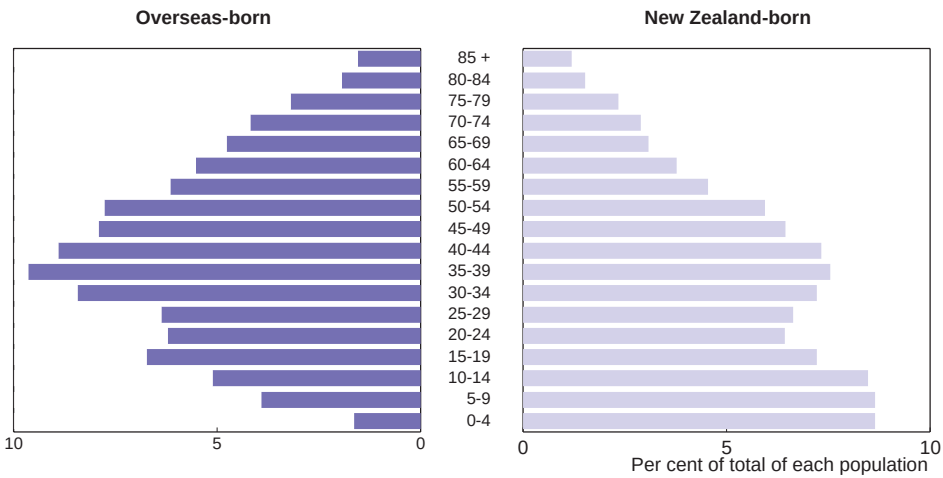
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Figure 23. **Contributions of net migration and natural increase to population growth**
1971-2002, per cent



1. Before 1991: estimated *de facto* population; estimated resident population thereafter.
Source: Statistics New Zealand.

Figure 24. **Population age structure: New Zealand- and foreign-born**
For the Census Usually Resident Population Count, 2001



Source: Statistics New Zealand.

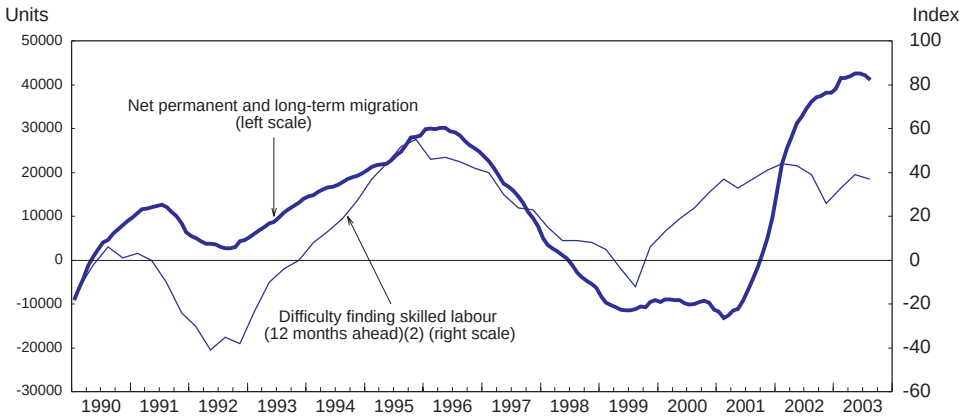
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Table 7. **Correlation between output gaps and New Zealand migration flows**

	Same year			Previous year			Following year		
	Arrivals	Departures	Net	Arrivals	Departures	Net	Arrivals	Departures	Net
New Zealand	**0.03**	**0.09**	**–0.04**	**–0.02**	**0.21**	**–0.21**	**–0.12**	**–0.04**	**–0.09**
Australia	0.17	0.70	–0.41	0.16	0.59	–0.34	0.20	0.58	–0.32
OECD total	0.19	0.59	–0.29	0.30	0.50	–0.11	0.24	0.46	–0.17

Note: Simple correlation coefficients for the period 1980-2002, for permanent and long-term flows of people aged 25-64.
Source: Statistics New Zealand and OECD calculations.

Figure 25. **Migration flows and skilled labour demand**[1]



1. This chart is based on one published in the Small Business Monitor of the National Bank of New Zealand (July 2003).
2. From NZIER Quarterly Survey of Business Opinion. The observation plotted in the figure for 2003 q3 is thus from the NZIER survey for 2002 q3.

Source: Statistics New Zealand and NZIER.

in New Zealand; indeed, net inflows diminished noticeably in the second half of 2003. Unpredictability may not be a problem in itself, though it has been argued that, as well as responding to the economic cycle, migration may itself influence the cycle. Although correlations with broad cyclical indicators are not high (Table 7), especially compared with Australia, there may be links with demand for skilled labour (Figure 25). Many factors enter into migration decisions, so it is unlikely that a simple model of the economic aspects of this decision will explain aggregate migration flows well. Table 7 in fact suggests that the economic situation

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Table 8. **Permanent and long-term arrivals and departures**
Financial years ending in June of the year shown

	Arrivals	Departures	Net
1980-89 average	43 069	56 806	–13 737
1990-99 average	61 242	51 022	10 220
1995	69 572	46 843	22 729
1996	81 965	52 459	29 506
1997	74 492	57 722	16 770
1998	61 246	60 794	452
1999	56 250	67 620	–11 370
2000	61 280	71 040	–9 760
2001	69 490	78 760	–9 270
2002	92 660	59 850	32 820
2003	97 250	54 730	42 520

Note: Immigrants intending to stay in New Zealand for 12 months or more or permanently, plus New Zealand residents returning after an absence of 12 months or more, or emigrants departing permanently or intending to be away for 12 months or more, plus overseas visitors departing after a stay of 12 months or longer.
Total migration data for the years 1979-1996 are sampled data. Actual counts of passengers are available from the month of September 1997 onwards. Total migration data for 1997 consist of sampled data up to August 1997 and actual counts from September 1997 onwards.
From 1998 onwards total migration data represent actual counts of passengers.
Source: Statistics New Zealand.

abroad may affect migration decisions more than that in New Zealand, and that its effect is felt more on departures than on arrivals.

Most immigrants settle in Auckland, New Zealand's largest city, with the next most popular destination being the capital, Wellington. Both regions also tend to be destinations for internal migrants of working age, but there are distinct net outflows of people over 45 from both regions, especially from Auckland to sunnier climes. These two areas contain a large proportion of the total population and have significantly higher proportions of migrants than average.

Net immigration has increased considerably since the trough in 1999-2000, partly due to a large and unusual fall in departures since 2001 (Figure 23).[41] In 2001-02 net inflows were higher as a proportion of the population than the previous post-war peak of 1973-74 and the inflow in 2002-03 – some 1.1 per cent of the population – was even higher (Table 8), although the planning total for residence approvals in 2002-03 was the same as that for 2001-02.[42] A total of 52 856 people, equivalent to about 1.3 per cent of the population, were approved for settlement in 2001-02, compared with the planning level of 45 000; the excess was accounted for by migrants in skilled and business categories. In the second half of 2003, net inflows declined, mainly due to an increase in departures.

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The most important destination for outflows is Australia. Partly due to (relative) proximity, it is also facilitated by the Trans-Tasman Travel Arrangement on the free movement of labour. Citizens of each country have the right to work and settle in the other. In both countries, some have questioned whether some "immigrants" to New Zealand might be using it as an indirect way into Australia, given New Zealand's policy of granting citizenship after three years of residence.[43] In July 1999-June 2002, over 30 per cent of about 95 000 NZ citizens who arrived in Australia declaring their intention to settle there, were not born in New Zealand.[44] The high figure for the share of non-NZ-born among settlers in Australia may suggest that New Zealand is a route to Australia for some migrants, though recent NZ data show that in 2003 the proportion of non-NZ-born people in permanent and long-term flows from New Zealand to Australia was practically identical to their share in the New Zealand population. In any case, migrants might be expected to be more mobile on average than non-migrants, so it could be expected that the share for foreign-born would be higher than for that of the NZ-born. These figures do not necessarily mean that an eventual move to Australia is pre-planned by the migrants; for example, information on how long they had been living in New Zealand is not available.[45]

There is some suggestion that NZ emigrants are staying abroad longer than they used to, and that they represent a significant proportion of the highly skilled. A recent survey of NZ expatriates[46] found that young people going abroad to get overseas experience (half of New Zealanders aged 20-29 consider doing this) are staying longer than they used to, and the main reasons that keep them abroad concern incomes and career prospects.

Policy

From the 1950*s to the* 1990*s*

From the Second World War until the late 1980s, immigration policy had mainly been focused on migrants as a means of meeting labour-market shortages. Apart from refugees (mostly from eastern Europe but also from the other continents), early post-war migration was largely restricted to targeting British migrants with specific skills under an assisted passages scheme, but this was not felt sufficient and was extended; from 1951 onwards it was further expanded to include migrants from the Netherlands. In the post-war period many Polynesians also moved to New Zealand under various special arrangements, with the largest number coming from Samoa.

Immigration reached a post-war peak in 1973-74, and in the subsequent recession it was decided to end the assisted passage schemes and the open-door policy for British citizens and to widen the range of countries of origin. Similar policy changes were occurring in Australia. The share of traditional source countries in

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Table 9. **Birthplace of foreign-born residents, 1996 and 2001**

Birthplace	Per cent of all foreign-born	
	1996	2001
United Kingdom and Ireland	38.0	32.2
Asia	19.5	23.7
Pacific Islands	16.4	16.9
Other Europe	9.2	8.5
Australia	9.0	8.1
North America	3.2	3.0
Africa (excluding North Africa)	2.9	5.2
Middle East and North Africa	1.2	1.7
Other America and Caribbean	0.6	0.6

Source: Statistics New Zealand.

migration had diminished considerably by the 1990s, although their historical importance can still be seen in the stock of resident foreign-born (Table 9). Since 1979, an average of about 800 refugees per year have also been admitted, mainly from South-East Asia but also from East Africa and the Middle East.

By the 1980s policy was explicitly non-discriminatory in terms of country of origin and ethnicity. This was formalised in the 1987 Immigration Act, which saw four categories of migrant: occupational, business, family and humanitarian. But the occupational and business programmes continued to be oriented towards meeting what were seen as the current needs of the labour market. In 1991 the focus moved towards potential migrants' human capital, and a points test was introduced for this purpose. Initially the English language requirement was that potential migrants should have the level of comprehension expected of an 11-year old English-speaking child; in the absence of a certificate to this effect, the immigration officer conducted a test, sometimes by telephone. The balance of points available under different headings has been modified from time to time, but without major changes in structure (Table 10). A review of policy in the mid-1990s resulted in the introduction of an explicit requirement for English language ability based on the IELTS[47] tests. A requirement was also introduced for professional qualifications used to acquire points for entry to be complemented by registration with the relevant NZ professional body, when necessary to practise in New Zealand, before the points could be awarded.

The current programme

At the beginning of this decade, the immigration programme maintained the same broad structure that had been in place since 1991. It distinguishes three main streams of immigrant: Skilled/Business; Family Sponsored; and International Humanitarian (Table 11). Close family members of NZ citizens (dependent children,

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Table 10. **The evolution of the New Zealand General Skills points test**[1]

	November 1991 to October 1995	November 1995 to January 1999	February 1999 to October 1999	November 1999 to June 2002	July 2002 to June 2003	Interim[2] (July to November 2003)
Qualifications and employability						
Qualifications[3]	15	12	12	12	12	12
New Zealand qualifications[3]	–	–	1	2	2	2
Work experience[3]	10	10	10	10	10	10
Job offer	3	5	5	5	–	–
Job offer – relevant	–	–	–	–	5-8	5-8
Age	10	10	10	10	10	10
Settlement factors[4]						
Settlement funds	2	2	2	2	2	2
Qualified spouse/partner	–	2	2	2	2	2
NZ family sponsor	2	3	3	3	3	3
Investment funds	3	–	–	–	–	–
NZ work experience	–	2	2	2	2	2
Job offer – not relevant	–	–	–	–	2	–
Total	43	44	45	46	46-49	46-49
Pass-mark	20-31	25-26	25	24-5	28-30	29

Note: Changes to the General Skills Category since 1991 can be summarised thus: in 1995, the government shifted some emphasis from qualifications as a sign of employability to a job offer, and introduced points for new settlement factors (a qualified partner and New Zealand work experience). Points for investment funds were scrapped. In 1999, an extra point was introduced for those who gained their qualifications in New Zealand and these people were exempted from the requirement for work experience. Later that year, the government made two points available to New Zealand graduates. In 2002, the government introduced a points premium for relevant job offers. How many points an applicant can score for a job offer relevant to his or her qualifications or work experience depends on the pass-mark.

1. The points indicated are the maximum available for each criterion.
2. Following changes announced in July 2003 the points test will not play quite the same role as before, though it will still provide a minimum standard for entry under the Skilled Migrant Category. Additional points will be available for jobs in certain sectors and for settlement outside Auckland. See text and Table 12 for more details.
3. Since 1995, applicants have had to score at least 10 points for qualifications and 1 point for work experience.
4. From 1991 to 1995, applicants could score a maximum of five points for settlement factors. Since 1995, applicants have been able to score a maximum of seven points for settlement factors.

Source: New Zealand Immigration Service.

spouses, *de facto* partners – same or opposite sex – as well as, in some cases, parents, adult children and adult siblings)[48] are entitled to settle without quantitative restrictions, though subject to certain policy requirements. Much of the International Humanitarian stream covers Pacific Islanders who enter under quotas;[49] most of the rest is accounted for by the Refugee Quota and successful asylum seekers.

The planning total for 2002-03 was for some 45 000 immigrants in all three streams taken together (equivalent to about 1.1 per cent of the population), with a margin of error of 5 000. This level was maintained for 2003-04 and is expected to be continued for the next three years.[50] The government argues that this is not a target,

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Table 11. **The immigration programme, 2003-04**

Stream	Skilled/Business	Family sponsored	International/ Humanitarian
Categories	General Skills Category Business categories Entrepreneur Investor Employees of relocating businesses Residence from work categories	Spouses/partners Dependent children Parents Adult children/siblings Family Quota	Convention Refugee Refugee Quota Refugee Family Category Pacific Access Category Samoan Quota Pitcairn Islanders Domestic Violence Ministerial Exceptions to Policy
Proportion of approvals	60 per cent (27 000 ±3 000)	30 per cent (13 500 ±1 500)	10 per cent (4 500 ±500)

Source: New Zealand Immigration Service.

although the fact that the threshold for entry under the General Skills Category has been raised several times in recent years, given the very large number of applicants implies that there is at least a broad view of some maximum acceptable inflow.

New Zealand tries to approve applications rapidly, and one of the reasons for the margin of error built into the planning total was to avoid having to refuse entry to too many well-qualified applicants if numbers turn out higher than expected.[51] Processing times averaged around four to five months in 2001 and 2002, but rose considerably to around 8-10 months in the General Skills category by the first half of 2003. By March 2003 a backlog of 20 000 applications (compared with a "normal" level of some 12 000 applications) had built up in the General Skills Category. Most had accumulated in the New Delhi office as a result of increased applications. Much of this backlog was eliminated by the changes announced in July 2003, discussed further below.

More than half of immigrants currently enter in the General Skills Category, which is based on the points test (provided applicants fulfil health, character and language skills requirements).[52] The bulk of points is awarded on the basis of qualifications, work experience, age and whether the applicant already has a job offer; factors such as spouse's qualifications and settlement funds available can attract additional points. Certain vocational qualifications attract as many points as an academic degree, though the maximum is one point below that from post-graduate qualifications. (See below, and Table 12, for changes to the points system effective from the end of 2003.)

In March 2000 it was made possible for those who failed to get the minimum number of points under the General Skills Category – but who would get the required points if they had a relevant job offer – to enter with a temporary work

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permit. If they could find suitable employment, they could then apply onshore for permanent residence. These Job Search Visas as such were abolished in July 2003, to be replaced by the provisions of the new Skilled Migrant Category as they relate to applicants without a job offer at the time they apply. In addition to the categories already mentioned, people whose occupations are on the Priority Occupations List may be admitted if they have a job offer, and a small number of "Talent" visas are given to people who are recruited by accredited employers or have an international reputation in the arts, sport or a cultural field.

Business immigration policy includes an investor category where the main criterion is investing sufficient funds in New Zealand. Up to now, in most cases it has been sufficient (in addition to meeting the health and character requirements common to all categories) to deposit NZ$ 1 million in an interest-bearing local bank account to qualify under this heading. It also includes an Entrepreneur Category open to people already running a NZ business that is "benefiting New Zealand".[53] Entrepreneurs wishing to set up a business can apply for a temporary visa ("Long Term Business Visa") which allows them to stay for up to three years to gain the experience necessary to qualify for permanent residence. Only small numbers gained residence under the Entrepreneurial category. In 2001-02, 97 per cent of around 4 500 Business visas were awarded under the Investor Category, which is currently under review.

In November 2002 business immigration policy was tightened, with more attention paid to how business plans were being put into operation. The Long Term Business Visas were made valid for only nine months, renewable up to three years. Renewals are conditional on immigrants having set up and operated a business and remaining in the industry they specified.

Changes announced in July 2003

In July the government announced a change to skilled immigration policy and the management of applications under that policy. The General Skills Category is to be replaced by the Skilled Migrant Category in late 2003 or early 2004. The changes are a continuation of the move towards trying to ensure high participation and low unemployment rates among immigrants. The government also argues that it will be better able to attract those migrants it judges New Zealand needs. Although the points system will be retained, entry will not be automatic. Instead, all initial applications (to be known as expressions of interest) meeting a minimum points threshold will be put into a pool (the others being eliminated), and those at the top of the list ranking highly (in terms of points) will be "invited to apply" for residence.[54] Previously, if large numbers of applicants met the announced conditions, the only way to smooth the numbers being admitted was through letting a queue build up. In future, the number of people "invited to apply" from the pool will be limited to those meeting the minimum requirements

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and the number it is intended to admit. The pool will be cleared periodically (about once every three months). Applicants may immediately re-register if they wish. People selected from the pool are expected to be admitted almost automatically if they have a relevant job offer or if they have already worked or studied in New Zealand. If not, they may be put in a work-to-residence programme, with a two-year work permit; if they are successful in finding and maintaining skilled employment, applicants could expect to be admitted permanently. More thorough interviews are likely to be used as a way to try to ensure potential migrants have realistic expectations about what they can expect. Accompanying these procedural changes are some changes in the points system which will give additional points for certain skills that "match New Zealand's skill shortages" (employment, qualifications and work experience in identified growth areas or clusters, or in areas of absolute skill shortage) and for applicants with job offers outside Auckland. Points will no longer be given for job offers not corresponding to the applicant's skills.

To a certain extent, these changes amount to varying the required number of points continuously as a function of the level of demand, although the announced minimum number of points required to register an expression of interest will remain constant. In periods of excess demand for skilled immigration it will therefore be much easier to smooth the inflow. It is not clear what would occur if there were no excess demand (*i.e.* if the number of expressions of interest that meet the minimum points requirement is lower than the planned intake of skilled migrants). The choice would be between lowering the points threshold (though minimum requirements to get into the pool in the new system are less stringent than implicit in the pass mark under the previous General Skills Category) or a lower intake.

The new system is not yet (November 2003) in operation. In the transition period applications under the previous rules were dealt with as normal, with one major change – that those with no "relevant" job offer were automatically rejected. Application fees are being refunded to rejected applicants who applied before the changes were announced and who would have been successful under the previous rules. The interim General Skills Category closed on 12 November 2003 as the first step in implementing the new Skilled Migrant Category. A summary of the points allocation table that will be used to assess employability and capacity building (in order to enter the pool of potential applicants) is provided in Table 12 below.

Temporary entry

A range of permits are available for temporary entry (Box 1). Increasingly this has been seen by the government as an opportunity to allow the labour market to test a potential settler's ability to integrate successfully, as well as to allow entry to migrants who require only temporary residence in any case. The July 2003 changes can be thought of as integrating some of this experience into the mainstream settlement policy.

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Table 12. **The new Skilled Migrant Category: points allocation table**

Factors	Points
Skilled employment:	
Current ongoing skilled employment in New Zealand for 12 months or more	60
Offer of ongoing skilled employment in New Zealand or current ongoing skilled employment in New Zealand for at least three months, but less than 12 months	50
Bonus points for employment or offer of employment in:	
An identified future growth area, identified cluster, area of absolute skills shortage	5
Region outside Auckland	10
Partner employment or offer of employment	10
Work experience:	
2 years	10
4 years	15
6 years	20
8 years	25
10 years	30
Additional bonus points if work experience in New Zealand:	
2 years	5
4 years	10
6 years or more	15
Additional bonus points for work experience in an identified future growth area, identified cluster or area of absolute skills shortage:	
2 to 5 years	5
6 years or more	10
Qualifications:	
Recognised basic qualification (e.g. trade qualification, diploma, bachelors degree, bachelors degree with Honours)	50
Recognised post-graduate qualification (Masters degree, Doctorate)	55
Bonus points for:	
Recognised NZ qualification (and at least two years study in New Zealand)	10
Qualification in an identified future growth area, cluster or area of absolute skill shortage	5
Partner qualifications	10
Age (20 to 55 years)	
20-29	30
30-39	25
40-44	20
45-49	10
50-55	5

Note: This table applies to applications as from December 2003. A minimum of 100 points is required for applications to be put into the pool from which selections will be made.
Source: New Zealand Immigration Service.

Migration policy aims

The New Zealand Immigration Service (NZIS) mission statement says that its purpose "is to contribute to New Zealand's economic and social wellbeing. This is done by developing and implementing immigration legislation and policies to

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Box 1. Temporary entry

Work permits that do not carry permanent residence rights can be applied for under separate arrangements, and these are now frequently used as a route to acquisition of a settlement visa. Most of these focus on people with relatively high skills: permits issued under the Talent policy require applicants to have a job offer with a minimum base salary of NZ$ 45 000 (the average production worker earned NZ$ 39 400 in 2002); the job must be with an accredited employer, or on the Priority Occupations List,[1] or in an area of Arts, Culture or Sports. After two years, holders of Talent Visas are eligible for permanent residence if they have an offer of ongoing employment meeting the same requirements. Skill Shortage permits are issued on the basis that no suitable New Zealanders are available for the jobs that they are filling; if the job is on the Occupational Shortages List applicants are deemed to pass this test, otherwise a specific assessment is undertaken.[2, 3]

In recent years, twice as many work permits have been issued each year as permanent residence visas. Holders of work permits may subsequently apply for permanent residence, and in 2001-02 about 8 000 principal applicants (out of a total of 25 000) had recently held a temporary work permit; nearly 5 000 principal applicants had most recently held a visitor permit.[4] Those holding a Long Term Business Visa (LTBV) represent much smaller numbers; of 8 316 people granted an LTBV between March 1999 and June 2002 (over 5 000 of which were issued in the last year of that period), 457 had gone on to become residents, and only 65 of these were approved through the Entrepreneur Category; most used the General Skills and Investor Categories.

Eight thousand student permits were granted in 1997-98; this grew to almost 74 000 by 2001-02, of which over 40 per cent went to students from China and nearly 20 per cent to those from Korea.[5] The number of permits is thought to exceed the number of students because permits are given for the period for which fees have been paid, not the total length of the course. Nevertheless, this is extremely rapid growth. Of students who had a permit in 1997-98, a cumulative total of 17 per cent had been approved for permanent residence four years later. Between 1997-98 and 2001-02 the number of temporary work permits issued also rose rapidly: from 26 000 to 59 000. These lead more frequently, or at least more rapidly, to residence. Of those given work permits in 1997-98, 33 per cent had residence within four years. Working holiday permits are also numerically quite important. They entitle holders to work in New Zealand for up to 12 months, with conditions that may differ according the country of origin but which often preclude working for the same employer for the entire period. In recent years over 20 per cent of all work permits issued were for working holidays, about half to UK citizens and a quarter to Japanese. For the most part, students and working holidaymakers are not counted in the arrivals statistics discussed earlier, since their permits are usually for less than one year, and the numbers present in the country are lower than the number of permits issued in any one year.[6]

1. Occupations on that list are defined to be in persistent nationwide shortage. Those on the Occupational Shortages List (see next footnote) may be in shortage in some areas of New Zealand but not in others.

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Box 1. **Temporary entry** (*cont.*)

2. The Occupational Shortages List, updated twice a year, ranges (in June 2003) from Aircraft Engineers, Apiarists and Appliance Service Technicians (Refrigeration and Cooling) to Vineyard Workers, Welders and Yacht Riggers. The Priority List is much shorter, including only secondary school teachers, food technologists, many medical professions, IT specialists and veterinarians.
3. Other temporary visas and permits are issued, for example, to spouses and partners of NZ residents while awaiting permanent residence, to working holiday makers, to refugee claimants, to some students and to the spouses and partners of Skill Shortage work permit holders.
4. This figure does not include people who visited New Zealand for up to three months (or up to six months for UK citizens) from countries with which New Zealand has visa-waiver agreements. It is likely that, if people from such countries were included in the analysis, then visitor permits would have been the most common temporary permit type held prior to being approved for residence.
5. Some of these are also accounted for by children of work-permit holders, including refugee claimants, who are classed as domestic students.
6. Even where students are attending a course that lasts for more than 12 months, their permits are valid for the period for which they have paid their fees, which is usually less than 12 months, and are renewed as necessary.

facilitate the entry of visitors, workers and migrants, while minimising risks and maximising the contribution to growth and enhancement of New Zealand's economy and culture". This does not place any explicit weight on population *per se*, and by referring to the wellbeing of "New Zealand" leaves ambiguous precisely whose wellbeing is intended (only current residents, current citizens – of whom one in eight do not live in New Zealand, or also future residents). Although policymakers – in New Zealand and in many other OECD countries – often refer to the fact that they are competing in some sense to attract highly skilled migrants, there has not so far been a definite strategy to promote this. The government intends to finds ways to explicitly market New Zealand as an attractive destination for skilled migrants, however, and hopes to use expatriate networks for this purpose.

The authorities have focused on two observations in their recent policy initiatives. One is that many of the highly skilled people whom several governments are trying to attract, and probably an increasing proportion of all potential migrants in many countries, are long-term but temporary migrants. The other is the relatively high rates of unemployment among recent migrants during the 1990s (see below), even those who had been selected under the newly introduced points scheme for their potential to increase average productivity. The first observation has led the government to place more emphasis on short-term gains to

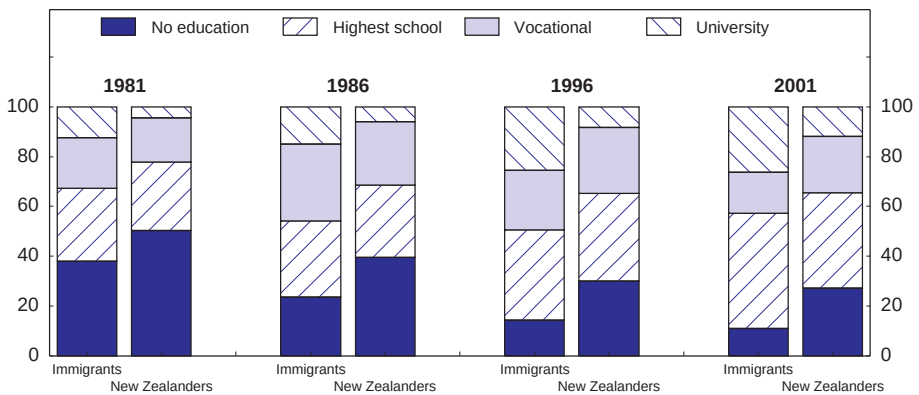
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New Zealand. The second draws attention to the fact that no economic benefit is likely from immigrants while they are unemployed. Although it would be hard to specify how to *maximise* the contribution of immigration to New Zealand's economy, improving short-term employment outcomes for migrants should at least *increase* it, provided selection is not so narrow as to reduce the flexibility of the workforce in the face of structural changes.

Recent policy changes have therefore been directed towards raising the short-term employability of immigrants. Even before the July 2003 changes, these included the increase in the number of points granted on the basis of a relevant job offer and the advent of the short-term Job Search visa. Poor employment outcomes are also thought to have been partly related to inadequate screening for English-language ability, hence the tighter requirements introduced in the second half of the decade and further tightening in 2002.

The points scheme has ensured a highly skilled intake in the General Skills Category, since it is impossible to get the required number of points without a formal qualification. When the educational level of recent immigrants of all categories is compared with that of the working-age population, however, the change between the 1986 and 2001 censuses is as significant for the reduction in the number with no qualifications as it is for the increase in tertiary qualifications (Figure 26). The share of immigrants with a university degree doubled from 1986 to 24 per cent in 2001;

Figure 26. **Educational attainment of recent immigrants and New Zealanders**
Per cent composition, people of working age[1]



1. Recent immigrants are defined as those who arrived in New Zealand in the five-year period prior to each census. Excludes those not fitting into any of these categories.

Source: Winkelmann and Winkelmann (1998) and Boyd (2003).

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although the share of the university-educated NZ-born more than doubled, it did so from a much lower level, widening the gap between the two.

Attracting migrants?

A recent report (L.E.K. Consulting, 2001) argues that New Zealand should compete more actively to attract talent (a concept that is close to "highly skilled") and has several recommendations that normally lie outside the range of action by central governments. Notably, it argues that highly skilled migrants are attracted by "lifestyle" as well as by material standards of living, and suggests that the lifestyle sought by the highly mobile can only be found in large dynamic cities. Sydney is cited as the only example in the Australasian region, and indeed Sydney has been attracting certain activities away from Auckland and Wellington in recent years, especially company head offices. To compete, argues the report, Auckland should become a "Global Lifestyle City", though this may not be something that government action can do much about.

One activity which is probably already attracting future migrants is the education industry. The provision of education services to foreigners is a growing activity in many OECD countries (Larsen and Vincent-Laurin, 2002). Growth in New Zealand has been considerable, although less rapid than in Australia, with numbers doubling between 1990 and 1999, and tripling since 1980. Growth has continued since 1999. Now quite significant in terms of export earnings,[55] this growth can influence immigration in two ways. F*irst*, it introduces large numbers of potential immigrants to the country[56] and, assuming that this introduction is successful, may well generate interest in migration. S*econdly*, since NZ qualifications are more highly valued by local employers than foreign qualifications, it may increase the speed with which immigrants who enter this way integrate in the labour market. The role of providing education services to foreign students in integrating immigrants may be more important than in attracting them, since anecdotal evidence suggests that in many cases the education decision is linked with an idea of migrating anyway. About 30 per cent of the students are Chinese, reflecting the increasing tendency of students from that country to look for an English-language education abroad.[57] New Zealand now allows foreign students to apply under the General Skills Category onshore.[58]

Education exports are not restricted to the tertiary sector. Since 1990, state-sector schools may take fee-paying foreign students. The decision is delegated to school governing boards, so there is no national policy other than the requirement that foreign students are not subsidised by their national counterparts.[59] Provided that the schools charge adequate fees, scale effects allow schools to augment the range of services available to other students. The same is true for tertiary institutions, which may also benefit from wider international connections, perhaps enhancing their ability to attract foreign teaching and research staff.

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A factor that may already be, or has the potential to be, important in attracting migrants is the development of Immigration Consultants. They sometimes have a bad reputation; for example, there are suggestions that they provide potential migrants with little information that could not be obtained from official sources, or they devote their time to finding loopholes in legislation. An NZIS report concludes that the main problems were related to making inappropriate claims for refugee status and giving poor advice on the immigration process and other aspects of migration, but it was unable to quantify the importance of these issues (NZIS, 2001). Immigration agents have also recently acted as a kind of pressure group for potential migrants: the New Zealand Association for Migration and Investment, an umbrella group for migration agents, recently took the government to court over November 2002 changes to the English-language standard required for a Job Search Visa. Standards were tightened without notice, so a number of applicants who would have qualified when they applied under the General Skills Category faced a stiffer test than they expected. The High Court ruled in favour of the Association in May 2003, and though the government signalled that it wished to appeal, events were overtaken by the July 2003 policy changes.

The economic impact of migration

Various sources, principally the census but also NZIS records and other government agencies, provide a considerable amount of information on the experience of immigrants and comparisons can be made across groups. While there are comprehensive surveys of the labour market experience of immigrants, and studies of their direct contribution to public sector finances, few studies have attempted empirical modelling of the overall and longer-term impact of migration on the labour market or its consequences for the economy. This section considers evidence on the labour market experiences of immigrants, the possible consequences of migration for labour market behaviour, its fiscal effects, and finally discusses the overall impact.

Labour market experience

Even when net inflows are not great, the gross inflows and outflows can be large. The number of new immigrants to the labour force is similar to the approximately 50 000 residents who enter the labour force each year.[60] But for the most part they would be unlikely to compete directly with new entrants.

Evidence on the labour market experience of immigrants comes from a study of census data (Winkelmann and Winkelmann, 1998) covering the years 1986, 1991 and 1996, with some updating following the 2001 census. One of the most important issues is how well migrants integrate into the labour market over time. Since census figures are "snapshot" data, without any means of linking observations on individuals in one census year to what they were doing in earlier years, indications on how immigrants'

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positions change over time have to be treated carefully. Longitudinal surveys are necessary to be sure about such questions, but none have yet been undertaken in New Zealand.[61]

As in Australia and the other traditional countries of settlement, labour-market outcomes for immigrants in New Zealand tend to converge over time towards those of the locally-born, though with the rate of convergence varying according to what measure is used. Considering annual income of immigrants compared with those of the NZ-born, this convergence appears to be rather slow, with parity being reached after between 15 and 25 years. When census data are used to compare the simple average of the incomes of migrants who arrived a certain number of years earlier, convergence appears to occur after around 15-20 years. Thus, in the 1986 census, average incomes of immigrants who arrived 15-20 years earlier (in the 1966-70 period) were 2 per cent higher than the average for NZ-born, while those who arrived 10-15 years earlier (in 1971-75) had incomes about 3 per cent lower. By 1996, average incomes of those arriving 15-20 years earlier were still about 8 per cent lower, while those from the 1971-75 period, now in the country for 20-25 years, were 12 per cent higher.[62]

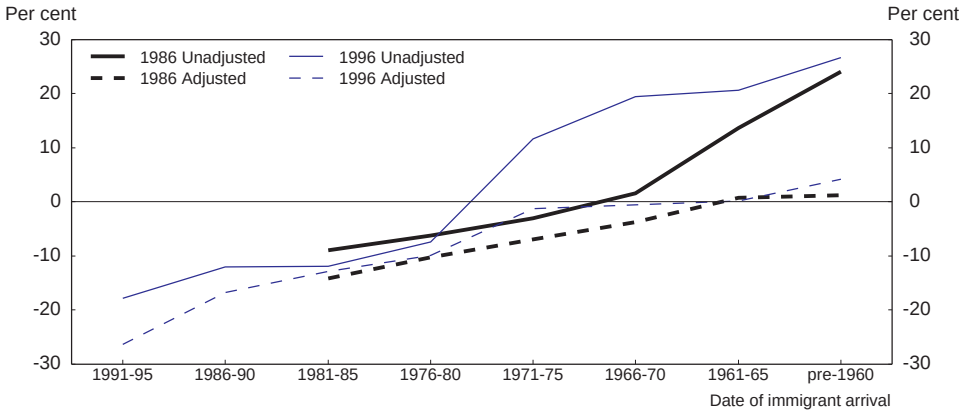
Winkelmann and Winkelmann (1998) take account of variations in certain immigrant characteristics – age, education and gender – by estimating a regression model for earnings as a function of these variables. They find that the implied catch-up period is actually longer than obtained when using unadjusted data. In the 1996 census, immigrants who had been in the country for 15-20 years were still earning incomes below those of NZ-born people of similar socio-economic profile (Figure 27).

Although this looks like convergence, whether after 15 or 25 years, the picture is not one of immigrants from diverse backgrounds converging equally quickly. The experience of immigrants seems to vary substantially according to their country of origin. Employed immigrants from the United Kingdom and Ireland, for example, start with average incomes well above those of the NZ-born, while those from the Pacific Islands have very low relative incomes (Figure 28).[63] In the case of the first group, this appears to be explained largely by such immigrants being more highly skilled than the NZ-born, but according to estimates in Winkelmann and Winkelmann (1998) to take account of age, gender and education, such differences do not explain much of the very large income gap for Pacific Island immigrants. On the other hand, a process of catch-up is evident for Pacific Islanders and Asians.

The catch-up shown in Figure 28 for Pacific Islanders is in terms of their position corrected for the influence of age, gender and education. It does not show that they converge on average economy-wide incomes, since their educational level is low. More importantly, it seems that low educational achievement and low participation in post-compulsory education are also characteristic of the *children* of immigrants of Pacific Island origin. In the year 2000, 47 per cent of the working-age population of Pacific Island origin had at least an upper secondary

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Figure 27. **Income differentials between immigrants and New Zealand-born, 1986 and 1996**[1]

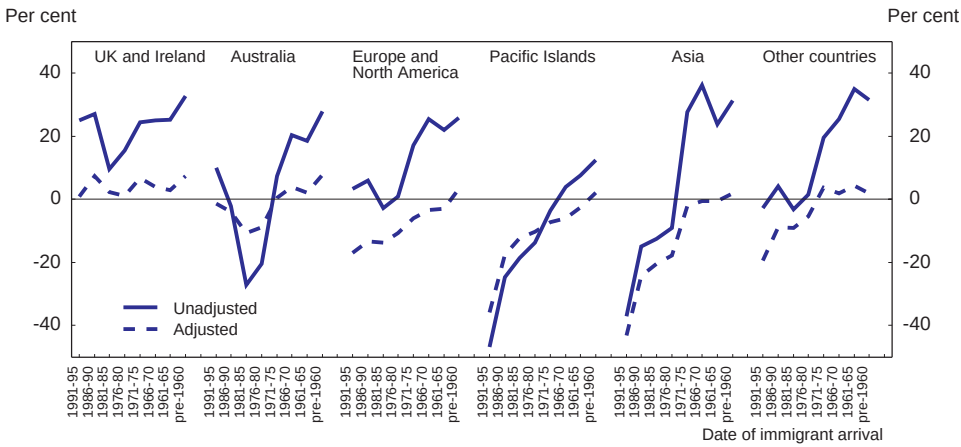


Note: Adjusted figures take account of the age, education level and gender of the immigrants relative to the average New Zealand-born.

1. Figures cover only those in employment at the time of the census.

Source: Winkelmann and Winkelmann (1998), Table 37.

Figure 28. **Income differentials between immigrants and New Zealand-born, by region of origin, 1996**[1]



1. Figures cover only those in employment at the time of the census. Adjusted figures take account of the age, education level and gender of the immigrants relative to the average New Zealand-born.

Source: Winkelmann and Winkelmann (1998), Table 39.

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level of qualification, compared with 71 per cent for the population as a whole, and only 4.1 per cent had a tertiary level qualification (12.6 per cent for the population as a whole). Although these figures remain low, there are some signs of considerable improvement recently.[64] The OECD PISA comparative study of educational performance at secondary level (testing children at age 15) showed that New Zealand has very high levels of performance overall, and that the gap between native-born children and foreign-born children, or NZ-born to foreign-born parents, is quite small and among the lowest in OECD countries (with only in Australia and Canada being lower). There is, however, a significant gap between children who speak English at home and those who do not; this gap is much greater than in Australia and Canada and is comparable with other countries such as France and the United Kingdom (OECD, 2001c).

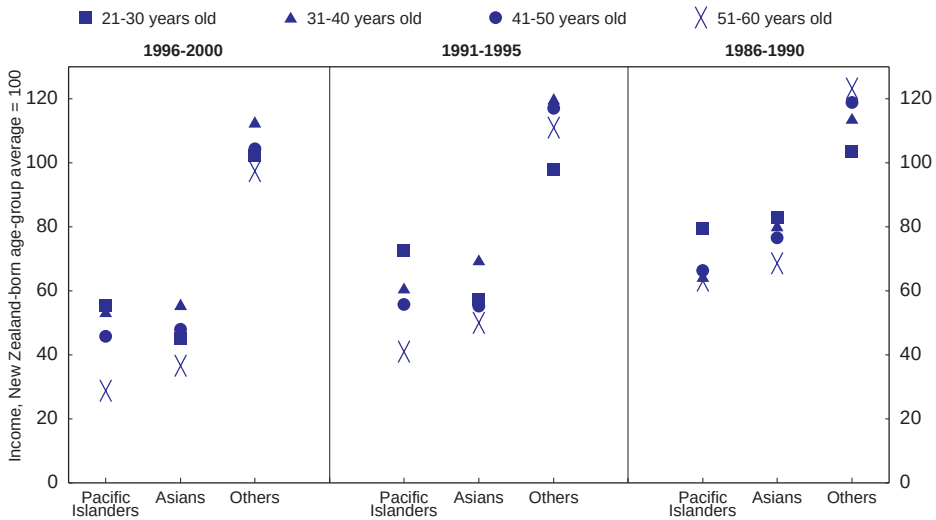
A further impression from Figure 27 is that the average recent immigrant in 1996 fared less well in the labour market than corresponding immigrants a decade earlier. A similar phenomenon appears in Canada, where "economic" immigrants (who are admitted on the basis of a points test) had incomes comparable with those of average Canadians on entry in the early 1980s, but significantly lower initial incomes during the 1990s (OECD, 20038*e*).[65]

Notable income disparities by region of origin among recent immigrants were still visible in the 2001 census. Data adjusted in the same way as those in Figures 27 and 28 are not available, but comparison of age-specific gaps shows that differences in average age of migrants compared with the NZ-born cannot explain more than a small part of the income gaps, which exist for all age groups (Figure 29). Pacific Island-origin immigrants aged 21-30 seem to have a smaller income gap than the older age groups, regardless of in which period they arrived, whereas for other groups this is not the case, and for those of European origin the reverse seems to be true, at least for established immigrants.

These comparisons of income concern only the employed. Recent immigrants tend to have lower participation rates and higher unemployment rates than the NZ-born, and an important measure of immigration outcomes and the performance of labour-market institutions is how big this initial disadvantage is and how quickly it is reduced. The most important period is the first few months and years. Preliminary results from the pilot Longitudinal Immigration Survey of New Zealand (LisNZ) have recently become available.[66] The pattern is similar to Australia's data,[67] with increases in employment rates of 9 percentage points (Table 13). But these increases are small compared with the variation between categories of immigrant, and the importance of English-language skills is clear (both phenomena also appear in the Australian longitudinal survey). Sample sizes are small, however, and these data are from a pilot study, so it is probably not wise to draw conclusions from – for example – the apparent low level of and small increases in employment rates among family and humanitarian immigrants (shown in the last

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Figure 29. **Relative immigrant incomes in 2001 by age and date of arrival**



Source: Boyd (2003).

Table 13. **Employment rates among certain categories of immigrant: LisNZ[1] pilot data**

Percentage in work or self-employed

Time since arrival	All immigrants	Skilled/business		Non-skilled/business, English as second language[2]	
		Principal applicants	Secondary applicants	Good English skills	Poor English skills
6 months	53	76	43	51	22[4]
18 months	62	84	51	50	27[5]
Sample size[3]	690/546	246/186	147/120	99/81	102/75

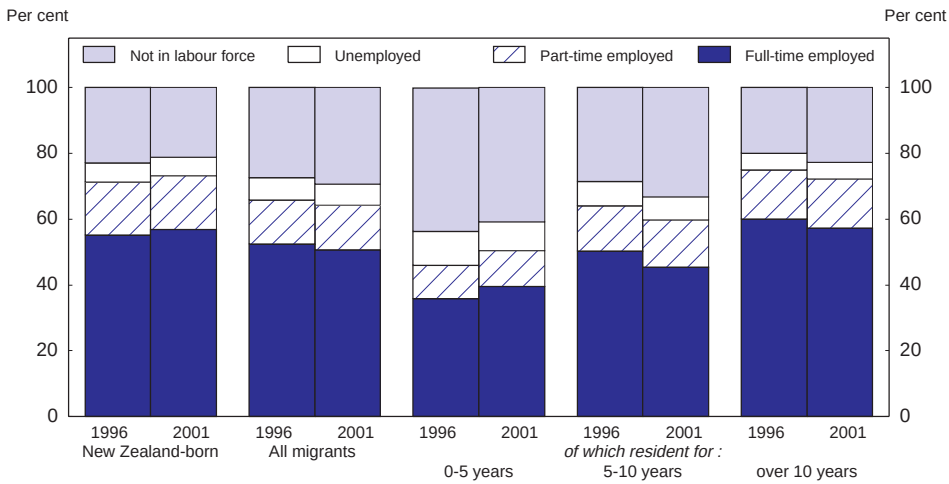
1. Longitudinal Immigrant Survey: New Zealand. The pilot survey interviewed a sample of immigrants who arrived, or whose application was approved, in late 2000 or early 2001.
2. This includes both principal and secondary applicants from Family and Humanitarian, including Pacific Access, categories.
3. Denotes sample sizes at 6 and 18 months.
4. Sampling error +/– 8.
5. Sampling error +/– 10.

Source: New Zealand Immigration Service.

two columns).[68] Improvements in outcomes are observed using census data, with employment rates rising and unemployment and inactivity rates declining with length of residence (Figure 30).[69]

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Figure 30. **Labour force status of New Zealand-born and immigrants**
Age 15-64



Source: Statistics New Zealand.

Figure 30 also shows, however, that overall participation rates for immigrants were lower in 2001 than in 1996, even though the unemployment rate had fallen slightly, and that in both years immigrant participation was lower than for the NZ-born. This is a reversal of the historical pattern. In 1981, for example, the average participation rate among immigrants was 74 per cent, rising to 76 per cent in 1986, higher than the figures for the NZ-born of 71 and 75 per cent, respectively. This pattern of relatively high participation (and relatively low unemployment) among immigrants had often been taken as corroboration of the idea that immigrants are naturally more enterprising than average, and its reversal may call this into question or reflect some problems of labour-market function. The story is not simple, however. For example, participation rates vary considerably according to regional origin: in 2001 about 19 per cent of migrants from the United Kingdom and Ireland were not in employment compared with 29 per cent of those from Western Europe and America and 62 per cent of those from North-East Asia. Furthermore, between 1996 and 2001, participation and employment rates increased for migrants from nearly all regions and almost irrespective of their length of residence in New Zealand. This suggests that the decline in overall immigrant participation and employment rates shown in Figure 30 is due to the changing pattern of regions of origin of migrants (or other characteristics correlated with this), and that labour-market functioning improved when allowance is made for this.

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Fiscal impact

One study, which has some limitations[70] (BERL, 2003), shows that the net per capita contribution of immigrants to the fiscal balance is positive, indeed more positive than that of the average NZ-born person (Table 14). "New" migrants (those resident for less than five years) have a less positive contribution than those resident for more than five years, since the latter tend to have much higher incomes and therefore pay more taxes, but do not make much more of a claim on public expenditures.

Table 14. **The fiscal contribution of immigrants**

$ per capita in 2000-01 prices	New Zealand-born	Overseas-born			
		Total	Length of residence in years		
			0-5	5-10	Over 10
Government revenue					
Income tax	5 136	5 561	3 677	5 134	6 910
GST	1 495	1 630	1 333	1 490	1 883
Petrol, alcohol and tobacco excises	555	603	493	551	697
Government expenditure					
Early childhood education	112	21	76	1	0
Primary and secondary schools	860	534	988	925	50
Tertiary institutions	331	355	478	456	228
Health	1 709	1 968	1 364	1 415	2 630
New Zealand Superannuation (NZS)	1 371	1 707	0	225	3 535
Unemployment benefit	252	241	245	297	208
Domestic purposes benefit	345	229	128	274	264
Sickness benefit	69	75	45	86	88
Invalids benefit	121	86	22	51	144
Supplementary benefits	166	177	178	208	160
Student allowances	99	132	162	228	62
Net impact[1]	1 749	2 266	1 817	3 007	2 121
Population (in hundred thousands)	3 053	741	204	191	346

1. Allowing for impacts on revenue and expenditure categories as explicitly identified in the table only.
Source: BERL (2003).

Impact on output and growth

Despite the lack of formal modelling to assess the overall consequences of immigration, the generally accepted view is that immigration is beneficial for the economy.[71] This may result from economies of scale, though there is doubt about whether economies of scale exist at the level of the New Zealand economy as a whole (see NZIER, 1998),[72] even if they exist for individual plants, or if cluster effects may manifest themselves in certain areas. Although arguments that large

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cities and a cosmopolitan lifestyle attract migrants, and that associated clustering effects might raise productivity may be plausible, the empirical evidence is far from conclusive.[73] Existing empirical literature for other countries (see Antweiler and Treffler, 2002 for a cross-country study and Perkins *et al.*, 1990 for a study on Australia) might suggest that an estimated scale elasticity would be no more than 1.2: a net immigration flow that increased population growth by 1 percentage point would increase per capita output growth by 0.2 per cent. Such figures are highly speculative, rather than a basis for policy-making, though they would imply that migration could have a significant impact on the economy.

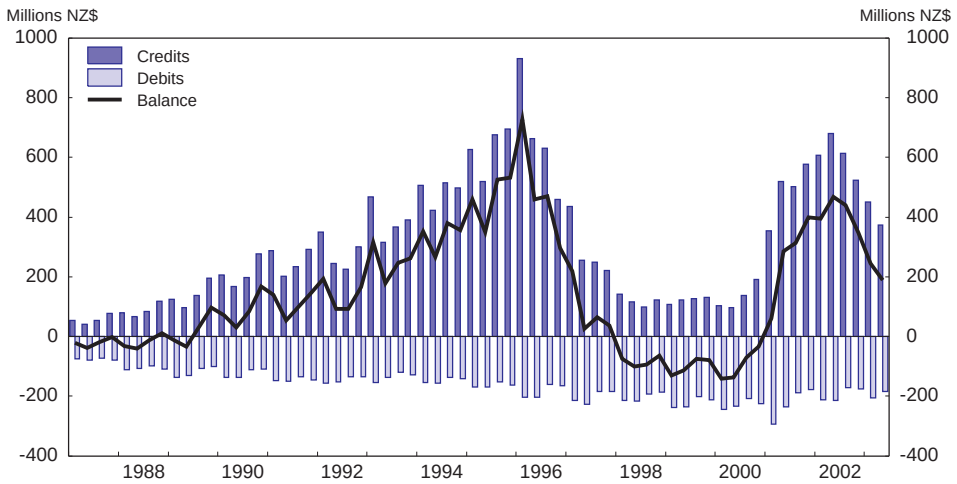
Another aspect of this growth is that migrants tend to concentrate in Auckland. This has resulted in rapid expansion of the city so that both congestion and rising real estate prices have become issues. While congestion costs are real, rising real estate prices are partly a distributional issue, benefiting property owners at the expense of others. To the extent that population pressures are behind rising property prices in Auckland, rapid expansion of the education industry may be as much a culprit as immigration, since overseas arrivals are as likely to be students as long-term migrants.

Migration movements affect aggregate demand as well as aggregate supply, and the balance between the two effects may be different in the short run from that in the long run. The short-run macroeconomic effects receive more attention in New Zealand than in most countries, perhaps because there can be significant variations in annual net inflows and because some of these variations are themselves related to economic developments. Most immigrants are either highly skilled, many of whom probably arrive with some financial assets, or have some close family connections; the family connections may not be wealthy, but they are likely to be willing to help with installation. It has been argued that high net immigration in the mid-1990s contributed to rising house prices to such an extent that it threatened to have wider consequences for inflation, and the current high levels of net inflows have also been accompanied by rising property prices.[74]

There is not sufficient or detailed enough data on the behaviour of the NZ economy to give clear answers on the overall effects on per capita incomes of existing residents. One assessment concludes that recent net immigration has been expansionary in the short term[75] in the sense that it expands demand more than supply (Goh and Downing, 2002). Although net migration inflows have been large, the study notes that an increasing proportion have been under 24 years old, generating relatively greater demand for education expenditures, for example. On the other hand, the large wave of immigration in the mid-1990s may have been more inflationary, partly because of the large balance of payments inflows that accompanied it (Figure 31).[76] If net migration inflows into New Zealand were responsive to the economic situation with little lag, there could be a potential tendency for these flows actually to amplify the cycle, rather than play the damping

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Figure 31. **Immigrants' capital transfers in the balance of payments**
Quarterly rates, not seasonally adjusted



Source: Statistics New Zealand.

role that one might expect. Apart from this, the implications of high net immigration flows for macroeconomic balance are perhaps not very different from those of an increase in exports, given that a considerable proportion of the increase in demand due to immigration is financed from external capital flows, except that the inflow itself generates increased supply. In the longer run, migrant participation rates increase and unemployment rates decline over time, so the contribution to supply must increase relative to the effect on demand. However, precise control of net migration is difficult, since the government cannot reasonably control either returning New Zealanders or departures of any nationalities. The annual planning totals for settlement visas are, however, set after discussion with economic ministries. This probably influenced, for example, the decision to maintain the planning total for 2003-04 and subsequent years at about the same level as 2002-03, despite the availability of many highly qualified potential applicants at the moment.

Immigrant employment reflects the economic structure

Since the economy has been built on, or with, migrants, looking for an impact of migration on the industrial structure is difficult. Census data show that the distribution of overseas-born employment across broad industry groups is similar[77] to that of the NZ-born, apart from construction and agriculture. Otherwise,

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the similarity in the patterns of employment by industry is likely to be a reflection of the fact that, despite the changing geographical origins of migrants, they are relatively similar to the existing population in their balance of skills and aptitudes.

Construction and the primary sector each employ around 4 per cent of the foreign-born but 6 and 9 per cent, respectively, of the NZ-born. This is a marked contrast to some European countries[78] and to the United States where one or both of these industries, as well as hotels and catering, often employ large numbers of immigrants. The difference is that in those countries there is a rather higher proportion of unskilled migrants, often illegal and perhaps not speaking the local language. In the case of agriculture, it is often argued that employment of unskilled and/or illegal immigrants is itself partly due to the protective trade regime that governs agriculture in many countries.

The impact of emigration

Very little is known with any certainty about the impact of emigration – emigrants rarely figure in national datasets while they are away, and little is recorded about them when they leave. Discussion of their impact is therefore a little speculative. The main issues are the extent to which they constitute a "brain drain" (and whether this is a problem anyway), how their activities abroad may affect New Zealand, how many of them eventually return and what benefits they bring if and when they do.

A large proportion of New Zealanders in their twenties travel abroad to work. Most go to Australia (at least as their first declared destination) and many to Europe, particularly the United Kingdom. They are relatively highly qualified, compared with the NZ average. Since the inflows are also relatively highly qualified, it can be argued that there is no significant net loss of human capital. But this may not be the appropriate comparison unless it is thought that the immigration would not occur (or would not be permitted) if emigrants were not leaving. In practice, it can be argued that economic activity in New Zealand is reduced in the short term by emigration and that per capita incomes are also lower as a result, given emigrants' relatively high levels of human capital. However, since it may be presumed that emigrants themselves are better off than if they stayed,[79] economic activity attributable to New Zealanders, irrespective of where they live, is probably increased.[80] There is some evidence that New Zealanders in Australia, at least, are relatively industrious – their participation rates are higher than average in Australia and their recourse to social welfare lower, though this is largely accounted for by their relative youth (NZIER, 2000).

Some studies find a relation between the presence of immigrants and trade patterns, as the presence of groups of immigrants from particular countries may encourage both imports from and exports to these countries. This appears to be relevant in Canada for example (Head and Ries, 1998). No information on this

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is available for New Zealand. Yet it can be presumed that the presence of large numbers of foreign born in New Zealand and of New Zealanders working abroad does facilitate international trade and investment links for a country that is otherwise extremely geographically isolated, even if the size of this effect is unclear.

It is thought that most New Zealanders who emigrate eventually return. There is some suggestion that average stays have been lengthening, though there is no statistical series on which to base this conjecture. A survey of expatriate New Zealanders (L.E.K. Consulting, 2001)[81] does suggest that they stay abroad for longer than originally intended. Of those who had been away for up to two years, two-thirds had already been away longer than they intended, and one third of those who had been away for between three and five years. Initially, the intention appears to be to stay away for up to five years (this covers two thirds of the sample), with about one in six expecting to stay more than 10 years or indefinitely.

The fact that there is a well-established name for the period of time that New Zealanders spend abroad before returning home – "OE", for Overseas Experience – already suggests that they have in mind something more than simply seeing the world; acquiring human capital that would be useful on their return is an explicit aim for many. How important this really is, either in terms of intention or outcomes is impossible to judge. One piece of research on temporary emigrants from Ireland (Barrett and O'Connell, 2001) suggests that there can be a measurable effect of overseas experience on incomes,[82] but this is not yet a well-established phenomenon, since it is difficult to control for a number of factors, notably the possibility that emigrants may be self-selected from among the more dynamic individuals for any given initial qualification level.

Integration ("settlement") policy

In the 1990s there were no active policy measures to follow immigrants' progress or provide specific assistance or information to improve their employment prospects, once they had arrived in the country. Towards the end of the decade, when unemployment problems among recent skilled immigrants were observed,[83] attention turned to this issue. A number of programmes have been launched or piloted, including research into the process of integration itself.[84] Some of these programmes are focused on employment outcomes; implementation, which usually follows pilot studies, is generally decentralised to particular areas and is often subcontracted (*e.g.* to Chambers of Commerce or Citizens Advice Bureaux) or in the form of joint projects between government and private-sector or non-profit agencies.

One of the characteristics of the economy that may be relevant in analysing employment outcomes is average firm size. It is argued that small firm size implies that employees cannot, for the most part, be highly specialised within firms, that people have to be willing to "lend a hand" to tasks that are not their direct responsibility, and that in order for this to work smoothly, communication

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skills are especially important. It might be expected that those with poor English-language ability would be at a disadvantage in this kind of labour market. Australian companies are, on average, of a similar size to NZ firms, and studies there show the importance of English-language skills for successful labour-market integration.[85] This is one of the reasons behind the progressive tightening of the English-language requirements.

Firm size is therefore likely to be part of the reason for the difficult labour-market experience of some immigrant groups in the 1990s. However, there is some evidence that part of the explanation may also be discrimination by employers; for example, people with good English but the wrong accent are said to be discriminated against (Equal Employment Opportunities Trust, 2000). According to Oliver (2000), the main barrier was not English competence, but degrees of employer discrimination and stereotyping, together with inadequacies in the ESOL (English language tuition for Speakers of Other Languages) courses available. Furthermore, an NZIS survey showed that very few employers who actually took on an immigrant found that English-language problems adversely affected employee performance; 93 per cent said they would willingly accept an immigrant employee again.[86]

Some employer organisations have argued that aspects of labour law may also be partly responsible for integration difficulties, by making it difficult for employers to hire "risky" employees. In the 1990s it had become easier for employers to engage new staff with a probationary period. The Employment Relations Act (2000) allows for these contracts, but according to some employer organisations specifies such tight conditions on procedures – for example, explicit expectations on productivity/performance must be established in advance – that it is rarely worthwhile employing people on this basis (See the next Chapter).

Initiatives aimed at improving labour-market outcomes among immigrants may be useful regardless of whether difficulties for immigrants are due to unjustified discrimination or to real difficulties for some immigrants in "fitting in" in NZ firms. Two programmes in Auckland illustrate this. The "New Kiwis" programme and the "Hi-Q" (for highly qualified) are both online job-matching services.[87] New Kiwis provides a database of around 4 000 CVs skilled immigrants, which can be searched by employers looking for candidates, and also has information on job vacancies that can be looked at by migrants. Maintained by the Auckland Chamber of Commerce and supported by finance from NZIS, this programme aims to reduce the information gap for both employers and immigrants[88] but does not provide much active intervention. Another Chamber of Commerce programme, also funded by NZIS, founded on the observation that a key inhibitor to business growth is difficulties employers have in hiring skilled staff, promotes skilled migrants' potential to employers more actively. Auckland New Ventures, a joint venture set up in 1988 by NZIS and local government in Auckland, runs Hi-Q. It has

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some similarities to the New Kiwis programme but is more "hands on", involving counselling of new immigrants regarding the kind of jobs they can expect to get, along with other information such as how best to apply. NZIS and Department of Labour funding also supports a wide range of other programmes, often selected from competing bids from various providers and in different parts of the country. These are generally related either to improving information flows or certain job-specific training to improve employability for immigrants. The availability of facilities such as telephone translators for a suitable range of foreign languages is also being improved.

Conclusions

New Zealand's immigration policy has evolved considerably over the past two decades or so, towards its current aim of selecting two-thirds of its non-humanitarian permanent immigrants on the basis of their skills and the rest on the basis of family connections. There are signs that the government was right to interpret the early versions of this policy (which concentrated on bringing in human capital as measured by level of qualifications but without sufficient attention paid to language skills) as generating poor labour-market outcomes among some migrants, despite their high level of skills. It increased the minimum level of language ability required for Skilled/Business migrants several times. Most recently it modified selection policy to try to ensure skilled migrants enter the labour market successfully as soon as they arrive and also to give some weight to applicants who wish to work in specific sectors of activity. These changes are unlikely to reduce overall immigration inflows at the moment, given the current level of applications, which suggests that the supply of potential migrants will remain high for some time.

Improving labour-market outcomes among skilled migrants will bring economic benefits. Results from a pilot for the longitudinal survey suggest that skilled immigrants already have high employment rates within 18 months of arrival; improving overall labour-market outcomes among immigrants will require attention being paid to the labour-market experience of other migrant categories as well.

Fluctuations in net migration flows are considerable. It is possible that this generates some cyclical "amplification" effect, as recent arrivals add more to demand than to supply in the short term. This does not show up systematically in correlations between broad cyclical indicators and migration flows, however. Recent policy changes improve the ability to regulate inflows in periods of high demand, although it may turn out to be similar to a queuing system with overall numbers not very different from the current one. The increased use of temporary entry as a qualifying period may put pressure on the annual quota in the future if large numbers of temporary entrants successfully prove themselves.

The government recognises that some problems of integration may be related to employer discrimination, direct or indirect, on the basis of perceived

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language problems such as those associated with unfamiliar accents or cultures, rather than objective or demonstrated language difficulties. Given that immigrants' regional, linguistic and ethnic origins are now much wider than they were for the first three-quarters of the twentieth century, improved integration will depend both on successfully selecting immigrants who will "fit in" and on flexible attitudes among New Zealand employers. Some programmes have been initiated that may improve these outcomes for any given immigrant intake; they are promising and should be followed up with careful analysis of their effectiveness.

The government should also bear in mind that selecting for particular sectors of immigrant employment is subject to the same risks as the discredited industrial policy of "picking winners": any skills that are currently only narrowly applicable in certain fields risk becoming much less valuable than more general skills. Offering incentives to migrants willing to settle outside Auckland may reduce the pressure on that area, but probably not by any noticeable amount, unless it alters the underlying relative attraction of central and peripheral regions.

Aggregate data suggest that immigrants tend to converge on NZ levels of incomes and labour-market participation, controlling for age, sex and education levels, even if after a longish period which may be up to 20 years for some groups. However, this appears to be the result of very different outcomes for groups with different countries or regions of origin. Immigrants from the United Kingdom start with income levels comparable or higher than that of comparable New Zealanders, whereas those of Pacific Island origin have very low incomes in the first years after arrival, though catching up subsequently (after taking account of their low skill levels).

Although analyses of successive census datasets show Pacific Islanders catch up with NZ residents of similar skill levels, even the educational and skill levels achieved by their offspring do not seem sufficient for this group to give the result – observed in many OECD countries – that second-generation immigrants from unskilled backgrounds do relatively much better than their parents. This is probably not an issue specific to their immigrant status, since it is also observed that NZ-born people of Maori ethnic origin are not, as a group, converging very rapidly on the educational or skill levels of the European-origin population. These phenomena deserve further investigation, and the proposed longitudinal survey of migrants should eventually provide useful information; an accompanying new parallel survey of the income and expenditure dynamics of the NZ population as a whole (Survey of Household Income and Expenditure) will make it easier to draw conclusions about the process of integration.

Although immigrants' labour-market experience is fairly well documented through analysis of census data, there is no work on the specific impact of migrants on the labour market – in particular their influence on wages and unemployment levels. Current immigration policy settings, with the important weight attached to skills and labour-market testing, and the significant capital inflows that tend to

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accompany immigration, make it unlikely that there are significant short-term negative impacts, such as depressing wages or employment among the existing residents; potentially, some of this could be hidden by the response of emigration flows to these same effects, but there is no evidence to support this.

Emigration is as important as immigration to New Zealand. But its implications are even harder to establish empirically. Given that most of those who leave New Zealand to acquire "OE" appear to return, that most people appear to feel that they have acquired valuable experience while abroad, and that the current outflow of skilled people seems to be broadly matched by inflows of people to replace those skills, there is no obvious reason to fear a brain drain. However, the pattern of country origins of immigration does mean that changes in the ethnic make-up of the New Zealand population will continue.

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IV. Improving labour market outcomes for marginal groups

New Zealand's overall labour market performance is good by OECD standards and has been particularly impressive in the past few years. Employment legislation and the industrial relations framework both contribute to a labour market that has been able to painlessly absorb a significant influx of working-age migrants over the 1990s. The flexibility of the framework has made it easier to cope with significant changes in working practices, including greater use of part-time and temporary work and a shift towards higher skills. It has also given more scope to small firms to tailor employment conditions to their specific needs. In terms of basic outcomes, this framework has delivered above-average employment rates for men and women, and an unemployment rate below 4½ per cent of the labour force. The incidence of long-term unemployment, as measured by the labour force survey, is also low in comparison with other countries. However, a broader measure of joblessness that includes people only marginally attached to the labour force – *e.g.* those without a job but who want one – is considerably higher (Table 15). Thus, there is still a significant number of able-bodied people who are permanently or frequently out of work and who may be able to be brought into the labour force if particular blockages are removed. This Chapter reviews the labour market position of such people and focuses on social assistance reforms that may help the jobless move from welfare to work while minimising any negative impacts on poverty or social outcomes more generally. It also discusses the importance of maintaining labour market flexibility.

Who are the long-term jobless?

Since 1999, most of the reduction in joblessness has come from a reduction in the ILO-consistent survey measure. The number of people available for but not actively seeking work, or looking but temporarily unavailable, has not fallen by anywhere near as much, while the fall in the number of people receiving the unemployment benefit has lagged the general improvement in employment conditions. The share of the population receiving other benefits, especially single parents and the disabled, has been broadly stable or rising over the 1990s (Figure 32).

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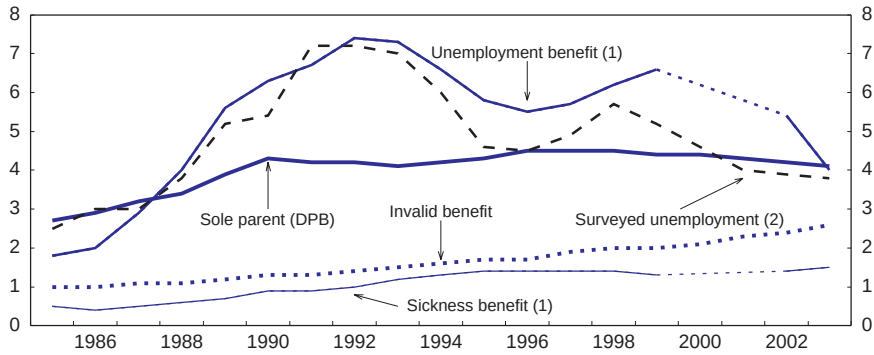
Table 15. **The jobless and job-search methods**
Per cent of the working-age population

Year ended March	Officially unemployed (ILO measure)	Available for but not actively seeking work[1]			Actively seeking but not available for work[3]	Total jobless
		Seeking through a newspaper only	Discouraged[2]	Other or not specified		
1987	3.0	0.2	0.4	1.2	0.5	5.3
1991	5.9	0.5	0.6	1.5	0.7	9.3
1995	5.4	0.5	0.5	1.6	0.6	8.6
1999	5.6	0.5	0.5	1.6	0.8	8.9
2003[4]	3.7	0.4	0.3	1.4	0.7	6.4

1. Refers to people who answered "yes" to the question "If you had been offered a job would you have started last week?".
2. Refers to people who were not actively seeking work because they believed they lacked skills, or were the wrong age, or the right work was not available in their area.
3. Someone may be temporarily unable to start work because of sickness, personal or family responsibilities or because they are attending an educational institution.
4. Year to September.

Source: Statistics New Zealand.

Figure 32. **Benefit recipients**
Per cent of working age population



1. From October 1998 to June 2001, the unemployment and sickness benefits were combined into a single benefit (the Community Wage).
2. Unemployment rate from the Household Labour Force Survey. Note that this is measured as the percentage of the working-age population rather than the labour force.

Source: Ministry of Social Development.

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Table 16. **Employment rates**
Per cent of people aged 15-64

	1990	1995	2000	2003 (first half)
	By ethnicity			
Pakeha	70.4	74.0	75.2	77.3
Maori	49.4	53.0	57.6	61.5
Pacific Islanders	50.2	51.7	57.3	60.0
	By education level			
Less than upper secondary	57.6	58.5	59.4	62.0
Upper secondary	67.3	70.8	68.6	68.4
Tertiary	79.1	81.7	80.8	81.6
	By age			
15-24	58.3	59.4	54.7	56.1[1]
25-54	76.3	77.6	78.6	79.8[1]
55-64	41.8	50.4	57.2	64.0[1]
New Zealand Total	67.2	70.0	70.6	72.2
OECD average	64.5	63.7	66.0	–

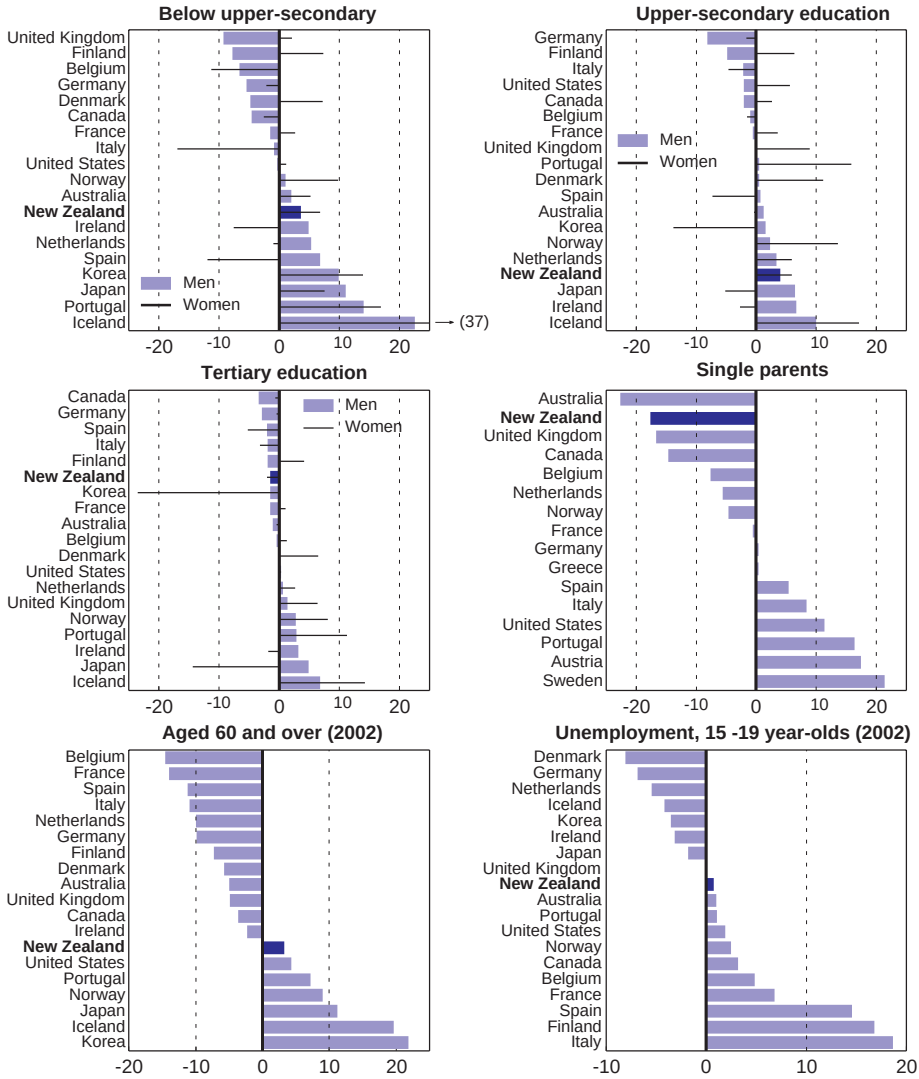
1. First three quarters of 2003.
Source: Statistics New Zealand and OECD.

The better-than-average labour market performance is concentrated among those with upper-secondary qualifications (Figure 33). Employment rates are around the OECD average for the low-skilled, and are a little below average for people with tertiary qualifications. With lower average education, Maori and Pacific Islanders have significantly worse employment rates, although these groups have shown the biggest improvement over the past decade (Table 16).

Most benefit recipients have only a weak attachment to the labour market, being unemployed for long periods or cycling between short spells of work and joblessness. Around one in 11 people of working age has been receiving a benefit for a year or more (Table 17). However, duration measures understate the problem because many of the long-term beneficiaries who find a job are back on a benefit less than a year later.[89] Adding together multiple spells of unemployment, one study that followed a cohort of unemployed over four years in the mid-1990s found that 44 per cent were unemployed for at least one out of the four years, and 20 per cent were without a job for at least half of that period, despite a decline in the unemployment rate from 10 to 6 per cent (Gobbi and Rea, 2002). Unsurprisingly, the probability of being out of work for long periods is higher for the young, the low-skilled, for Maori and Pacific Islanders, and for those in remote regions (although differences across regions are not particularly large). These factors are obviously inter-related, but there have been no studies that look at labour

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Figure 33. **Employment rate indicators**
Percentage point difference relative to OECD average, 2001[1]



1. The education-related panels refer to employment rates of the population aged 25-64.
Source: OECD.

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Table 17. **Benefits by duration**
Proportion of beneficiaries by duration on each benefit (excluding pensions), June 2003, per cent

	0-6 months	6-12 months	1-2 years	2-5 years	5-10 years	Over 10 years	Per cent of all beneficiaries[1]	Per cent of long term[2] beneficiaries[1]
Unemployment	36.7	18.0	17.0	22.1	5.6	0.6	27.2	19.6
Sole parent (DPB)	13.8	10.8	16.3	27.5	21.0	10.7	28.0	33.5
Invalids	6.3	7.3	12.7	23.7	21.8	28.3	17.8	24.4
Sickness	33.3	16.9	18.7	19.0	10.1	2.0	10.4	8.2
All benefits	**23.3**	**13.6**	**16.1**	**23.0**	**14.3**	**9.7**	**100.0**	**100.0**
Per cent of working-age population	3.4	2.0	2.3	3.3	2.1	1.4	–	–

1. Does not add to 100 as the table excludes other categories such as veterans and widows benefits.
2. Longer than one year.
Source: Ministry of Social Development.

market performance in a multi-variable framework that controls for all these factors at the same time. This lack of knowledge of the underlying causes of labour market outcomes makes it harder to design the best solution.

Single parents account for a third of long-term working-age benefit recipients, and a third of them have been receiving the sole-parent benefit for at least five years. Fewer than half of single parents work, which is especially striking given that other mothers have relatively high employment rates as a result of liberal social attitudes, flexible working arrangements and relatively easy availability of part-time and temporary work. This sort of employment gap is much smaller in welfare systems that have work requirements for single parents, such as Denmark, Sweden and the post-reform United States (OECD, 2003*g*). Another fifth of long-term jobless receive the unemployment benefit; the majority of these people are young (half are under 35), and most have no dependent children.[90]

Features of the income support system

New Zealand has a social assistance system in which most benefits for working-age people are income tested (based on family income) and available for an unlimited time. The phase-out profile of benefits means that income support does not extend much beyond the average household income. The main social security benefits are the *Domestic Purposes Benefit* (DPB) for single parents, the *Unemployment Benefit* (for those aged 18 and over), the *Sickness Benefit* (for those who temporarily cannot work) and the *Invalids Benefit* (for those who are severely and permanently disabled). A second-tier of assistance is available for specific purposes, such as the *Accommodation Supplement* and *Childcare Subsidy*. A third tier is available for people facing particular hardship such as an ongoing deficiency of income relative to outgoings,

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although expenditure on this tier is relatively small. Most of the assistance for low-to-medium income families in employment is delivered through the tax system.

Major benefit reforms in 1991 led to a tightening in eligibility criteria and a cut in benefit rates. Cuts differed across demographic groups and benefit types: young adults without children saw their benefit fall by around 25 per cent, but couples with children saw a cut of just 3 per cent. Further reforms in 1998 were aimed at reducing benefit dependency and halting the rise in disability benefits (which succeeded temporarily). A work test was introduced for spouses of disability beneficiaries and was extended for single parents (the test depending on the age of the youngest child), rates for sickness and unemployment benefits were aligned, and mandatory community work or training was extended to a greater share of unemployment beneficiaries, but still only applied to a small minority (around 6 per cent). Most of these latter reforms were reversed in 2000 by the incoming government who felt that all the obligations were on the individual, with insufficient help to overcome barriers to employability. It was replaced with a system of case management with relatively light-handed obligations and sanctions.

The key features of the current system include:

– *Income replacement rates are relatively high for families with children*. Unlike countries that have an unemployment insurance system, benefit rates are the same regardless how long someone has been unemployed. This flat rate is relatively low for single people in the initial period of their spell but is higher than average for the long-term unemployed.[91]

– *The benefit system is relatively passive*. Although the heart of the government's approach is to put more emphasis on active case management, the benefit system is still relatively passive, with the "active" share of expenditure on labour market programmes being lower than in most countries (Table A2). While inflows to active labour market programmes (ALMPs) have increased since 1999, expenditure per person has fallen. The imbalance between active and passive measures is important given the evidence that passive social spending can be a drag on growth but active social spending can promote it (Arjona *et al.*, 2001).

– *The earnings disregard or abatement-free zone is small.* All benefits except the Accommodation Supplement have a small abatement-free zone equivalent to approximately 10 per cent of the average wage (or around 9½ hours work per week at the minimum wage). This is relatively low; countries with gradual abatement (*i.e.* less than 100 per cent) typically have earnings disregard zones equal to 20-40 per cent of the average wage, while Ireland and the Netherlands base theirs on hours worked rather than income (OECD, 2002*f*). Relatively few NZ beneficiaries take advantage of the earnings disregard (Nolan, 2003), possibly because the

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fixed costs of working a small number of hours outweigh the financial return.

– *Marginal effective tax rates are high for some groups*. The reduction in benefit income as earned income rises can create disincentives to increase hours of work, or to move into work in the first place, especially for families with children. Beyond the abatement-free zone, benefits are reduced by 70 cents for each extra dollar earned (except for sole parents, invalids and widows, which have a 30 per cent phase-out rate for part-time work). After taking childcare and transport costs into account, lone parents for example would be little or no better off by moving into work. For those already working part time, there is little incentive to increase hours of work: moving from 15 to 40 hours at the minimum wage would bring in just NZ$ 30 a week, and childcare costs would eat away much of this (Table 18). In sum, families with children are better off staying on a benefit unless they can move into a full-time job paying at least the average wage.

– *The minimum wage is slightly above average*. The adult minimum wage is approximately half the median wage, a proportion that is slightly above

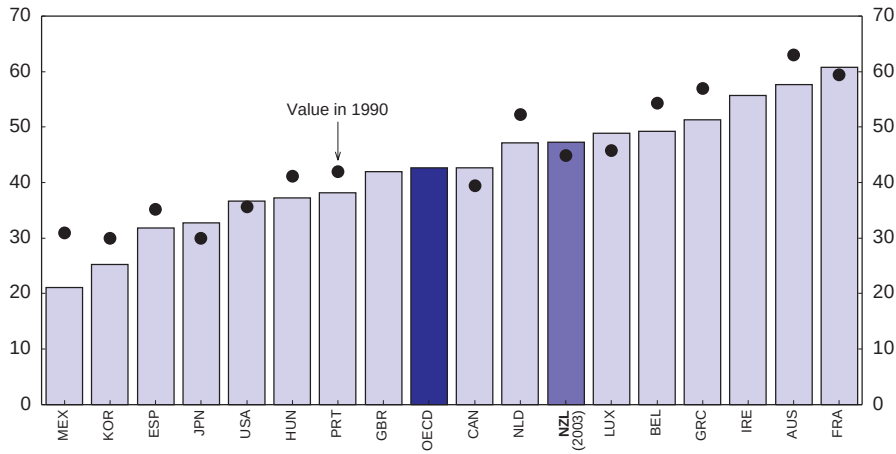
Table 18. **Benefit replacement rates for single parents**
Disposable income including housing benefits,[1] ignoring transport and childcare costs

	One child		Two children	
	Disposable income NZ$ per week	Replacement rate Per cent	Disposable income NZ$ per week	Replacement rate Per cent
	At minimum wage			
Hours of work				
0 (benefit only)	348	–	397	–
15	412	84	456	87
20	427	81	472	84
40	444	78	487	82
	At average full-time wage			
Hours of work				
0 (benefit only)	348	–	397	–
15	437	80	481	83
20	446	78	490	81
40	579	60	600	66

1. Accommodation Supplement based on rent of NZ$ 8 750 per year in Auckland.
Source: OECD; New Zealand Treasury.

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Figure 34. **The adult minimum wage**
Per cent of median wage, 2000



Source: OECD.

the OECD average (Figure 34). However, the wage distribution is wide, implying the minimum wage will be quite high relative to a typical low-paid job. It has also been increasing faster than other wages (by 21 per cent for adults since 1999, by 62 per cent for 16-17 year-olds and by 100 per cent for 18-19 year-olds who now receive the adult rate). This may be one reason why the unemployment rate of 15-19 year-olds is slightly above average despite the low adult unemployment rate.

– *Employment conditional benefits are small.* There are three employment conditional tax credits, the biggest by far being a *Child Tax Credit* (costing NZ$ 159 million in 2002-03) which is a per-child payment available to families that are independent of state assistance. A *Family Tax Credit* (NZ$ 12 million) provides a guaranteed minimum family income, but few families qualify because there is a very small income range over which it can be received. Finally, a *Parental Tax Credit* (NZ$ 17 million) is paid for the first eight weeks after the birth of a child to parents who are not on welfare. All three are refundable (non-wasteable) and income tested, but together amount to less than 3 per cent of welfare spending on people of working age (Nolan, 2002).

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Shifting towards in-work benefits

In a nutshell, the problem of long-term joblessness is concentrated among sole parents, who account for a third of long-term benefit recipients, and those receiving the unemployment benefit, who account for another 20 per cent. The government has signalled that, if it has the fiscal room next year, it will modify the income support system with the aims of increasing the level of family support to low- and middle-income families and improving the incentives to move from benefits into employment. Benefit replacement rates for families with children are above the OECD average, but the government does not regard them as generous or excessive relative to what is needed to provide a minimum acceptable standard of living. It believes that further reductions in benefit rates would lead to an unacceptable increase in poverty. Yet at these levels, the small gap between benefit and employment income provides little financial incentive to work unless in a full-time job paying a good wage. That is not an option for the majority of the long-term jobless because they are relatively low skilled or they cannot find or afford childcare.

In similar circumstances, several countries have moved towards employment-conditional benefits as a way of increasing work incentives without increasing poverty (see Table A3). These "making work pay" policies are likely to be most appropriate where payroll and income taxes are not high, where the minimum wage is moderate, and where the unemployment problem is more concentrated on particular groups. In some countries, reducing payroll taxes may be the first priority, while countries with high income tax rates may find that effective marginal tax rates become too high over the income range in which an in-work benefit is phased out. Countries with high minimum wages may also find such benefits ineffective because it is pointless to encourage labour supply if the constraint is on the demand side of the market. With low income taxes, a minimal payroll tax and a minimum wage that is not excessive, the main conditions are in place in New Zealand for making-work-pay policies to be potentially effective. However, they would need to be carefully designed, for otherwise they could be expensive or have unintended consequences for other groups. The following section discusses what has been learned from international experience about the best way to design an in-work benefit if the main goal is to improve work incentives.[92]

Best practice at making work pay

Untargeted benefits can be expensive

Welfare reform packages have the twin objectives of supporting incomes and boosting work incentives. But in the presence of a budget constraint, a trade-off must often be made between these two goals. If more weight is placed on income support, then the benefit should be income tested and perhaps restricted

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to certain household types such as families with children. But inevitably, the more widely the money is spread the lower the impact will be on each individual or household. Hence, if the primary goal is to boost work incentives then the benefit should be more closely targeted at the groups with the biggest labour market problems, such as sole parents and the long-term jobless. This would allow a larger financial incentive to be given to those groups. This trade-off is especially sharp in New Zealand's case because the high employment rates of non-disadvantaged groups means that an across-the-board benefit is likely to be very expensive per job created, as the bulk of the money would go to people who would be working anyway.

Some policymakers are wary of targeting benefits at only some groups because it may change welfare-claiming behaviour. For example, a benefit that is only for the long-term unemployed may encourage people to stay on welfare longer in order to qualify. A time-limited benefit may also encourage people to cycle between welfare and work to become eligible again – the so-called "revolving door" effect. However, these theoretical concerns may be exaggerated. There is not a great deal of evidence on this point, but Canada's making-work-pay experiment for sole parents looked for yet found little evidence that people altered their behaviour in this way.

Benefits must be generous to be effective

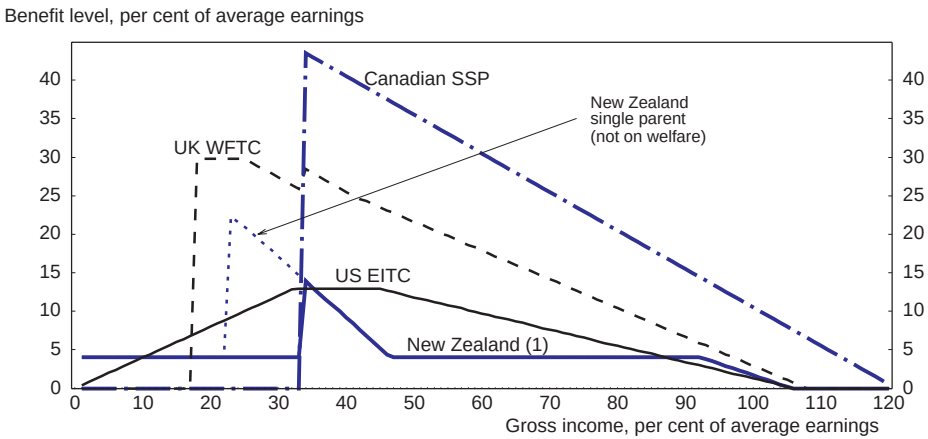
While at least nine OECD countries have employment-conditional benefits, most are tiny and have a trivial impact on work incentives (Table A3). The only substantial benefits are the UK's Working Family Tax Credit (WFTC) and the US's Earned Income Tax Credit (EITC), although Canada conducted a temporary experiment with a back-to-work benefit for single parents who had been out of work for at least a year (the Self Sufficiency Project, or SSP). The financial incentive must be large enough to create a sizeable wedge between welfare and work, and the optimal level will therefore depend on factors such as levels of income support relative to wage rates of the less skilled, the minimum wage, and the availability of affordable childcare services for single parents and dual-income families. New Zealand's existing employment-conditional benefits are much smaller than the EITC, WFTC or SSP (Figure 35).

Time-limited benefit supplements may be more cost-effective

The government should also consider making some part of the benefit time-limited, especially if an in-work benefit is targeted at particular groups. For example, a temporary back-to-work bonus for the long-term unemployed may be effective, while some might see a permanent in-work benefit available only to sole parents as creating an inappropriate financial incentive to form single-parent households. In the long term, a large one-off financial push to such groups may be

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Figure 35. **Employment-conditional benefit profiles**
For a family with two children, per cent of economy-wide average earnings



1. The flat portion of the New Zealand benefit profile is the Child Tax Credit; the "shark fin" pattern around 40 per cent of earnings is the Family Tax Credit. UK and US parameters are for 2002; NZ's are for 2002-03.
Source: OECD.

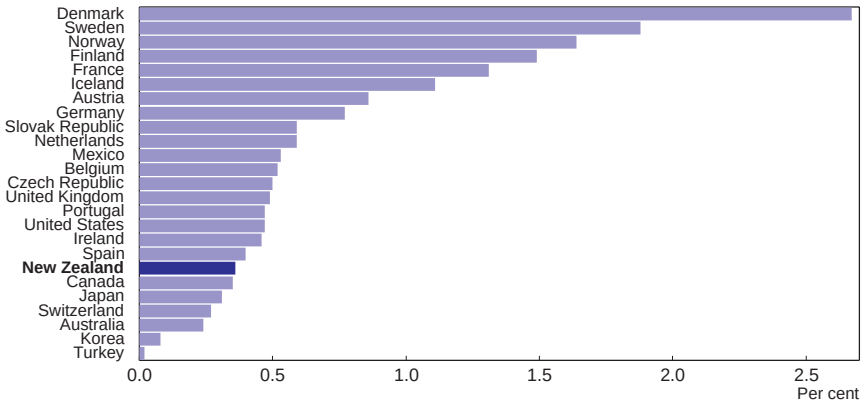
a cost-effective approach if it has a permanent impact on today's jobless. But if it turns out that people revert to their present behaviour when a time-limited benefit runs out then the time limit could always be extended. It is important to note that such a time-limited in-work benefit would be in addition to a basic income support safety net; this is not a proposal to eliminate income support altogether after a certain period. For example, Canada's SSP offered a benefit for three years to those who moved off welfare into work, while Ireland has a three-year back-to-work allowance with a payment rate that decreases over time (while also offering a family income supplement that is not time limited). There is strong evidence that the duration of benefits affects recipient behaviour and that payment rates should fall the longer someone receives a benefit (Fredriksson and Holmlund, 2003). In contrast, New Zealand's benefit profile effectively rises over time as beneficiaries tend to make greater use of supplementary benefits the longer they remain unemployed. In any case, any time limit should be generous as the evidence is that people progress towards self sufficiency fairly slowly.

For groups such as sole parents, increasing access to childcare may be more effective

Many sole parents cite the lack of affordable childcare as a major barrier to employment. If that is the case then, dollar-for-dollar, expenditure targeted at making childcare more affordable or increasing the number of places is likely to

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Figure 36. **Public expenditure on day care and pre-primary education**
Per cent of GDP[1]



1. 1999 for all countries except New Zealand (2003-04), France, Ireland and Spain (1998), Netherlands (2001), and Japan (2002). This data should be used with caution as it may not be perfectly comparable across countries.
Source: NZ Treasury and OECD.

be more effective in terms of employment outcomes than an across-the-board in-work benefit, much of which would go to people for whom childcare is less of an issue. Public spending on childcare has increased in recent years but is still low by international standards (Figure 36). Most of that spending goes to fund places at early childhood centres, the majority of which are privately run, with the rest going to two childcare subsidies. The first is for low-income families participating in education, training or employment, available for up to 50 hours per week (increased this year from 37 hours). The second, the Out of School Care and Recreation (OSCAR) subsidy, contributes to the costs of before- and after-school care. Both subsidies are heavily income tested and are available only for approved institutions. Subsidy rates are low: the maximum payment rates are approximately NZ$ 2.50 per hour for the childcare subsidy and NZ$ 2.00 per hour for the OSCAR programme.

Recent policy changes will have conflicting impacts on access to childcare services. In the five years to 2003-04, direct funding of early childhood places has increased by 43 per cent and subsidies have risen by 32 per cent. These funding increases should significantly improve access. However, in the interests of raising quality the government is introducing pay parity between kindergarten teachers and primary school teachers and requiring staff in teacher-led services to be registered teachers. These changes are likely to raise costs and reduce the number of places available where there is a shortage of qualified staff. While maintaining

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quality standards is important, the government needs to carefully balance that objective with its goal of reducing barriers to employment for sole parents.

Raising the minimum wage can reduce the effectiveness of employment-conditional benefits

Rethinking the level of the minimum wage should be part of the overall welfare reform package because the higher the minimum wage, the less sensible it is to use in-work benefits. Cross-country evidence shows that statutory minimum wages at typical OECD levels do not have major negative effects on total employment, but a high minimum wage reduces the employment prospects of disadvantaged groups (OECD, 2003f). Raising the minimum wage may reduce labour demand for these groups, in which case using an in-work benefit to encourage greater labour supply would be ineffective if the demand for workers at such wage rates is lacking. A goal of both a minimum wage and an in-work benefit is to reduce poverty among working households. Hence, if they are seen as part of a package, it would be feasible to lower (or freeze) the minimum wage at the same time as boosting in-work benefits. That would leave the income support element of the package intact at the same time as improving the employability of disadvantaged groups. However, one argument for maintaining a moderate minimum wage is that any increase in labour supply may drive down wages at the lower end of the distribution, cancelling out some of the positive effects. This is why the United Kingdom introduced a minimum wage at the same time as it extended its tax-credit programme.

Any minimum hours requirement should not be too high

A minimum hours-of-work requirement is a necessary part of an employment-conditional benefit to avoid people reducing their hours to very low levels. However, if set too high the policy will bypass some of those it is trying to help, such as single parents who may only be able to work part time. When the United Kingdom reduced its hours threshold from 24 to 16 hours per week, a significant number of inactive single parents moved from welfare to work, but it also reduced the number of hours worked by single parents who were already employed (Blundell, 2002). The government subsequently introduced a small 30-hour "full time bonus." New Zealand currently requires 30 hours of work per week before a couple is eligible for the Family Tax Credit, and 20 hours for a single parent.

Stronger activation and enforcement is needed at the same time

Recent experience in a range of countries with a wide range of social attitudes has shown that financial incentives are more effective when combined with strong job-search requirements and other activation policies (OECD, 2003g).[93] Examples include Canada, Denmark, Ireland, the Netherlands, Spain, the United Kingdom and the United States (Table 19). The majority of people who left

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Table 19. **Activation policies in Denmark, Ireland, the Netherlands and the United Kingdom**

	Denmark
1989	First in a series of tighter definitions of the obligation to accept "suitable work".
1992	Job offers, previously made after 2½ years of unemployment, are brought forward for young people.
1994	"Active period of benefits" which starts after 4 years of unemployment. Individual action plans introduced. New government information systems to track communications between the PES and benefit institutions.
1995	Creation of a central government "availability inspection unit" to supervise the implementation of benefit eligibility criteria.
1996	"Active period of benefits" applies after 2 years of unemployment.
1999	The unemployed must be registered with the PES from the first day of unemployment. The relaxation of availability rules for 50-59 year-olds is limited to 55-59 year-olds.
2000	"Active period of benefits" applies after 1 year of unemployment.
	Ireland
1996	Labour force survey finds that only 25% of a sample of individuals on the Live Register (unemployment benefit register) confirmed to be ILO unemployed. A questionnaire is mailed to all beneficiaries and an anti-fraud drive initiated. Beneficiaries aged 18 and 19 and unemployed for more than six months are required to register with the placement service.
1998	Beneficiaries aged under 25 and crossing the six-month threshold of benefit receipt enter processes under Ireland's Employment Action Plan (EAP – part of the European Employment Strategy).
1999	24-34 year-olds crossing a 12-month threshold enter EAP processes. These processes require attendance at an interview.
2000	20-54 year-olds crossing a 9-month threshold enter EAP processes.
	Netherlands
Late 1980s	A "change in focus" which results in sanctions for UI benefits increasing from 27 000 in 1987 to 140 000 in 1994.
1991	Introduction of the Youth Work Guarantee.
1992	Guidelines as regards "suitable work" are defined. Sanction frequency for assistance beneficiaries increases sharply.
1995	Radical reforms to the institutional structure of benefit administration. "Melkert" jobs are introduced (participation in job creation schemes rose from about 20 000 in 1994 to 80 000 by 1999).
1996	New legislation concerning benefit sanctions. Sharply increased attention is given to the long-term unemployed: part of the direct grant to the PES is earmarked for the reintegration programmes for disadvantaged jobseekers, and another part is diverted to the benefit institutions for them to purchase such programmes.
	United Kingdom
1986	Programme of Restart interviews introduced. In later years many types and schedules of interviews are tested and successful models are applied nationwide.
1989	"Actively seeking work" becomes a condition for benefit eligibility. Benefit administration and placement offices are united at local level (over several years).
1991	Participation in a one-week job-search course is made obligatory for those who have been unemployed for over 2 years.
Early 1990s	"Stricter benefit regime" leads to a doubling of benefit sanctions.
1996	Benefit legislation radically overhauled.
1998	New Deal for Young People makes participation in a six-month labour market programme obligatory for all youth remaining unemployed after six months plus an additional four-month "Gateway" period.
2000	New Deal for Adults applies after 18 months unemployed.

Source: OECD (2003g).

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welfare in these countries moved into work, although the proportion that ended up with neither benefits nor jobs does vary significantly (OECD, 2003g). Activation policies can also square the circle between providing benefits which are generous enough to alleviate poverty and the unintended consequences they may have on employment rates. A key to successful outcomes has been to apply activation strategies for long enough to change the work habits of beneficiaries. This culture change can take many years. Recently, however, New Zealand has taken some steps to reinforce job-search requirements for recipients of the unemployment benefit, but has moved against international trends by relaxing such requirements on recipients of sole parent benefits, sending mixed signals to those out of work. The government's preferred approach is to use case management to encourage and assist people to become self-reliant.

Not everyone on a benefit can or should work. Different countries make different social choices over who should be expected to be in the labour force. For example, the Nordic countries have had a long-standing philosophy that work is preferable to welfare and have been aggressive users of activation policies – increasingly so in the last decade or so (OECD, 2003g). In part, this reflects the growing appreciation that long-term dependency has more than just labour market and fiscal costs; it worsens health, self-esteem and school outcomes for children. As noted above, New Zealand's benefit system is relatively passive by OECD standards and there are several areas where applying some of the lessons from international experience would help move people into sustainable jobs.

First, work requirements need to be strengthened. While recipients of the unemployment benefit in New Zealand must be actively seeking work, there is wide variation across regions in how strictly the test is enforced. Overall, it is applied relatively gently (OECD, 2000b). From 1997 to 1999, notional work test requirements were extended to some other beneficiaries, such as sole parents, who had not previously been required to look for work. However, case managers rarely, if ever, imposed sanctions because of concerns for the beneficiaries' family. Policy reversals in 2000 made it easier to maintain receipt of certain benefits, and there was further loosening in 2001 when the work test was abolished for sole parents and widows. Instead, they must now develop a job plan with their case manager that lays a plan for re-entering the workforce when family responsibilities allow. New Zealand is therefore similar to Australia and the United Kingdom in having no formal work test for sole parents. In most other OECD countries, most lone parents must be available for work in order to qualify for assistance.

Until recently, there was virtually no requirement for those aged 55 and over to look for work, so some benefits have been used as early-retirement schemes. While employment prospects can be bleak for many older workers, especially those with low skills, allowing an easy work test regime for a quarter of the average person's working life is excessive. This year the work-test cut-off was

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raised to 60 years; this is a welcome move and is well timed given that a large demographic bulge of unemployment and sickness beneficiaries is approaching the age-55 threshold.

Second, the unemployed need more contact with the public employment service. In New Zealand and an increasing number of other countries, an intensive interview takes place early on to develop an individual action plan. After that, contact can be too infrequent to ensure adequate progress on the plan:

- *In-person interviews.* Sole parents in New Zealand are called in once a year to review their job plan. In principle, recipients of the unemployment benefit should be called in for an interview at least every six months, although some clients are seen more often. However, it is up to the case manager to organise a meeting, so some clients go for years without seeing their case manager. In contrast, some countries – including Austria, the Netherlands, Sweden, the United Kingdom and Switzerland – conduct interviews at least every two months.

- *Signing in* is required weekly for the unemployed and can be done by telephone. In contrast, some other countries require regular confirmation of status by mail, but the majority require in-person visits. In most cases these must be fortnightly or monthly. These visits are often used for other types of contact such as job-search reporting, checking for job vacancies and providing information on labour market programmes.

- *Reporting job search efforts.* Most clients only have to confirm that they are actively seeking work, although a small proportion is asked to provide evidence of job applications. Practice varies greatly in other countries, but few monitor intensively or double-check job search activities. A handful require frequent reporting of job-search activities and expect four to eight employer contacts per month, although there is wide variation around this range depending on individual and local circumstances.

Third, consideration should be given to whether participation in a work or training programme should be compulsory in order to receive a benefit. In some countries, compulsion for certain groups is an integral part of their activation policies. In Denmark, for example, everyone must participate in an employment or training programme after they have been unemployed for a year. Countries that have tried obligatory schemes often have few people actually in the programmes, suggesting their existence can successfully motivate people to avoid the obligation. New Zealand adopted aspects of "workfare" for a little over two years in the late 1990s when work-tested beneficiaries were obliged to undertake training or part-time community work, with the work test being broadened at the same time to encompass other recipients. However, the reforms were not in place for long enough to assess their impact.

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Whether participation in active labour market programmes (ALMPs) is made compulsory or not, careful attention should be paid to the programmes on offer. New Zealand's approach is broadly consistent with OECD recommendations based on what works among ALMPs (see Box 5 of the previous *Survey*). There is a strong emphasis on training programmes, and assistance is being increasingly directed towards youths. Most interventions focus on job-search assistance, motivation and work confidence, while training programmes are increasingly focussed on specific labour market opportunities rather than just foundation skills. Employment subsidies are also in line with OECD recommendations: they are for a limited duration and targeted at the long-term jobless.

In summary, a system of mutual obligations combined with improved financial incentives can be a successful approach to encouraging labour market integration. On the individual's part, that requires a commitment to look for work, or possibly training as a first step. The government's commitment involves employment assistance in the form of case management, training and childcare support. The government is taking some steps in the right direction, but needs to go further. The system of active case management has been inadequate in the past, partly because caseloads have been too high. However, recent funding increases should reduce caseloads to more reasonable levels (from around 220 to 160 per case manager of the unemployed, and from 300 to 150 for sole parents). A package of reforms earlier this year (the so-called "Jobs Jolt") included some minor tightening or clarification of work obligations in certain circumstances, but the more substantial element was to send "clear and strong expectations" that recipients of the Unemployment Benefit should be available and actively looking for work. The government also intends to streamline the sanctions process, making work obligations easier to enforce for case managers. Time will tell how much stricter the regime will become, but these steps are in the right direction. The government now needs to ensure that the Personal Development and Employment Plans currently being negotiated with DPB recipients are enforced, and that they lead to genuine labour market integration rather than perpetual participation in training or community activities.

Disability reforms may help activate those who cannot work full time

The number of people on disability benefits is low but, as in most countries, has been showing a trend increase for a couple of decades.[94] Half of the increase since 1992 can be explained by the rise in the age of eligibility for the public pension. The increase in sickness beneficiaries was briefly halted in the mid-1990s when eligibility criteria were tightened and, in 1998, when the benefit rate was aligned with the unemployment benefit. However, the rising trend has since resumed. Eligibility may need to be reviewed as part of a reform package to ensure that tightening in one area is not offset by people

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migrating to disability benefits. For example, sickness and invalids benefits are currently available to anyone who cannot work full time in their usual job. Eligibility is discrete: people are either sick or not. There is no spectrum of different levels of incapacity, recognising that some people may be able to work at less-than-full productivity. There is a need to support such people with a package that contains rehabilitation and vocational training, employment subsidies tailored to work capacities, and supported jobs (with individual employment assistance granted to employees or employers). However, the government has been making considerable progress in these directions, shifting disability benefits from passive income-support schemes towards more active rehabilitation programmes.

Maintaining the benefits of labour market flexibility

The labour market framework is one of the most flexible in the OECD. Employment protection legislation is about as liberal as in Australia and Ireland, less so than in the United States, the United Kingdom and Denmark, but with much more flexibility than in most Member countries (Nicoletti *et al.*, 1999). The non-intrusive contractual approach to labour market arrangements has most likely contributed to the fairly swift and sizeable increase in employment rates following economic restructuring, to the pickup in productivity growth and to the economy's resilience in the face of economic and climatic shocks. It does not appear to have led to difficult or unpleasant working conditions – most employees report a high degree of cooperation with their employer, and nine out of ten are satisfied with their jobs overall.[95]

Since 2000, however, there has been a clear trend towards reduced labour market flexibility and increased labour costs. While each measure on its own has been fairly benign, their cumulative impact may have been more material (Box 2). The most important reform was the replacement of the 1991 E*mployment Contracts Act* with the E*mployment Relations Act* (ERA) in 2000. The intention of the ERA was to redress a perceived imbalance in bargaining power between employers and workers, to promote collective bargaining and to be more consistent with ILO Conventions on freedom of association and the right to organise and bargain collectively. Its major features include a requirement to bargain in "good faith", and mediation as a first step in the event of disputes. It also limits use of fixed-term agreements, restores to unions their monopoly on collective bargaining and restricts firms from replacing striking workers. However, union membership was not made compulsory, and workers can still choose whether to bargain for an individual or collective agreement. The Act also imposed various administrative costs on employers. Other labour market reforms separate from the Act include increases in the minimum wage, especially for young people, and stricter health and safety requirements.

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Box 2. Flexible labour markets help growth and resilience

There is increasing evidence that flexibility in wage-setting and labour adjustment can have sizeable benefits for economic performance in both the short and long term. Stricter employment-protection legislation (EPL) and high costs of unskilled labour (*e.g.* a high minimum wage) reduce the pressure on the employed to moderate their wage claims in a downturn, and the same factors can curb the adjustment of employment to a changing economic environment. Safeguarding labour market flexibility is important for two reasons.

First, flexible economies tend to grow faster, with rigidities having a stronger impact the further a country is behind the technological frontier. Strict EPL lowers productivity in systems with an intermediate degree of centralisation/co-ordination – *i.e.* where multi-employer wage bargaining is predominant without co-ordination. This is the direction that the NZ government seems to want to move in its industrial relations reforms. Hiring and firing costs also hamper entrepreneurship and impede the process of firm creation and destruction, with several recent studies having found that firm turnover is an important determinant of productivity growth. Adjustment costs can also reduce investment in new technologies because it becomes more difficult to retool and re-organise the labour force in response to changing market opportunities.

Second, flexible economies are more resilient. They tend to get hit less hard by economic shocks and bounce back quicker. That in turn results in smaller swings in output, inflation and exchange rates. Recent OECD work on the impact of structural and labour market rigidities on economic resilience has found that a flexible economy:

- is better placed to take advantage of permanent supply shocks (such as a rise in productivity) and to weather temporary supply shocks (such as droughts). With wages and prices moving more quickly, monetary policy is more able to speed up and smooth out the adjustment process (*e.g.* US policy being more able to "test the economy's speed limit" and accommodate the productivity pick-up in the 1990s);
- has an advantage when hit by a temporary demand shock (such as the Asian crisis), though possibly at the cost of a larger inflation response in the very short term (OECD, 2003*i*). The initial impact on unemployment is about the same in flexible and rigid economies, but it takes longer for unemployment to recover when adjustment is held back by labour-market rigidities. In assessing the overall social loss, if policymakers care more about unemployment than inflation, or care more about the medium term than about short-term blips, then cumulative social losses are much lower in the flexible economy.

Further reforms are in the pipeline. The ERA is currently being reviewed, largely because it has not achieved its goal of increasing collective bargaining. There has been virtually no increase in the proportion of collective or multi-employer

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agreements, and unionisation has edged up by only a few percentage points. Some unions have argued that the obligation to bargain in good faith lacks teeth, and the government is considering steps that will promote rather than simply permit collective bargaining. To do so, it may have to reconsider the rule that unions must have at least 15 members, since that rules out most small enterprises from having workplace-based unions. Most workers who want to be covered under a collective agreement would have to seek a multi-employer agreement, which is clearly much harder to negotiate. The government is also concerned that unionisation may be held back by a free-rider problem in which employers negotiate a collective agreement and then give the same conditions to their employees who are on individual agreements. This reduces the incentive for workers to join a union.

The review is also looking at whether continuity of employment should be automatic in the event of the sale of a business, transfer of undertakings or contracting out. It is unclear what this will entail. The ERA currently requires collective agreements to contain a clause that describes workers' rights when a business is sold but leaves the terms up for negotiation. The new legislation may simply guarantee that employees can continue with the new owner under their existing terms and conditions. There is a difficult trade-off here between trying to protect the position of workers on the one hand and encouraging entrepreneurship on the other, as a dynamic process of firm creation and destruction is a key determinant of productivity growth. Moreover, it is unclear whether workers would actually be better off. Being less able to sell a failing business, an employer might be forced to close it, with the consequent loss of jobs. Nevertheless, automatic continuity of employment is common practice in the OECD. Imposing the same in New Zealand would reduce flexibility, but the impact may not be severe because three quarters of collective agreements already contain negotiated provisions along these lines.[96] However, the proposal may go further by giving workers the option to take redundancy, receive whatever severance payments they are entitled to, and potentially then go back to their old job with the new owner. A clause along these lines was in the original draft of the Employment Relations Bill, but was rejected before it became law. To reinstate it would be a serious mistake.[97]

Holiday provisions are also being reviewed. Two reform proposals are currently before Parliament. The first proposes various changes to holiday and sickness leave, including giving employees who work on public holidays a day in lieu as well as time-and-a-half compensation for the day worked (including for salaried staff). It also creates a double liability for employers in seven-day-a-week operations when Christmas and New Year holidays fall on a weekend. These changes will increase labour costs and reduce flexibility in industries with non-standard working arrangements. The second proposal would increase the minimum annual leave entitlement from three to four weeks, effective from 2007. Whether minimum holiday standards should be an individual or a social choice could be debated endlessly, but it does not seem an appropriate time to be lengthening mandatory

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Table 20. **Trial period before compensation is available for unjustified dismissal**

	Type of worker	Trial period
Australia	All workers	Not legally regulated.
Austria	All workers	1 month.
Belgium	Blue collar	7-14 days.
	White collar	1-6 months.[1]
Canada	All workers	Typically 3 months.
Czech Republic	White collar	3 months.
Denmark	Blue collar	0 month.
	White collar	3 months.
Finland	All workers	4 months.
France	Blue collar	1 week – 2 months.
	White collar	1-3 months.
Germany	All workers	6 months.
Greece	All workers	3 months.
Hungary	All workers	3 months.
Ireland	All workers	12 months.[2]
Italy	Blue collar	1 2 weeks.[3]
	White collar	3-8 weeks.
Japan	All workers	Not legally regulated but varies mainly between 2 and 6 months.
Korea	All workers	Not legally regulated, varies from case to case.
Mexico	All workers	Not legally regulated.
Netherlands	All workers	1 month for contract of up to 2 years duration; 2 months for longer contracts.
New Zealand	All workers	None. Case law tends to reduce the rigour of provisions where employee is on probation.
Norway	All workers	1 month.
Poland	All workers	Minimum 2 weeks, ranging up to 3 months.
Portugal	All workers	60 days.
Spain	All workers	2-3 months depending on company size.[4]
Sweden	All workers	Maximum of 6 months. Does not exclude claim for damages.
Switzerland	All workers	1 month, sometimes extended by collective agreements to 3 months.
Turkey	All workers	1 month, sometimes extended by collective agreements to 3 months.
United Kingdom	All workers	2 years.[2]
United States	All workers	Wide range.

1. For Belgian white collar workers, the trial period can be up to 12 months if pay exceeds € 28 000 per year.
2. In Ireland and the United Kingdom, shorter trial periods are commonly agreed between employer and employee, but claims under statutory unfair dismissal legislation are not normally possible until after the periods shown.
3. For Italy, the trial periods cited are those common in collective agreements which are enforceable.
4. Spain: trial period can go up to 6 months for qualified technical staff and 9 months for managers.

Source: OECD (1999).

vacations when one of the government's key goals is to increase per-capita incomes.

As part of the review, the government should clarify and simplify severance provisions. Cumbersome procedural requirements when using fixed-term agreements and in cases of personal grievances have become grounds for dispute. Also, judicial interpretations in personal grievance cases have been inconsistent. These factors may also be influencing hiring and firing decisions. In a survey of firms in 2002, 84 per cent said they would be more likely to increase staff numbers if there was a trial period during which new staff could be laid off without the risk of a personal grievance if things did not work out. Indeed, New Zealand is unusual in not having a minimum probation period for new employees (Table 20).

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V. Macroeconomic developments and policies

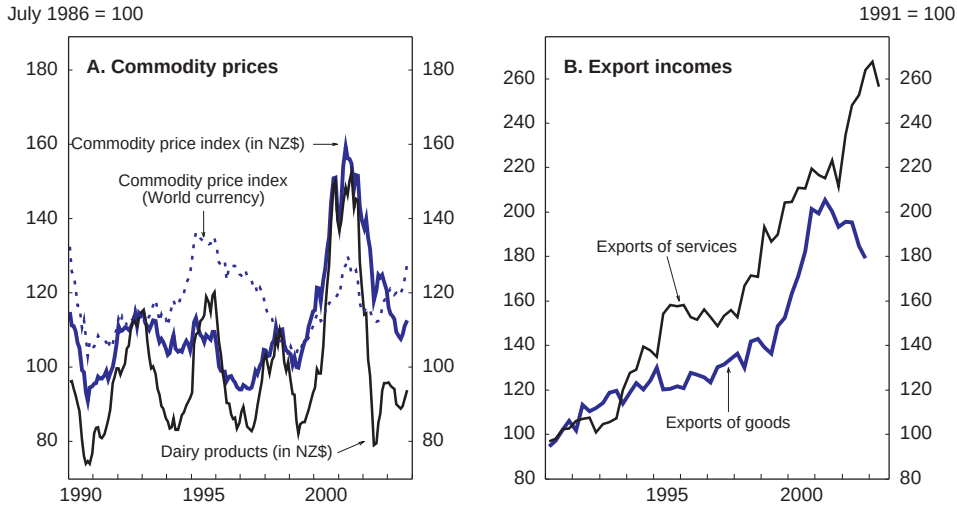
Macroeconomic developments

Economic activity has remained buoyant over the past two years despite the global economic slowdown. GDP growth[98] has averaged 3½ per cent per annum since the first quarter of 2001 and has been around or above 4 per cent in seven of the past ten years. The economy has also proved much more resilient to climatic and external economic shocks than in the past. This performance can be partly attributed to the improvement in potential output growth that became evident in the mid-1990s and was described in more detail in Chapter I. But it also reflects some temporary and cyclical factors, the most notable being a spike in export earnings early in the millennium and a recent surge in inward migration.

That export boom was driven by a rare coincidence of high prices on world markets of New Zealand's main exports, strong primary production, considerable services exports growth and a significantly but temporarily under-valued currency (Figure 37, Panel A). In a period in which most global commodity prices have been weak, a few special factors kept prices for New Zealand's primary products relatively strong. Dairy prices in particular benefited for a time from strong demand and a reduction in agricultural subsidies in Europe, while the BSE scare and Britain's foot-and-mouth outbreak boosted prices of NZ-produced lamb and beef. With these world prices being converted back at what was, until early 2002, a very weak currency, export earnings in local currency terms were very high. Although prices have now fallen back from their peaks, they remain close to their long-run average whether measured in local or foreign currencies. The exchange rate has also bounced back, rising by nearly 40 per cent in real effective terms since its trough in 2001, and in November was 12 per cent above its long-term (post-float) average. However, this will not make a significant dent in firms' export income until foreign-exchange hedges expire. The dollar value of exports remains high, with continued growth in services exports – especially tourism – plugging the gap created by a slight softening in goods exports (Figure 37, Panel B). Overall, export incomes by mid-year were down 5 per cent from their peak (but still 45 per cent above their level in 1997), although some sectors have witnessed more significant falls.

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Figure 37. **Commodity prices and export incomes**



Source: ANZ Bank and Statistics New Zealand.

Migration has been the second driving factor. As noted in Chapter III, sharply increased immigration flows combined with fewer people leaving have helped lift the population by 1¼ per cent in each of the past two years, adding an estimated 1½-2 per cent per annum to the growth rate (RBNZ, 2003). This has been most visible in the demand for housing and consumer durables. Household consumption has made a large contribution to GDP growth and has not yet shown any signs of slowing: it grew by 4 per cent in the year to June 2003, with spending on durables rising by more than 7½ per cent.

The housing market has been boosted by this migration surge. Residential construction over the past year (6.3 per cent of GDP) has hit its highest level for three decades, although the rate of house-building is in line with the pace of population increase. However, strength in the market for new houses has spilled over to the market for existing homes. The median house price rose 17 per cent in the year to September 2003, and the average sale time (24 days) is the shortest on record. Borrowing for housing has lifted household indebtedness to a record high of 120 per cent of disposable income. Perhaps surprisingly, the run-up in house prices has not been confined to Auckland, where most of the migrants have settled. Average prices in the rest of the country have almost kept pace with Auckland's. New Zealanders returning home, presumably with a good deal of savings, look to have been a factor in several markets, pushing up demand for waterfront and lifestyle

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property in particular. The increase in house prices is partly justified by the improving economy, but it is hard to know whether they have overshot their "equilibrium" level. The ratio of house prices to disposable income is now a little on the high side, but not excessively so, and the increase since 1999 has been markedly less than in many other countries. However, indirect indicators such as a pick-up in the purchase of properties for investment purposes may indicate an element of speculative froth.

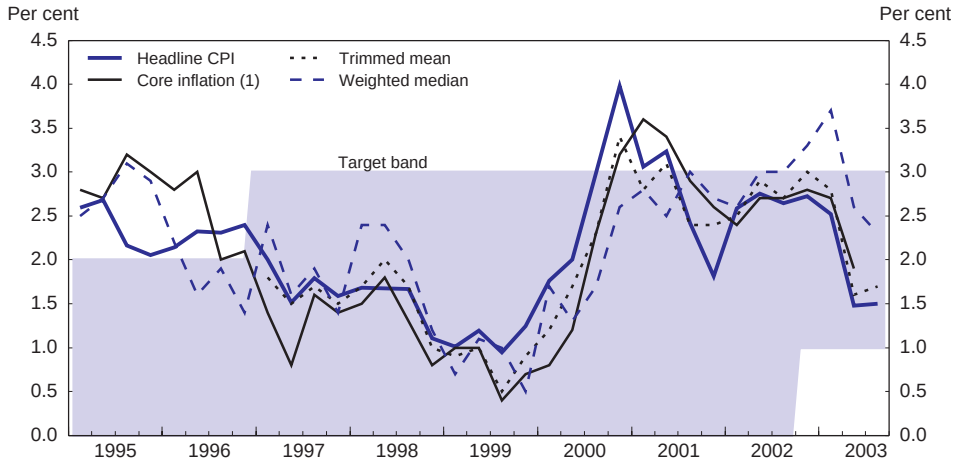
Whether excessive or not, the housing market strength is one factor that has stretched economic resources. Strong growth has put pressure on the labour market, which by most measures has been tight for a couple of years. Employment increased by 3.3 per cent in the year to September 2003, contributing to a fall in the unemployment rate to 4.4 per cent, the lowest level since 1987. Reported labour shortages are at high levels, as are participation rates. Capital resources are also stretched. Capacity utilisation in the manufacturing and building sectors has remained high since early 2000, particularly in the construction sector. Despite that, business sector investment has remained soft. Although investment growth is picking up (12 per cent in the year to the second quarter), the investment rate (as a proportion of GDP) is only around its historical average. Putting the pieces together, output is estimated to have been around 1 per cent above the OECD's estimate of potential at mid-year. However, this may be an underestimate because the method of calculating potential output implicitly assumes that migrants are ready for work as soon as they arrive. Under the more realistic assumption that they take time to add to productive capacity, their initial impact on demand will outstrip their effect on potential by more than a conventional output gap calculation would imply.

The positive output gap has fed through to inflation. The headline CPI inflation rate was above 2.5 per cent from March 2002 to March 2003, before dipping to 1.5 per cent in the year to September 2003 (Figure 38), pulled down by falling import prices and by the impact of SARS and greater competition on international airfares. Most measures of core inflation have been near the top of the central bank's 1-3 per cent inflation target, although they have eased recently. The trend of strong domestically generated inflation and falling import prices is clear from the gulf between tradeables (–0.9 per cent) and non-tradeables inflation (4.1 per cent in the year to September 2003). There is no sign yet that non-tradeables inflation is slowing, having been above 3 per cent on an annual basis since the middle of last year, but nor are there indications of weak tradeables inflation reversing. Moreover, wage inflation has begun to pick up after a long delay (average private sector hourly earnings rose 3 per cent in the year to September 2003).

The balance of these forces – a decline in export earnings, a stronger currency, and continued strength in domestic demand – has led to a widening in the current account deficit. A reduction in the merchandise trade surplus pushed the current account deficit in the year to June 2003 to 4½ per cent of GDP, on par with

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Figure 38. **Inflation indicators**
Annual percentage change



1. CPI excluding food, petrol and government-set charges.
Source: Statistics New Zealand and Reserve Bank of New Zealand.

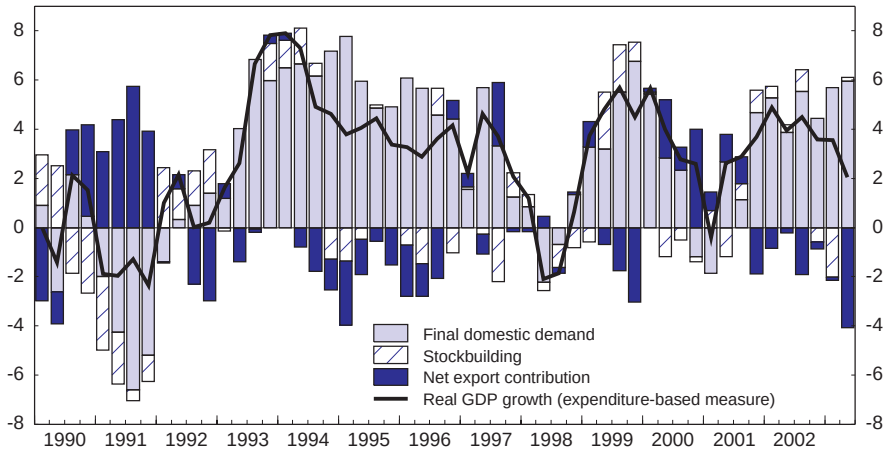
its 10-year average. With net external liabilities currently around 77 per cent of GDP, a deficit of this size would imply an approximately constant ratio of net debt to GDP under the reasonable assumption that nominal output will grow by around 5 per cent per year in the long term. This scenario would imply an ongoing vulnerability to external shocks. However, the risks should not be exaggerated. Although it is true that about 60 per cent of external debt is denominated in foreign currency, almost all of that is hedged either naturally or with financial instruments. Moreover, the banking system is in good shape and the financial positions of firms and households are relatively sound. However, the high level of indebtedness may be adding to the cost of capital, thereby contributing to the previously-discussed low rate of business investment.

Where is the domestic slowdown?

This year, domestic demand has held up better than most forecasters had been expecting (Figure 39). Trends in the first half of the year have been difficult to interpret because the economy has been hit by several large shocks. A dry summer led to falling primary production and early culling and caused a mini "power crisis" until rainfall restored reservoirs to normal levels. The electricity shortage led to cutbacks in the manufacturing sector in particular. A further shock

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Figure 39. **Contributions to GDP growth**
Year-on-year percentage change



Source: OECD.

came from the SARS virus, which caused a large but temporary fall in tourist arrivals, but luckily that occurred in the low season. Consequently, GDP grew by just 0.8 per cent in the second quarter (measured at an annual rate), with the year-on-year growth rate dipping to 2.7 per cent. Looking through the temporary factors, "underlying" GDP growth is probably still above 3 per cent, and domestic demand growth has risen to 6 per cent on an annual basis. The expected flow-through of the weakening export sector to domestic demand has not yet occurred. Moreover, the majority of short-term indicators point to unrelenting strength.

Nevertheless, a slowdown in domestic demand growth to more sustainable rates must come (Table 21). A reduction in employment growth in the primary sector has eased some of the labour-market pressure, although that has been offset by strong employment growth in other sectors. Exporters will also face reduced incomes as their foreign-exchange hedges expire. The impetus from migration has also begun to slow fractionally. Balancing these forces is likely to be continued strength in the housing market and in household consumption, the latter reflecting higher wealth and disposable incomes along with continued job security. A further offset should come from business investment. Capital spending has remained surprisingly modest in recent years, despite high rates of capacity utilisation. This does not seem to be related to the world-wide downturn in investment in ICT, as even non-ICT investment rates have been relatively flat in New Zealand. Instead, it

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Table 21. **Medium-term economic projections**
Annual percentage change

	2002	2003	2004	2005	2006-09
Private consumption	3.8	4.2	3.5	3.2	3.1
Government consumption	4.7	3.8	3.3	2.6	2.7
Gross fixed investment	8.1	12.7	6.0	2.4	3.5
Business investment	5.2	11.1	15.0	6.3	3.9
Private residential	20.4	20.0	–4.8	–5.1	2.6
Government	1.0	7.6	2.2	3.7	3.4
Total domestic demand	5.0	4.9	4.2	3.0	3.1
Exports	5.8	1.2	3.5	6.7	6.7
Imports	8.8	9.1	7.1	6.7	6.5
Real GDP (expenditure measure)	**4.2**	**2.7**	**3.1**	**2.9**	**3.1**
Real GDP (production measure)[2]	**4.4**	**3.3**	**3.2**	**2.9**	**3.1**
Output gap (per cent of GDP)	1.1	0.6	0.4	0.0	0.0[3]
GDP deflator	0.2	1.2	2.5	2.8	2.5
Consumer Price Index	2.7	1.7	1.9	2.3	2.3
Private compensation per employee	3.4	3.9	4.1	4.2	4.6
Employment	2.9	1.8	0.9	0.8	0.9
Unemployment rate (per cent of labour force)	5.2	4.8	5.0	5.1	5.4[3]
Short-term interest rate (per cent)	5.7	5.4	5.4	5.8	5.8
Long-term interest rate (per cent)	6.5	5.8	5.9	6.4	6.4
Current account balance[4]	–3.7	–5.2	–5.2	–5.0	–5.0[3]
General government net lending[4]	2.7	2.6	2.2	2.0	2.0[3]
General government gross debt[4]	40.5	38.4	36.6	35.1	36.6[3]
General government net debt[4]	18.1	14.8	11.8	9.1	–0.1[3]

1. Per cent of GDP in the previous period.
2. The production measure is regarded as more reliable than the expenditure measure.
3. Value in 2009.
4. Per cent of GDP.

Source: OECD Secretariat.

probably reflects a series of negative confidence shocks. These include the delay in the world economic recovery by at least a year relative to what many people expected in the first part of 2002, uncertainty surrounding the war in Iraq and the temporary factors such as SARS and the electricity shortage that hit the economy earlier this year. Those uncertainties have now passed, and business investment is showing the first signs of taking off. If the timing works out nicely, rising business investment and a pick-up in export growth could plug the gap created by a gentle slowdown in consumption and residential investment. On the other hand, if the latter continues to grow strongly, a recovery in business investment may add poorly timed fuel to the economic fire.

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Box 3. The Reserve Bank's new inflation target

In September 2002, the Minister of Finance and the new Governor of the Reserve Bank agreed to make two key changes to the Bank's inflation target. *First*, the floor was lifted so the target is now 1-3 per cent per annum. *Second*, it now targets trend rather than annual inflation, *i.e.* "future CPI inflation outcomes … *on average over the medium term*". The changes partly reflect an evolution in the way policy is implemented since the first target was set in 1990. The Bank has been able to progressively lengthen the policy horizon as inflation expectations have become more anchored. But they are also intended to provide a little more flexibility for monetary policy, and therefore allow more gradual policy responses in certain circumstances. By doing so, it is hoped that output, interest rates and the exchange rate will be less volatile. The Bank interprets "the medium term" as being the next three or so years, and intends to set policy so that projected inflation will be comfortably within the target in the latter half of the three year period.

Thus, as it did in the mid-1990s, the central bank faces an awkward juggling act between the strongly growing housing sector and subdued export earnings. When activity was strong but the currency was still relatively weak in the first half of 2002, the Reserve Bank raised short-term interest rates by 100 basis points. In April 2003 it reversed course in anticipation of a slowdown to more normal rates of growth and in reaction to the quickly-rising exchange rate. Rates have been cut three times this year and now stand at 5 per cent. At this level, the Bank regards interest rates as mildly stimulatory. However, the exchange rate is clearly on the tight side, so overall monetary conditions are probably fairly neutral. The Bank's current stance, appropriately enough, is to wait and see whether the predicted slowdown materialises. In any case, it has a little more room for manoeuvre now that the inflation target has been made more flexible (see Box 3).

Recent fiscal outcomes and concerns for the future

The latest year has shown another large surplus, but rapid increases in spending too

Recent fiscal outcomes have generally continued to meet or surpass expectations. At NZ$ 5.6 billion (4.4 per cent of GDP) in the year ended 30 June 2003, the "underlying" operating surplus (as measured by the so-called OBERAC *i.e.* operating balance excluding revaluations and accounting changes[99]) of the central government rose from the previous year (when it was only half that amount) for the fourth time in succession and exceeded the previous year's budget prediction for the third straight year (Table 22). Although no official figures are available,[100] it would appear that

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Table 22. **Recent fiscal outcomes**
NZ$ billions

	Actual FY 2001-02	(Per cent of GDP)	Actual FY 2002-03	(Per cent of GDP)	Percentage change (actual over actual)	Budget 2002-03	Excess of actual over budget (Per cent)
A. Total Crown – GAAP basis							
Total revenue	50.0	(40.5)	57.0	(44.7)	14.1	52.7	8.2
of which: Taxation	36.2	(29.4)	39.8	(31.2)	9.9	37.9	5.0
Total expenses	47.7	(38.6)	55.2	(43.2)	15.9	50.5	9.4
of which:							
Functional expenses	45.0	(36.5)	49.3	(38.6)	9.6	47.7	3.4
Finance costs	2.2	(1.8)	2.6	(2.0)	15.1	2.3	9.8
Operating balance[1]	2.4	(1.9)	2.0	(1.5)	–17.8	2.3	–14.1
Excluding revaluations and accounting changes (OBERAC)	2.8	(2.2)	5.6	(4.4)	. .	2.3	. .
B. Core Crown – GAAP basis							
Revenue	39.9	(32.4)	43.6	(34.2)	9.3	41.3	5.6
Expenses	38.0	(30.8)	41.7	(32.7)	10.0	39.6	5.5
of which:							
Social security and welfare	13.5	(10.9)	13.9	(10.9)	3.1	14.0	–0.5
Government employee pensions	1.4	(1.1)	2.6	(2.1)	86.3	0.9	196.6
Health	7.0	(5.7)	7.5	(5.9)	6.7	7.6	–1.2
Education	6.5	(5.2)	7.0	(5.5)	8.4	6.8	2.9
Core government services	1.5	(1.2)	1.8	(1.4)	15.6	1.6	11.5
Finance costs	2.1	(1.7)	2.4	(1.8)	11.4	2.3	1.8
Operating balance	1.9	(1.6)	1.9	(1.5)	. .	1.9	. .
C. Core Crown-SNA basis							
Current revenue	40.0	(32.4)	43.7	(34.3)	9.2	. .	. .
Current expenses	37.2	(30.2)	39.1	(30.7)	5.1	. .	. .
of which:							
Social security and welfare	14.5	(11.8)	14.9	(11.7)	2.8	. .	. .
Health	7.0	(5.7)	7.5	(5.9)	7.8	. .	. .
Education	6.2	(5.0)	6.7	(5.3)	8.6	. .	. .
Economic services	4.4	(3.6)	4.8	(3.8)	8.6	. .	. .
Administration and defence	3.2	(2.6)	3.1	(2.4)	–3.1	. .	. .
Saving	2.8	(2.3)	4.5	(3.6)	. .	. .	. .

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Table 22. **Recent fiscal outcomes** (*cont.*)
NZ$ billions

	Actual FY 2001-02	(Per cent of GDP)	Actual FY 2002-03	(Per cent of GDP)	Percentage change (actual over actual)	Budget 2002-03	Excess of actual over budget (Per cent)
Net capital expenditure	0.5	(0.4)	0.2	(0.2)	–50.6	. .	. .
Net lending	2.3	(1.8)	4.3	(3.4)	. .	. .	. .
D. General government[2]							
Revenue	50.6	(41.0)	54.2	(42.6)	7.1	. .	. .
Expenditures	48.2	(39.1)	50.1	(39.4)	3.9	. .	. .
of which:							
Current expenditures	47.2	(38.3)	49.0	(38.5)	3.8	. .	. .
Net capital expenditures	1.0	(0.8)	1.0	(0.8)	5.4	. .	. .
Net lending	2.5	(2.0)	4.1	(3.2)	. .	. .	. .

1. Equals revenue less expenses plus net surplus of tertiary education institutions and minority interest.
2. Figures for general government are OECD estimates based on a variety of sources and differ from the total Crown (for example, general government excludes SOEs and includes local government). They should be treated as indicative only.

Source: New Zealand Treasury and OECD.

the general government is still in surplus (of some 3 per cent of GDP), as it has been in uninterrupted fashion since 1994, a record surpassed only by Luxembourg and Korea among OECD Member nations. The difference between the two measures consists primarily of the government's deficit on capital account, as the small non-central government sector has recorded a small operating surplus in recent years. In cyclically adjusted terms, net lending has also improved between 2001 and 2003, with an estimated cyclically adjusted general government surplus of 2½ per cent of GDP in 2002-03. Spending increases have nonetheless been substantial – about 10 per cent at the core Crown (central government) level – and were well above levels that had been in the original budget for the year. While subsidies and transfers rose only modestly, personnel, finance and operating expenses combined surged. Higher tertiary student numbers have pushed up education outlays. Health care spending also rose significantly, as it has done in most OECD countries in recent years. But the sharpest rise was on government employee pensions due to a revaluation of its unfunded liability (accounting for around 3 of the 10 percentage points of increase). Excluding these movements, expenses have increased by an average of 4.5 per cent per annum over the last four years, and 6 per cent in 2002-03. Fortunately, the strong economy helped to boost total core Crown tax revenues by over 9 per cent, holding the deterioration in the actual operating balance to a modest amount. The favourable revenue surprise was across the board, with greater-than-budgeted increases in personal tax (due to higher wage and employment levels), corporate tax (reflecting the strength in company profits) and indirect tax (resulting from higher household spending on consumption – especially on heavily-taxed tobacco and fuel – and residential investment).

The healthy flow of public finances has allowed a steady improvement in the government's balance sheet (Table 23), and the government took advantage of

Table 23. **The government's balance sheet**

Central government (including Crown entities and state-owned enterprises) as at 30 June 2003
NZ$ billions

Assets:		Liabilities:	
Financial assets in hand	30.4	Gross debt	38.3
Property, plant and equipment	52.7	Provision for government employee pensions	13.9
Other	16.8	Provision for ACC outstanding claims	9.2
		Other	14.8
Total	**99.9**	**Total**	**76.1**
Net worth	23.8		
As per cent of GDP	18.6		

Source: Financial Statements 2003 and OECD, *Economic Outlook* 74.

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this to move to full funding of the new Superannuation Fund (NZS) a year earlier than had been planned.[101] Gross debt has fallen by some 30 percentage points of GDP to 38 per cent (at the general government level) over the past decade. The decline for central government has been more moderate, though the level is now 28 per cent of GDP – below the government's long-term objective of 30 per cent – and the lowest since 1971. In net terms the Crown's debt is down to around 11.5 per cent of GDP,[102] while including the rest of the general government adds another 3 percentage points or so. The overwhelming majority of this debt is held by domestic agents (mostly trustee and nominee companies, banks and the Reserve Bank), though the non-resident share (11.3 per cent at end-June) has been on a gently rising trend in recent years. The government also wisely considers its entire balance sheet: with tangible assets of some NZ$ 53 billion easily exceeding provisions for unfunded government employee pensions and outstanding claims for the publicly-owned Accident Insurance Corporation, the government had a net worth of 18.6 per cent of GDP at mid-year.

The latest budget calls for further spending rises in priority areas

In its latest budget the government hiked spending by a cumulative NZ$ 9 billion over the coming four years (of which NZ$ 1.6 billion is for the current year). Nearly half of that was in health – including a questionable decision to phase out asset testing for long-stay geriatric care as from July 2005 – and more than a quarter in education, with most of the rest in support of the *Growth and Innovation Framework* (see Chapter II), other social services, justice, security, the environment and culture. For the current year health-care outlays are budgeted to rise by 8¾ per cent and education by 5 per cent, most of which is at the tertiary level, as there has been a sharp rise in the number of tertiary students (+11.3 per cent in 2002) and there is to be a new maximum tuition fee. Extra funding has been provided to finance sectoral training organisations and to ensure that all teenagers are either in education, training or work by 2007 (currently 10 to 17 per cent are not engaged in any such activity). It is acknowledged that there will have to be significant growth in capital spending, especially on transport, although details of how that is to be allocated have not yet been decided, pending the finalisation of a land transport strategy. As discussed in Chapter II, more money will also have to be spent to recapitalise the public electricity producers, who face a clear need for capacity increases in coming years. Finally, on the tax side, the only change was to reduce the personal tax rate on employer contributions to pension funds from 33 to 21 per cent for those earning less than NZ$ 38 000.

The government believes it has further fiscal headroom

In the 2003-04 budget the government also signalled its intention to take several other important initiatives in its next three budgets if the economic and

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fiscal situation turns out as projected. In particular, with the OBERAC projected to rise to NZ$ 6.2 billion (4.0 per cent of GDP) by 2006-07, the government judges that it has sufficient "fiscal headroom" for initiatives costing up to around NZ$ 0.6 billion per budget without impinging on its intended operating surplus of around 3 per cent of GDP. Its ten-year projections ("progress outlooks") support the view that there is room for new initiatives, since by mid-2013 gross Crown debt could be below 12 per cent of GDP and net worth around 50 per cent of GDP. The government's hope is to raise benefits for low- and middle-income families and provide better incentives for getting the unemployed back into work. The merits of these goals are discussed more fully in Chapter IV, but the fiscal impact risks being costly if the reform is not well thought out or is inefficiently implemented. There is also a danger that these initiatives might overlap with the extra outlays from likely transportation infrastructure projects, say in 2005 or 2006, resulting in inappropriate stimulus and pressure on both capacity and the budget balance.

But *the longer-term outlook points to the need for caution*

The case for the existence of such room for manoeuvre on planned public spending is weaker if the risk of spending pressures – especially in health – is recognised, if tax rates are forced down by international competition or if the projection horizon is extended much beyond the decade required by New Zealand law. In comparative terms New Zealand will be a late-comer to the effects of ageing populations and the increase in the old-age dependency ratio will be smaller than most OECD countries (OECD, 2001e). By 2050 ageing-related spending could rise by 8.4 percentage points of GDP from the current share of 18.7 per cent, while the average Member country is projected to experience an increase of only 5.5 percentage points on top of a current figure of 16.9 per cent.

The Treasury has made available on the Internet a detailed long-term spreadsheet model of the public finances and has used it to make long-term fiscal projections. Analysis based on this model (Janssen, 2002) shows that the baseline operating balance is unlikely to suffer any ageing-related deterioration for about a decade. It would take about a further decade until the balance would turn negative, and it would continue to deteriorate throughout the simulation horizon (to 2051), reaching a deficit of 16 per cent of GDP by the endpoint. The bottom line is a "fiscal gap" (the amount by which revenues would have to increase to allow the projected gross debt to stay unchanged over a defined horizon, assumed in this case to be 2051)[103] of 1.57 per cent of GDP if the revenue increase is implemented in 2006 (Table 24). The paper shows that this estimate is very sensitive to the assumptions used: the gap almost doubles, for example, if health and education spending rise faster than productivity, as they have done in most recent years, and is also dependent on net immigration and low unemployment. OECD experiments with the model show that lowering the wage floor used in pension calculations from

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Table 24. **Fiscal gap estimates**
Per cent of GDP

A. Baseline case[1] under alternative terminal dates[2]	
2011	–1.61
2016	–1.15
2021	–0.80
2026	–0.37
2031	0.14
2036	0.60
2041	1.01
2046	1.33
2051	1.57

B. Alternative scenarios, terminal year = 2051		
1.	Higher education and health spending (2 per cent growth, rather than 1.5 per cent)	2.88
2.	Higher terminal debt target (60 per cent of GDP, rather than 30 per cent)	1.31
3.	Lower real interest rate (3 per cent, rather than 5 per cent)	1.96
4.	Lower net migration rate (zero, rather than 5 000 per year)	1.96
5.	Lower unemployment rate (5 per cent, rather than 6 per cent)	1.03
6.	Delayed adjustment (implementation in 2026, rather than 2006)	4.24

1. Initial years are from Budget Economic and Fiscal Update 2001. Labour productivity growth: 1.5 per cent per year; health and education spending growth: 1.5 per cent per year in real per capita terms; real interest rate: 5 per cent; gross debt in terminal year: 30 per cent of GDP; net migration of 5 000 per year; unemployment rate of 6 per cent.
2. Excluding the effects of the NZ Superannuation Fund. The paper points out that its existence shifts all fiscal gap calculations by –0.31 per cent of GDP because the rate of return on its assets is assumed to exceed the real interest rate.

Source: Janssen (2002, Tables 5 and 6).

65 to 60 per cent of average wages over a six-year period or gradually raising the retirement age from 65 to 67 starting in 2007 would each have powerful effects, boosting mid-century net worth by 37 and 59 percentage points of GDP, respectively. It can also be shown that higher productivity growth is extremely helpful, but only so long as real spending does not follow (in which case the impact is much more moderate). Finally, it might be argued that since the public finances are expected to be in good shape for another two decades or so, there is plenty of time to worry about the projected longer-term problems later and that current priority spending needs should be accommodated. However, delaying adjustment until the problem is upon the nation would make it an order of magnitude more severe.

Changes to the fiscal framework strengthen the medium-term focus but run the risk of loosening short-term control

Earlier this year the government decided to modify the previous fiscal management approach. That approach had been in place since 1996 and was adopted in order to gain fiscal credibility at a time of political uncertainty surrounding the

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initial experience with coalition government following the move to proportional representation in the mid-1990s. It had succeeded in ensuring an uninterrupted string of surpluses through the restraint it imposed on government spending. Essentially, it was based on a system of "provisions", comprising three-year (the length of the Parliamentary term) operating and capital spending limits and a set of rules for "counting" controllable items against that limit. It resulted in an effective cap on new spending initiatives in net terms. The government argues that it led to too much attention being paid to the short term, a neglect of medium-term issues, and too little attention given to baseline expenditures (which were outside the provisions). It also led to a modest tendency to engage in accounting games. There were also technical problems such as first-year changes counting more than those implemented later in the period, even if the long-run effects were identical. It also meant that the implications for spending outside the window were neglected. Henceforth, the government will focus on desired five- and ten-year tracks for the operating balance and government debt "consistent with overall fiscal policy" (Treasury, 2003, p. 2) and concentrate on what spending those tracks could accommodate. The implication is that virtually all spending[104] will receive equal consideration (rather than just what was considered new spending and thus countable against the provision), with greater certainty for closer time horizons. But what the government is seeking is most importantly greater discretion to change its policies if a reassessment seems appropriate and, in any case, at the beginning and the end of each Budget process.[105] This extra flexibility might come at low cost if policymakers can retain a firm hand, but the reduced discipline might prove detrimental over the longer term.

The government has decided to revise the fiscal framework by means of new legislation that was made public in August. It not only embodies measures to enhance the reporting requirements of the Fiscal Responsibility Act 1994, but also contains the legislative changes arising out of the *Review of the Centre* 2001 (see Chapter III of the previous *Survey*).[106] The legislation will remove the requirement that every *Budget Policy Statement* (BPS) set out the high-level fiscal strategy. Currently, the BPS is published about six months before each budget, setting the broad parameters for the forthcoming budget debate. This mechanism is intended to promote more informed trade-offs among strategic fiscal objectives by separating debate about them from the rush of detailed fiscal compromises and decisions in the run-up to the budget (Scott, 1996). Henceforth, unless there are changes to the high-level fiscal strategy, the BPS will focus more on detailed priorities for the upcoming budget. The annual Fiscal Strategy Report (FSR) will cover the high-level fiscal strategy and longer term fiscal scenarios.

Legislative changes arising out of the *Review of the Centre* 2001 would, in brief:

– allow spending Ministers more flexibility (such as permission to shift spending between output classes without Parliamentary approval);

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- mandate some current practices that increase transparency, such as analysis of the sensitivity of the fiscal aggregates to different economic and demographic scenarios;
- enhance Parliamentary scrutiny of spending by allowing the Auditor General to require Ministers to report to Parliament for "serious breaches of appropriations";
- create a new Crown Entities Act in order to improve their governance and accountability and better integrate them in the rest of the state sector by directing them to adopt a whole-of-government approach; and
- enhance departmental and Crown Entity[107] reporting to require more non-financial information to be disclosed regarding areas such as outcomes and organisational capability so as to allow Parliamentary Select Committees to judge performance more broadly than short-term financial results.

These are all worthy objectives. Finally, in order to avoid a significant reduction in spending discipline the bill would also require the Treasury to do an assessment of the long-term outlook and risks to the public finances every four years.[108] This will be helpful in attracting the attention of policymakers and the public alike to issues such as population ageing.

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VI. Some aspects of sustainable development

There is growing concern that long-run development may be compromised unless countries take measures to achieve balance between economic, environmental and social outcomes. This section looks at three issues of sustainable development that are of particular importance for New Zealand: containing greenhouse gas (GHG) emissions, reducing water pollution and improving living conditions in developing countries. In each case, indicators are presented to measure the progress and evolution of potential problems, and an assessment is made of government policies that affect the issue. The section also considers whether the institutional arrangements for integrating policymaking across the different elements of sustainable development are working well, taking the example of genetically modified organisms (GMOs) as a case study (see Box 4).

Climate change

Main issues

New Zealand is participating in international efforts to limit GHG emissions by means of the Kyoto Protocol. Ratified in December 2002, the treaty commits New Zealand to keeping its emissions in the period 2008-12 to their 1990 level, a generous target in comparison with an overall initial goal of reducing emissions from industrialised countries by 5 per cent. The main issue is to meet Kyoto requirements without excessively compromising growth outcomes.

Performance

GHG emission intensity is higher than in virtually all other OECD countries (Table 25). The biggest contributors are methane emissions from grass-fed ruminant farm animals (mainly sheep, beef and dairy cows) and nitrous oxide from agricultural soils. Together, these account for close to half of total gross GHG emissions, although CO_2 emissions from transport are also substantial. In 2000, GHG releases were already 5 per cent above their 1990 level. This increase has been mainly driven by the rising use of fossil fuels in energy supply, with a salient upward trend in the carbon content of electricity (Table 26) as additional power

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Box 4. Policy integration across sustainable development areas[1]

The Resource Management Act (1991) aims at integrating the economic and environmental pillars of sustainable development. The Act subjects public and private projects to a prior review of their environmental and social consequences, which in most cases fall within the purview of local authorities, although the impacts often go beyond regional borders. Environmental impacts are in general not assessed in monetary terms, though road projects are an important exception. Since 1995, every policy proposal submitted to the Cabinet must be accompanied by a regulatory impact statement including a cost-benefit analysis (CBA). Furthermore, the economic consequences of changes in environmental law are carefully looked at, as is currently the case for the upcoming introduction of vehicle emission standards. CBAs are prepared by the department that sponsors the bill and are not subject to independent review,[2] although they must follow government-set guidelines. In January 2003, the government adopted a Sustainable Development Programme of Action to orient policy on four selected long-term issues: the quality and allocation of freshwater, energy, sustainable cities, and child and youth development. The programme mainly puts existing policies in perspective, yet opens the debate on possible new measures, such as the introduction of national minimum standards of freshwater quality.

The issue of genetically modified organisms (GMOs) has been testing the effectiveness of arrangements to ensure policy integration across different areas. GMOs represent a major business opportunity for the biotechnology industry and some promise productivity gains to the farm sector, while at the same time they raise environmental concerns and may harm agricultural trade because of consumer fears in destination markets. A Royal Commission was set up to conduct a public enquiry into issues surrounding the use of GMOs. This effort seems to have been successful. In particular, an in-depth study carried out by the government found that farmers could be better off if they had the choice to use GMOs. Indeed, the loss of customers concerned with GMOs is estimated to be far less costly than that of price-conscious customers if farmers cannot use GMOs while their competitors can. In addition, GMOs that reduce chemical inputs into agriculture can help to ease the trade-off between agricultural productivity and water quality, which is of particular importance to New Zealand (see below). The Royal Commission recommended that GMOs be authorised on a case-by-case basis, with conditions attached if necessary, after evaluating each proposal's merits and risks. The main policy objectives are to enable the development of the biotech sector and to allow farmers to remain competitive in comparison to foreign producers who use GMOs, while preserving opportunities for those who see market opportunities from using non-GMO technology. However, a recent official review recommended some operational changes in relation to the implementation of the regime by the Environmental Risk Management Authority (ERMA), which considers applications for GMO releases, and the Ministry of Agriculture and Forestry (MAF), which monitors compliance with rules and conditions. The review found that ERMA has the core competencies and capability to carry out its role, but recommended organisational and managerial changes, including increased human resources to properly assess

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Box 4. **Policy integration across sustainable development areas**[1] (*cont.*)

many GMO proposals and improving current co-ordination arrangements between ERMA and MAF. The authorities are currently acting on the recommendations made by the reviewers. There was also legal uncertainty over whether local authorities, who are responsible for environmental consents in their areas, can overturn decisions by ERMA. This uncertainty has been resolved by the New Organisms and Other Matters Act, passed in October 2003.

1. The sections in this report dealing with greenhouse gas emissions, water pollution and improving living conditions in development countries are inputs into the Organisation's follow-up on Sustainable Development as mandated by the OECD Ministerial Council decision in May 2001.
2. Apart from the part of the analysis that assesses business compliance costs.

requirements were met by carbon-emitting combined cycle gas plants. On existing policies, official projections suggest that the 2008-12 Kyoto target will be met comfortably, with increases in emissions from 1990 levels being offset by carbon absorption in forests planted after 1990 (NZ Climate Change Programme, 2002).

Policies

The likely attainment of the Kyoto target does not imply, however, that no climate policy is required. Since there will be a price for carbon allowances on the international market, domestic emissions will have an opportunity cost. In recognition of this, the authorities have adopted a policy whereby, as from 2008, emissions will be taxed at a rate that reflects the price of permits on the international market. The tax will encourage the efficient level of carbon emission abatement, notably in electricity generation.[109] The *a priori* economic optimality of such an approach is diminished by several exemptions.

The main exemption concerns the farming sector. On-farm releases of methane and nitrous oxide will not face the carbon tax. Apart from their consumption of fuel for tractors and for buildings, farmers will have no incentive to reduce emissions. The decision to exempt this sector was made because the only known way to reduce emissions from extensive rearing is to cut down on herds, an option that the authorities do not want to encourage given the importance of farming to New Zealand's economy. By narrowing the tax base to less than half of total emissions, this choice creates a distortion that favours farming and will sustain activity in this sector above the level that would maximise New Zealand's net gains from

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Table 25. **Main indicators: climate change**

Indicators of greenhouse gas (GHG) emission intensity, grams of CO_2 equivalent per $PPP of GDP, in 1995 prices

	Total GHG emissions	CO_2 emissions, electricity	CO_2 emissions, transport	Other GHG emissions	Total GHG emissions	CO_2 emissions, electricity	CO_2 emissions, transport	Other GHG emissions
	Level, 2000				Average annual percentage change 1990-2000			
Australia	1 061	360	159	542	–1.8	–0.5	–1.5	–2.7
Austria	403	66	96	241	–2.1	–3.2	–0.0	–2.4
Belgium	600	105	97	398	–1.5	–1.3	–0.2	–1.8
Canada	888	156	183	549	–0.9	0.2	–0.9	–1.3
Czech Republic	1 082	468	100	514	–2.8	2.5	6.3	–6.6
Denmark	501	171	88	242	–2.4	–2.7	–0.8	–2.6
Finland	597	178	99	321	–2.6	–0.2	–1.8	–3.8
France	402	30	102	271	–2.0	–2.6	–0.0	–2.6
Germany	519	168	91	260	–3.9	–3.6	–1.1	–5.0
Greece	819	275	122	422	–0.2	0.1	0.0	–0.3
Hungary	747	192	79	476	–2.6	–1.3	–0.2	–3.4
Iceland	398	0	84	314	–1.8	. .	–2.5	. .
Ireland	643	152	98	392	–4.6	–3.0	0.2	–6.0
Italy	432	108	89	235	–1.1	–0.4	0.0	–1.7
Japan	441	132	81	229	–0.3	0.1	0.9	–1.0
Luxembourg	314	6	249	59	–12.5	–27.1	0.6	–23.1
Netherlands	553	138	80	335	–2.5	–1.0	–1.1	–3.3
New Zealand	**1 078**	**82**	**179**	**817**	**–2.2**	**2.9**	**0.8**	**–3.1**
Norway	454	3	97	354	–2.9	–1.6	–2.9	–2.9
Poland	1 109	458	74	576	–7.1	–6.5	–1.4	–8.1
Portugal	516	129	111	276	–0.1	0.9	3.5	–1.5
Slovakia	846	249	70	526	–5.2	1.0	2.0	–7.6
Spain	536	130	127	278	0.4	1.2	1.0	–0.3
Sweden	340	35	110	195	–1.91	–1.5	–0.8	–2.6
Switzerland	267	2	78	187	–0.94	–3.8	–0.4	–1.1
United Kingdom	512	137	106	268	–3.58	–4.3	–1.4	–3.9
United States	779	273	192	315	–1.86	–0.7	–1.3	–3.0
OECD total	639	201	137	307	–1.88	–0.8	–0.6	–2.9
European Union	491	120	100	272	–2.43	–2.4	–0.4	–3.1

Source: Greenhouse gas emissions: national submissions to the UNFCCC and national publications. Carbon dioxide emissions for electricity and transport: IEA (2001). GDP: OECD, SNA database.

selling permits. However, this distortion is likely to be small because any tax in line with the international carbon price is unlikely to lead to large herd or emission cutbacks, so its impact would mainly be re-distributional.[110]

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Table 26. **GHG emissions and sectoral indicators**

	Total GHG emissions		CO_2 emissions per Kwh electricity	Manufacturing CO_2 emissions per unit of industrial production	Residential CO_2 emissions per unit of private consumption	Road transport CO_2 emissions per vehicle	Electricity use per unit of GDP	Industrial output per unit of GDP
	Level million tonnes CO_2 equivalent 2000	Annual average percentage change						
		1990-2000	1990-2000	1990-2000[1]	1990-2000[2]	1990-1999	1990-2000	1990-2000[1]
Australia	502	1.7	0.1	–0.8	–1.6	–0.6	–0.5	–1.6
Austria	80	0.3	–2.8	–2.8	–3.4	–1.0	–0.4	1.5
Belgium	152	0.7	–0.8	–0.7	–1.6	–0.1	–0.5	0.0
Canada	726	1.8	0.7	–2.4	–2.7	1.2	–0.5	0.9
Czech Republic	147	–2.7	1.1	–10.1	–11.5	2.6	1.4	1.3
Denmark	69	–0.1	–3.7	–3.4	–5.3	0.3	1.0	1.1
Finland	74	–0.4	–0.5	–7.2	–7.8	–0.6	0.3	3.2
France	550	–0.2	–3.2	–1.8	–2.3	–0.1	0.7	–0.2
Germany	991	–2.1	–2.1	–2.6	–5.1	–0.4	–1.5	–0.4
Greece	130	2.2	–1.9	–0.9	8.2	–1.5	2.0	–1.2
Hungary	84	–1.8	–2.6	–13.4	8.8	0.0	1.3	7.3
Iceland	3	0.7	. .	. .	–7.5	–1.9	2.9	. .
Ireland	67	2.2	–1.1	–11.4	–5.4	2.5	–1.8	5.5
Italy	547	0.5	–1.2	–2.0	–0.7	0.3	0.8	–0.3
Japan	1 386	1.1	–0.9	0.5	–2.2	0.1	1.0	–1.6
Luxembourg	6	–7.8	–20.3	–12.5	–2.4	1.2	–8.5	–2.8
Netherlands	218	0.4	–0.3	–1.6	–3.9	0.2	–0.7	–0.8
New Zealand	**77**	**0.5**	**3.7**	**1.8**	**–4.3**	**–1.2**	**–0.8**	**–0.8**
Norway	55	0.6	0.4	0.2	–9.4	0.3	–2.0	–2.1
Poland	386	–3.7	–3.7	–6.4	11.7	–0.7	–2.9	3.8
Portugal	85	2.7	–0.7	1.3	1.1	–2.2	1.5	–1.4
Slovakia	49	–4.0	–0.3	–9.1	–2.1	0.3	1.3	–1.3
Spain	386	3.0	0.0	–0.2	1.8	0.2	1.2	–0.4
Sweden	69	–0.2	0.2	–4.1	–3.7	0.2	–1.7	1.9
Switzerland	53	–0.1	–4.8	0.2	–3.1	–1.0	1.0	1.5
United Kingdom	649	–1.3	–3.6	–2.1	–1.2	–0.6	–0.7	–1.6

Table 26. **GHG emissions and sectoral indicators** (*cont.*)

	Total GHG emissions		CO_2 emissions per Kwh electricity	Manufacturing CO_2 emissions per unit of industrial production	Residential CO_2 emissions per unit of private consumption	Road transport CO_2 emissions per vehicle	Electricity use per unit of GDP	Industrial output per unit of GDP
	Level million tonnes CO_2 equivalent 2000	Annual average percentage change						
		1990-2000	1990-2000	1990-2000[1]	1990-2000[2]	1990-1999	1990-2000	1990-2000[1]
United States	7 001	1.3	0.2	–4.7	–1.9	0.9	–0.9	1.1
Total of above OECD countries	14 543	0.6	–0.7	–2.8	–1.8	0.2	–0.3	0.2
OECD excluding US	**7 542**	**–0.1**	**–1.6**	**–1.9**	**–1.8**	**–0.3**	**0.3**	**–0.4**
EU countries	4 073	–0.3	–2.1	–2.0	–2.4	–0.2	–0.3	–0.3

1. 1995-2000 for Czech Republic; 1991-2000 for Germany; 1992-2000 for Hungary and Slovakia; no data for Iceland.
2. 1991-1998 for Czech Republic; 1993-2000 for Slovakia.

Source: GHG National submissions to UNFCCC, national sources and UNFCCC; carbon dioxide data, IEA; industrial production, private consumption, OECD.

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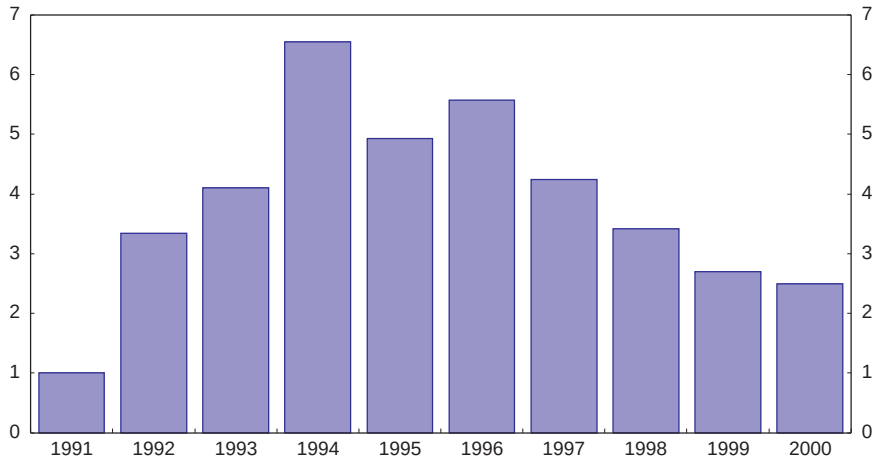
A partial exemption from the tax is also available for industrial emitters that compete, either for the domestic market or for exports, with foreign suppliers who are not subject to a carbon constraint. Such companies can negotiate relief from the tax in exchange for a commitment to reduce emissions. If a firm then misses its target, it must pay the tax on excess emissions. Conversely, it can sell carbon credits for any emission reduction beyond its target. These two provisions maintain the incentive to lower emissions at the margin and thus the capacity of the economic instrument to induce a cost-effective allocation of abatement efforts. However, the case-by-case nature of the procedure leaves government regulators in a situation of asymmetric information where firms can exploit their informational advantage as to costs in order to obtain a generous target. Furthermore, exempting firms from part of the burden of the carbon tax cannot really protect their competitiveness, since the price of marginal emissions still adds to production costs. One agreement has been signed so far, with the New Zealand Refining Company, whereby the target is set in relation to the level of output on the basis of World's Best Practice (WBP). According to the company, the target is ambitious, as required reductions in emission intensity would reflect not only existing WBP but also expected technological progress.

Forests will play an important role in helping New Zealand to meet the Kyoto target. Afforestation accelerated from the late 1980s as a consequence of, amongst other factors, the withdrawal of agricultural subsidies and a rise in world timber prices (Figure 40) (Rhodes and Novis, 2002). As the elimination of subsidies was reflected in lower land prices, the planting of harvest forests became a more profitable activity than raising sheep or growing crops in many areas. However, the government plans to retain sink credits for itself, because it enables the government to manage the credits and liabilities to achieve wider climate change objectives including sheltering some sectors from the carbon charge. This implies that forestry businesses have no incentive to take carbon storage into account in their planting and harvesting decisions. The only possible exception to that situation could come from a provision in the climate change strategy that foresees granting carbon credits to businesses that plant trees specifically for permanent non-harvest forests. This provision is unlikely to have any discernible effect, since a price higher than NZ$ 40 per tonne of CO_2 would be needed to make it economic to plant non-harvest forests.[111] On the other hand, if temporary carbon credits were issued for rotation forests, the economic attractiveness of traditional commercial forestry would be improved, which would yield more carbon sequestration in the future. On the current policy of not crediting forest developers, it is uncertain what trend planting rates will follow in the next decade. The way the uncertainty is resolved will have a strong impact on New Zealand's capacity to comply with post-Kyoto emission targets.

Besides the emission charge, the government intends to implement a competitive tendering mechanism aimed at encouraging the abatement of greenhouse gas emissions as well as improved security of electricity supply, notably

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Figure 40. **New planting of forests**
Percentage of total plantation area



Source: NZIER (2001b).

through the development of renewable sources in power generation. It plans to tender 4 million tonnes of CO_2 credits in the first year of the programme to projects that will meet the above objectives. Even though this policy deviates from economic efficiency, as credits add an extra incentive to the price differential created by the carbon tax, the resulting reduction in emissions should be achieved at least cost since credits will go to the lowest, most cost effective bidders.

Conclusions

New Zealand's choice of a price-based strategy represents in principle an economically efficient approach to reduce carbon emissions. However, sectors responsible for large amounts of the country's GHG emissions are sheltered from the projected carbon tax, namely farming, emission-intensive industry and forestry. In the long term, exempting on-farm GHG emissions will distort resource allocation in the economy. The way in which "competitiveness-at-risk" firms are being offered tax relief maintains a full incentive to cut emissions at the margin of the negotiated target. However, the case-by-case nature of the negotiation poses a risk that firms may use their informational advantage to obtain unduly generous targets. Tax relief should be offered only for a limited period, all the more so since effects on competitiveness will be quite limited. As regards forests, the abolition

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of agricultural subsidies has been a "win-win" policy, improving economic efficiency while at the same time leading to higher planting rates and more carbon absorbed by trees. Nonetheless, the forestry part of the climate policy ought to be revised, inasmuch as the emission credits for sinks should be devolved to land owners instead of being retained by the government. This should go hand in hand with abolishing the farm exemption from the carbon tax, since half of forests that generate carbon sinks under the Kyoto Protocol (those planted after 1990) are on farm land. As for the energy sector, the specific measures planned in order to foster renewables are unnecessary and could be withdrawn, since price signals created by the emission charge provide electricity producers with an efficient level of incentive to avoid emissions.

Reducing water pollution

Main issues

Clean drinking water is a vital commodity that depends in part on the supply of freshwater also being of good quality. In addition, New Zealand attaches great importance to preserving its "clean green image", which is partly based on the pristine condition of its water bodies. This is not only because the environment is highly valued but also because its favourable reputation contributes to attracting tourists and foreign customers for farm produce, a matter of significance given that agriculture accounts for more than half of merchandise exports and that tourism represents around 4½ per cent of economy-wide value added. Indeed freshwater is on the list of four key areas identified by the 2003 Sustainable Development Programme of Action. The Programme aims at three key outcomes: sustainable, efficient and equitable allocation and use of water; maintaining water quality to meet appropriate needs; and protecting water bodies with nationally significant natural, economic or cultural heritage values. The main issue is to preserve water quality from the growing pressure exerted by farming without imposing excessive costs on producers and households.

Performance

The quality of water bodies in New Zealand is high by international standards but deteriorating (Table 27). Nationwide trends are difficult to assess, but it appears that water quality has improved in cases where it was affected by discharges from towns and plants, thanks to better wastewater treatment.[112] However, it has deteriorated in areas where dairy farming has been expanding strongly (Statistics New Zealand, 2002b),[113] especially when it comes to contamination by faecal coliforms[114] and campylobacter.[115] The contamination of freshwater is thought to be one of the main causes of the rising prevalence of campylobacter infection in humans (Poore, 2003), which is now well above other industrialised countries (Figure 41).

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Table 27. **Performance indicators: water pollution**
Selected rivers

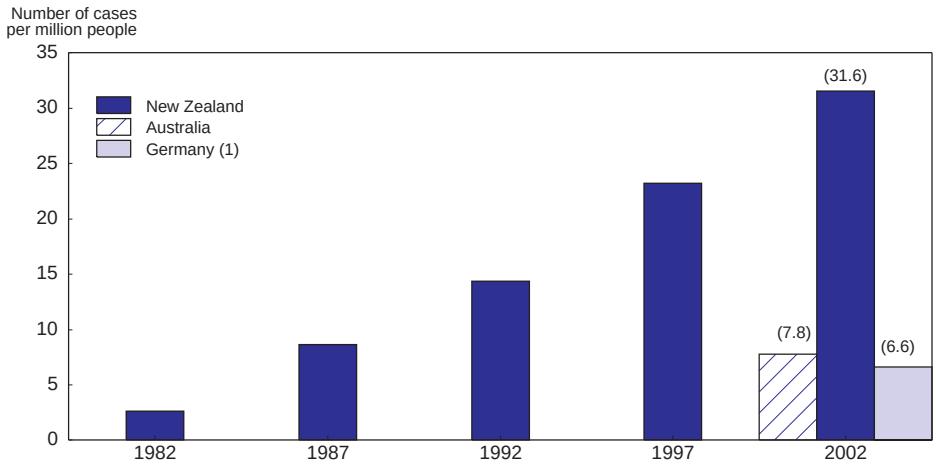
	Biochemical oxygen demand	Nitrates	Total Phosphorus	Ammonium
	mg O2/litre	mg N/litre	mg P/litre	mg N/litre
	Average last 3 years			
Australia	. .	. .	. .	. .
Austria	2.2	1.3	0.1	0.09
Belgium	. .	. .	. .	
Canada	. .	0.1	0.0	0.04
Czech Republic	4.6	3.5	0.3	0.5
Denmark	2.0	2.6	0.1	0.1
Finland	. .	0.3	0.0	0.04
France	3.2	3.1	0.4	0.15
Germany	2.4	3.3	0.2	0.12
Greece	. .	1.5	0.4	0.15
Hungary	2.9	1.6	0.3	0.08
Iceland	. .	. .	. .	
Ireland	1.8	2.9	0.1	0.05
Italy	. .	2.1	0.2	0.1
Japan	1.4	. .	. .	
Korea	2.8	2.6	0.1	0.76
Luxembourg	2.7	4.1	0.4	0.2
Mexico	15.9	0.6	0.1	0.04
Netherlands	3.1	3.3	0.2	0.14
New Zealand[1]	**0.5**[2]	**0.1**[2]	**0.1**[2]	**0.04**[2]
Norway	. .	0.3	0.0	0.02
Poland	4.3	1.9	0.3	0.22
Portugal	. .	. .	. .	
Slovak Republic	3.3	2.2	0.2	0.4
Spain	3.6	3.1	0.2	0.19
Sweden	. .	0.5	0.1	0.03
Switzerland	. .	1.5	0.1	
Turkey	2.7	1.0	0.2	0.21
United Kingdom	2.9	5.2	0.9	0.72
United States	1.6	. .	0.1	0.03

Note: Lower numbers indicate better water quality.
1. 1995-2001 average at 68 sites, in Statistics New Zealand (2002b).
2. 1995-2001 average at 624 monitoring stations.
Source: OECD, Statistics New Zealand and Ministry of the Environment.

Increasing dairying has also been identified as a cause of increased nitrogen pollution and high phosphorus concentrations (Hamill and McBride, 2003). The use of nitrogen fertilisers has increased fivefold since 1989. However, to put this into perspective, excess nitrogen per hectare of agricultural land is lower in New Zealand than in all other OECD countries except Hungary (OECD, 2000c).

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Figure 41. **Prevalence of campylobacter infection**



1. Germany: 2001. Germany has been used to provide a European reference, in the absence of a Europe-wide indicator.
Source: Poore (2003) and EC (2001).

Policies

Under the Resource Management Act (RMA), water policy is devolved to local authorities who have full responsibility for setting and enforcing quality objectives. The Ministry of the Environment publishes non-binding guidelines for biochemical parameters in streams and has the ability to produce national environmental standards. As drinking water standards are not obligatory, about 6 per cent of the population is currently connected to non-compliant supply systems. A package of drinking water standards is being developed under the draft Health (Drinking Water) Amendment Bill, which will require suppliers to take all practical steps to comply with the standards. Regional-level plans and resource "consents"[116] (issued for a maximum of 35 years) for point discharges constitute the main instrument of water policy. Regional councils usually tighten consents at renewal time, and this has been the main driver in water pollution abatement, with considerable reductions in discharges from point sources claimed over the last decade (Statistics New Zealand, 2002b).[117] The command-and-control nature of resource consents mean that these reductions may not have been achieved at least cost. When considering measures to curb pollution, local authorities are required to evaluate the costs and merits of different policy levers by a provision of the RMA that explicitly calls for an assessment of the use of "economic instruments". Surprisingly, another stipulation in the RMA precludes the use of tradeable permits to control discharges to

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water (Sharp, 2002). Two regional councils have indeed found themselves in the situation of identifying low-cost market-based solutions as desirable, only to reject them afterwards because of the legal impossibility.

In contrast to point sources, diffuse discharges from on-farm activities remain largely uncontrolled by the authorities with limited regulations in some regional councils (OECD, 2003j). A non-binding agreement aimed at reducing emissions to water bodies was signed in May 2003 between the government and Fonterra, a co-operative group that processes 87 per cent of New Zealand's milk. The thrust of the accord is that Fonterra should apply pressure on suppliers to gradually exclude cattle from streams and lakes and their banks, to building crossing points and to adopting nutrient input and output management systems at the farm level. Quantitative targets have been set for compliance with technical requirements, with two key deadlines in 2007 and 2012. Voluntary commitments in general raise issues of economic efficiency, as costs are hidden and marginal costs may differ widely amongst participants (OECD, 2003). However, the nitrogen accounts foreseen in the agreement could provide the basis for economic instruments such as emission taxes or discharges permits. In New Zealand's context of extensive agriculture, voluntary and regulatory measures may nonetheless remain helpful, because the ultimate impact of livestock output on water quality depends not only on the volume of excess nutrient but also on the location where it is released.

The combination of a rapid increase in the consumption of municipal water with the tightening of discharge permits puts considerable strain on the sewage collection and treatment infrastructure. The continuation of current trends appears unsustainable, since it would entail very high investment costs, as in the Auckland region where annual investments in water services are estimated to amount to an average of ¾ per cent of national GDP over the period 2001-05 (Parliamentary Commissioner for the Environment, 2000).[118] The key factor behind these developments is the very limited extent to which water supply and wastewater treatment are priced. Only one quarter of households are metered and, where they exist, volume charges cover only water supply, while wastewater collection and treatment costs are recovered through flat rates. Firms connected to public sewage collection networks are charged according to the volume and the pollution load of their discharges with the aim of recovering full costs.

Conclusions

New Zealand's waters are in good condition, but trends are difficult to ascertain given the limited availability of nationally comparable data. The quality of water bodies ought to be regularly reported to the public. Current efforts in this direction by the Ministry of the Environment should be sped up. The intensification and expansion of agriculture (particularly dairying and deer farming) and

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changes in land use pose a threat to water quality. The recent agreement with the dairy industry is a step in the direction of addressing diffuse nutrient pollution, and its implementation needs to be monitored closely so that the authorities can step in and rapidly introduce obligatory measures in case of insufficient progress. In addition, regional authorities could usefully introduce tradable permits based on the nitrogen accounts that the agreement has asked farmers to keep. Similarly, trading should be allowed between farmers and those who already hold allowances for point discharges. Regional councils are particularly well placed to design and implement water pollution cap-and-trade schemes because their boundaries broadly coincide with water catchment areas and they have the legal power to constrain discharges to waters. For regional councils to introduce tradable water pollution permits, the central government must lift the provision in the RMA that prevents them from doing so. Finally, the use of wastewater services should be charged to households on the basis of their consumption.

Improving living conditions in developing countries

Main issues

Reducing poverty in the non-OECD area is essential to achieving globally sustainable development. Although developing countries themselves have the major responsibility to improve their own living standards, OECD countries can assist them to do so by giving them access to markets and by providing them official development assistance (ODA). The main issues for New Zealand are the degree of openness of the domestic market to developing country producers and the volume and effectiveness of aid.

Performance

The share of developing countries (DCs) in New Zealand imports is above the OECD median and growing rapidly (Table 28). Soaring trade with China is the main driving force behind the high annualised growth for imports from low-income countries (LICs). On the other hand, New Zealand still has one of the lowest proportions of imports from least-developed countries (LDCs) in the OECD area, and it shows little sign of rising much. This may be related to the great geographical distance between the country and the main LDCs, and the associated transport costs which have a bigger impact on goods made in LDCs because of their typically lower ratio of value to weight.

New Zealand has one of the lowest ODA-to-national-income ratios amongst countries party to the Development Assistance Committee (DAC), and no intermediate target has been set to mark progress towards the agreed UN goal of 0.7 per cent (Figure 42). One quarter of aid is channelled through multilateral institutions, the rest being allocated bilaterally with a concentration on Pacific island

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Table 28. **OECD non-energy imports from developing countries**

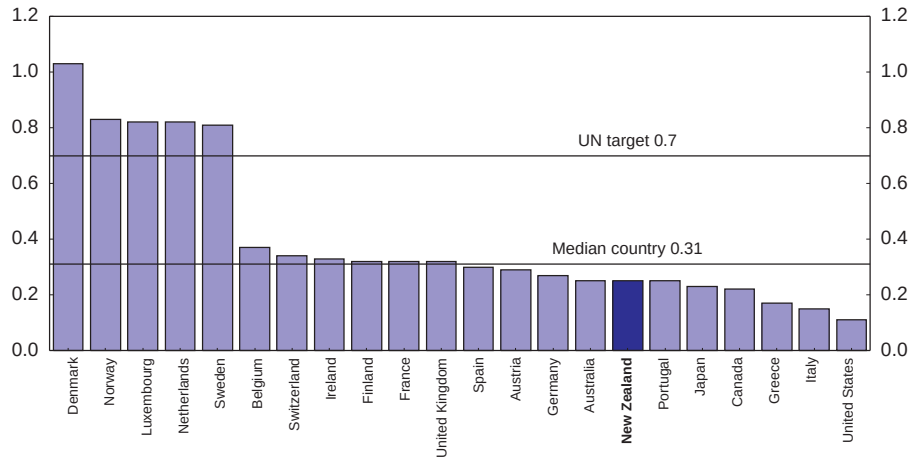
	Least-developed countries		Other low-income countries		All developing countries	
	Share in total imports, percentage	Average nominal growth (dollar terms), per cent	Share in total imports, percentage	Average nominal growth (dollar terms), per cent	Share in total imports, percentage	Average nominal growth (dollar terms), per cent
	2001	1990-2001	2001	1990-2001	2001	1990-2001
Australia	0.2	7.9	12.6	15.1	22.1	11.8
Austria	0.3	13.1	2.7	9.1	7.6	5.8
Belgium	1.6	5.7	4.5	9.9	11.7	8.8
Canada	0.1	5.1	4.8	17.0	11.9	13.0
Czech Republic	0.1	8.9	4.1	39.7	7.7	20.5
Denmark	0.3	0.9	4.3	9.6	7.4	5.9
Finland	0.5	16.6	4.5	13.7	9.2	8.4
France	0.6	1.0	5.4	11.2	13.0	6.3
Germany	0.5	5.6	5.5	9.2	11.3	4.6
Greece	0.7	7.0	5.1	13.4	13.4	7.9
Iceland	0.1	20.0	4.2	21.7	10.4	19.0
Ireland	0.3	5.6	2.9	17.9	7.6	18.1
Italy	0.4	–1.1	4.9	9.8	13.4	3.7
Japan	0.2	–4.7	24.6	14.0	39.0	9.9
Korea	0.1	–2.6	14.3	12.1	24.5	9.2
Luxembourg	0.1		0.7		1.5	
Mexico	0.0	–6.3	0.6	13.5	4.0	14.9
Netherlands	0.4	5.9	7.7	12.3	16.2	7.5
New Zealand	**0.1**	**4.2**	**10.2**	**18.6**	**17.2**	**12.6**
Norway	0.4	–17.5	4.3	14.4	8.9	–0.2
Poland	0.4	12.4	4.9	22.7	10.3	18.5
Spain	0.5	3.2	5.5	13.9	13.1	9.3
Sweden	0.2	7.3	2.7	6.8	5.7	3.1
Switzerland	0.1	–1.2	2.5	10.2	5.8	2.7
Turkey	0.2	–2.4	5.7	11.4	12.7	6.7
United Kingdom	0.4	6.8	4.7	9.6	12.8	8.3
United States	0.5	9.1	12.6	16.8	35.2	13.3

Note: Starting point is 1992 for Poland; 1993 for Belgium and Czech Republic.
Source: OECD.

states. (NZ$ 110 million of New Zealand's NZ$ 246 million total ODA goes to the Pacific, making New Zealand the fourth largest aid donor to that region.) The overall outcome of New Zealand's aid in terms of economic growth and poverty reduction is difficult to assess, as the economy-wide effects of ODA flows averaging NZ$ 2.8 million per recipient country cannot be readily discerned. Nonetheless, specific, focused parts of the aid programme may lend themselves to evaluation, such as New Zealand's assistance to the Solomon Islands, which amounted to NZ$ 9 million in 2000 (3.2 per cent of the archipelago's GDP). An assessment was

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Figure 42. **Net ODA by DAC members in 2001**
Per cent of GNI



Source: OECD.

carried out by the DAC in January 2000, prior to the coup in that country in June 2000. The general conclusion was that New Zealand's assistance had helped the Solomons reduce poverty, thanks to an integrated programme combining aid to the health sector, investments in education and efforts to improve governance (OECD, 2000d).

Policies

At a simple average of 13.8 per cent across all lines,[119] New Zealand bound tariffs are sizeably above those of the Quad countries (4.2 per cent),[120] with a large standard deviation and quite a few high rates (Table 29). There are peaks in both MFN and applied tariffs for textiles, clothing and leather goods – products which are of particular importance to developing countries. In 2002, the simple average across tariff lines for textiles and clothing was 19.4 per cent, while the average applied rate was 9.5 per cent (WTO, 2003). The country's generalised system of preferences (GSP) offers preferences, up to 80 per cent of the MFN rate, to DCs with per capita income below 70 per cent of the New Zealand level but with significant exceptions for footwear, apparel and motor-vehicle parts. LDCs have been granted tariff-and-quota free access since 2001 on the condition that 50 per cent of the value is added in the exporting country (or other LDCs). In practice, only 0.7 per cent

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Table 29. **Bound tariffs on industrial goods**
Post Uruguay Round

	Simple mean of bound tariffs, per cent	Standard deviation	Per cent of tariffs greater than 15 per cent	Maximum rate,[1] per cent
Australia	10.6	10.8	15.9	89.3
Canada	5.3	5.2	7.2	25.0
Czech Republic	4.5	3.3	1.0	31.5
European Union	4.1	3.6	0.6	22.0
Hungary	6.8	4.0	1.4	44.0
Iceland	10.0	12.1	30.0	107.0
Japan	3.6	3.8	0.6	49.0
Korea	11.4	9.0	18.9	110.8
Mexico	34.8	3.1	99.6	67.2
New Zealand	**13.8**	**14.7**	**33.9**	**313.5**
Norway	3.4	5.5	0.2	170.0
Poland	10.6	5.2	12.9	100.7
Switzerland	1.9	3.4	0.3	99.3
Turkey	40.7	34.2	77.3	360.0
United States	3.8	4.2	2.0	34.5

1. This is the maximum rate of tariffs aggregated at the 6-digit Harmonised System level. Tariff rates on individual products may be higher.
Source: OECD.

and 15.2 per cent of actual imports from LDCs and DCs, respectively, are subject to duty. However, the real degree of protection is higher than is suggested by the low figures. They give no account of the transactions that do not take place because of existing tariffs, of the complexity and limited predictability of the rules that determine the actual rate, and of other restrictions such as the rules of origin for the GSP. The plan to gradually bring every MFN rate to zero by 2006 would have eliminated these obstacles and made it considerably easier for prospective exporters in developing countries to gain access to New Zealand's market. However, the plan was shelved in 2000. Fortunately, tariff cuts will resume in 2006 for a three-year period but they will not bring rates to zero, in contrast to the initial plan.[121]

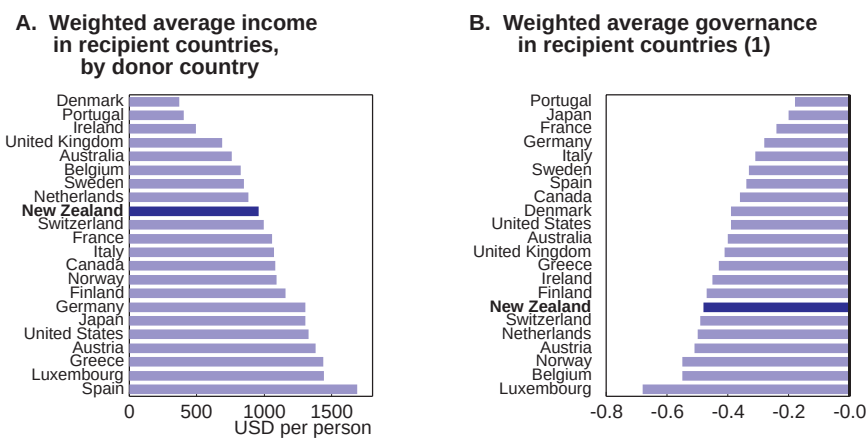
Having the possibility to sell into developed countries' agricultural markets on a level playing field is of particular importance to developing countries. In this regard, New Zealand offers much better opportunities to DCs than does any other OECD country. Producer support is almost non-existent in New Zealand, and there are no export subsidies depressing the prices given to farmers in the developing world. In addition, agricultural products enter quota-free with an average applied tariff of 2.1 per cent and a zero rate for LDCs. However, one difficulty

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facing farmers in developing countries, especially LDCs, is the extent of sanitary and phyto-sanitary (SPS) regulations.[122] The authorities have been working since the early 1990s to help exporters in the Pacific area to meet SPS requirements. One example is the appointment of an officer in the Ministry of Agriculture to work full time on import applications emanating from LDCs. This is part of the 6 per cent of the ODA budget that goes to build trade capacity in DCs.

Aid-related activities, which had been undertaken directly by the Ministry of Foreign Affairs and Trade, were transferred to a newly created semi-autonomous body in 2002, the New Zealand Agency for International Development (NZAID). Two main reasons behind this reform were to shift the focus from foreign policy objectives towards development goals and to put in place better monitoring and assessment tools. Poverty reduction is the primary objective assigned to NZAID. In this regard, the current importance of education and governance activities, which together represent 43 per cent of bilateral aid, constitutes a sound basis, as does New Zealand's allocation pattern that is relatively well geared towards the poorest countries (Figure 43). On the other hand, the quality of governance in recipient countries is comparatively low, which diminishes the potential of New Zealand's aid to reduce poverty. Besides, bilateral assistance has become increasingly scattered,

Figure 43. **Average income and governance in recipient countries**



1. A value closer to zero indicates better governance. Indicators are taken from the World Bank Institute dataset as reported in Kaufmann *et al.* (2002). They rely on polls of experts and surveys of business people and citizens in general.

Source: OECD, DAC and World Bank.

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from 49 recipient countries in 1990 to 94 in 2003 although a smaller group of 20 Pacific and Asian countries has been designated as core partners.

Conclusions

New Zealand offers better access to its market for farm goods than any other OECD country, and current efforts to help exporters in LDCs meet sanitary requirements can help reduce the only major impediment remaining in this area. Developing countries' exporters of industrial goods still need to comply with a complicated set of rules if they want to take advantage of the many possibilities to avoid MFN rates, which are higher than in OECD major trading blocks. These obstacles would be effectively eliminated by reinstating the plan to bring MFN rates down to zero. New Zealand's recent overhaul of its international development aid framework could also help improve the country's contribution to better living conditions in developing countries. In this reform, two elements are of particular importance. *First*, the planned monitoring and evaluation of aid should be implemented as soon as possible. *Second*, New Zealand's ODA should strengthen its focus on a core group of partner countries selected for the acuteness of poverty there and for their institutional capacity to make aid work. These improvements to the framework for providing aid should be supplemented by an increase in the volume of ODA so as to narrow the gap with the agreed UN target.

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Notes

1. Unless otherwise noted, "average" in this *Survey* refers to unweighted averages of the relevant countries.
2. In 1991, output is estimated to have been 6 per cent below potential. Hence, at least 6 percentage points of the growth since then can be attributed to a cyclical bounce-back. However, if potential output fell more sharply than current estimates suggest, perhaps because a significant portion of the capital stock became obsolete, then more of the growth since 1991 could be attributable to a recovery in the sustainable growth rate rather than being cyclical.
3. Several studies using a variety of approaches also confirm that a pickup in the trend rate of productivity growth occurred around the middle of the 1990s. See Razzak (2002), Black *et al.* (2003a) and Buckle *et al.* (2002). Downing *et al.* (2002) provide a range of estimates of potential output growth that are broadly consistent with the Secretariat's estimates.
4. This projection assumes that the participation rate of each age group remains unchanged at its 2002 level, and implicitly also assumes either zero migration or that migrants have the same participation rates and age composition as the New Zealand-born.
5. In the OECD there are 18 agglomerations in 11 countries that are bigger than Sydney (population 4 million), and 30 that are larger than Melbourne (3.2 million) (*www.xist.org/charts/city_million.php*).
6. For example, see McCallum (1995).
7. For most of the 1990s, around one-third of school leavers left with no qualifications or with School Certificate only (Ministry of Education Briefing to the OECD, December 2001).
8. For example, the reading performance of 10 year-olds in the PIRLS (2001) study was equal to the average of the 17 OECD countries that took part, but had the largest variance.
9. For every ten new entrants to high-decile (most advantaged) schools who are competent or expert in maths, seven new entrants to low-decile schools meet the same standards. By senior secondary school, for every ten students from high-decile schools who qualify to enter university, only three from low-decile schools have comparable grades (Ministry of Education, 1999).
10. The inter-quartile range of PISA's school mean index of economic, social and cultural status is below the mean and median of the OECD. See Table 8.4 of OECD (2001a).
11. Children from the top 5 per cent of Maori and Pacific families as measured by the PISA *International Socio-economic Index of Occupational Status* scored around 500 on the PISA combined literacy scale. That is approximately the same score as children from the bottom 5 per cent of Pakeha families. See Figure 6.1B of Sturrock and May (2002).
12. In terms of gross flows, 1.35 million New Zealanders have left since 1970 with the intention of staying away for at least a year, while 0.7 million have returned (although a

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small number of these would have been people who left before 1970). Around 1.1 million foreigners arrived over that period, and 0.5 million left. Note that these figures refer to NZ citizens rather than the New Zealand-born population. Therefore, some of the NZ citizens who emigrated over that period were people born overseas but who later gained NZ citizenship while they were there.

13. Fabling and Grimes (2003) use NZ firm-level questionnaire-based data and find that business performance is strongly correlated with the purchase of external technology and having fully up-to-date core equipment. IT-related factors were found to be considerably more important for small and medium-sized firms than for their larger counterparts.

14. As a rough approximation, road use expands at the same rate as income, so investment levels need to keep pace with GDP (Ingram and Zhi, 1997). In New Zealand, annual investment levels are currently insufficient to cover depreciation and growth in demand. Over the next ten years, expenditure on road building is budgeted to grow by an average 3.3 per cent per annum, well short of the forecast 5 per cent nominal GDP growth (NBNZ, 2003). That projected level of investment could be sufficient to reduce congestion only if those funds get channelled primarily to bottleneck areas by not fully maintaining the under-utilised parts of the road network.

15. The FDI β can be measured by regressing the (log) change of New Zealand's FDI on the (log) change of world FDI. The resulting β coefficient is 0.51 (with a t-value of 1.1) over the period 1980-2001.

16. See, for example, "Red tape worry as firms cut investment", INL Newspapers, 5 May 2003, and "New Zealand rules forcing investors overseas, say fish farmers", INL Newspapers, 30 June 2003.

17. This refers to the OBERAC, or operating balance of the Core Crown (central government) excluding revaluation effects and accounting changes.

18. By contrast, New Zealand has the highest proportion of graduates in life sciences among OECD countries.

19. A Design Industry Taskforce was also set up and has produced its report (2003), which however makes it clear that rather than an industry *per se*, design represents a capability, and design-led firms are present in a variety of different sectors.

20. The tax break resulted from a tax loophole that the government closed in 1998, but which could still be exploited by films which began production before that date. The film producers were allowed to claim an up-front tax deduction for the entire cost of the film trilogy.

21. The average bound tariff (simple average across all lines) is 13.8 per cent, compared with an average of 4.2 per cent in the Quad countries (United States, the European Union and Canada). However, the average applied MFN tariff is much lower, 4.1 per cent (WTO, 2003).

22. Thus, indicators of FDI restrictions that disregard screening requirements put New Zealand's FDI regime among the least restrictive in the OECD. On the other hand, given the difficulty of taking into account the way a screening system is actually implemented, if the very presence of a screening requirement is considered as a restrictive element, New Zealand's regime would be regarded as more restrictive than the OECD average (Golub, 2003).

23. For example, even though Ireland had a corporate tax rate of 10 per cent (12.5 per cent since 2003) against New Zealand's 33 per cent, in 2001 the average effective tax rate on an investment from the United States to Ireland was only 1 percentage point lower

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than that of a comparable investment to New Zealand (Yoo, 2003).

24. It has even been suggested (Simmons, 2002) that New Zealand may be functioning as a "nursery economy", nurturing innovative ideas and small businesses that, however, can only be fully exploited by offshore firms.

25. For residential consumers, one additional factor is that the price of access to low-speed Internet access is maintained artificially low, because under its "kiwi share" agreement with the government, Telecom is obliged to provide a free (unmetered) local calling option, which includes both voice traffic and normal (low-speed) Internet access. Moreover, given that Telecom was offering only metered broadband access, many consumers were probably reluctant to move from unmetered to metered access.

26. There is no general capital gains taxation in New Zealand. Capital gains from equity participations arising in the context of certain arrangements are taxed, while others are not. The key factor is whether holding and trading securities are normal part of an entity's business: for example, a mutual fund is considered to hold its security portfolio on revenue account and is taxed on any resulting capital gains, while a small investor is not. However, this criterion leaves significant room for interpretation, particularly when new financial arrangements emerge.

27. A survey by the Auckland Chamber of Commerce found that the smallest firms (those with 1-5 employees) devote up to 30 times as much of their resources per employee to compliance as those with 100 employees or more.

28. The Environment Court already has the power to award costs against frivolous objectors.

29. In addition to financing for research projects on a contestable basis, each CRI receives from the FRST a "non-specific" funding top-up equal to 10 per cent of the previous year's total allocation, whose purpose is to support longer-term capability enhancement. In some cases, CRIs can also bid for government funding for large capital expenditures that they cannot finance out of their own budget.

30. The CRI Act states that each CRI "shall, in fulfilling its purpose, operate in a financially responsible manner so that it maintains financial viability". This is interpreted to mean that it should recover the full cost of the research performed, including the cost of capital employed (see CCMAU, 2002).

31. Comparable data on tertiary education expenditure exist only for 2001, and for New Zealand they refer only to the public sector component, which is 0.9 per cent of GDP, against an OECD average of 1 per cent of GDP (OECD, 2003d). However, public spending on tertiary education has risen by over 30 per cent between 2001 and 2003, and is probably now above the OECD average.

32. In order to have access to public funding a tertiary education organisation must submit a charter and an annual profile indicating strategic plans, proposed activities and performance targets, which are then assessed by the TEC and have to be found consistent with the objectives of the TES.

33. A review of the course classification system used to set funding categories has been recently undertaken to address some distortions in funding rates that may affect the behaviour of providers and students. However, the government has not taken up the suggestion made by the Tertiary Education Advisory Commission in its fourth report (TEAC, 2001) to differentiate the proportion of public funding across courses and disciplines according to national strategic goals.

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34. In addition to this financing managed by the TEC universities, as already mentioned earlier in this chapter, are also eligible for funding allocated by the FRST for specific research projects on a contestable basis.

35. In 2001, foreign students represented 6.2 per cent of all tertiary students enrolled in New Zealand, a proportion above the OECD average, with students from Asia and Oceania representing 80 per cent of the total. The number of NZ tertiary students enrolled abroad was equivalent to 3.5 per cent of domestic enrolment, below the OECD average of 4 per cent; three-fourths of them were studying in Australia and most of the remainder in the United States and the United Kingdom (OECD, 2003d).

36. Another dry weather episode occurred in 1992.

37. In a recent study (Energy Link, 2002), the elasticity of demand for electricity was found to be virtually nil at relatively low prices, and to start rising (in absolute terms) gradually only above a price of 10 cents/kWh (which is about twice the historical average price). Even then, demand would fall by only 2 per cent at 20 cents/kWh and by 6 per cent at 40 cents/kWh.

38. The net cost of contracting for and operating the reserve has been estimated at about NZ$ 60 million a year, which represents a little over 2 per cent of what New Zealanders spend annually on electricity (at retail prices). Thus, the amount of the levy would not need to be very large.

39. According to the government's recently released *Energy Outlook to* 2025 (Ministry of Economic Development, 2003*b*), new generating capacity for a total of 3 350 MW (relative to a present capacity of 8 700 MW) will be needed by 2025, partly to replace old plants (especially in the years 2006-10) and partly to meet increasing demand. The latter is projected to grow at an annual rate of 1.2 per cent, assuming GDP growth of 2.5 per cent (rather modest relative to both recent experience and official objectives) and gains in energy efficiency exceeding those realised in the recent past. Thus, investment needs could be significantly larger if economic growth is higher and/or the government's National Energy and Conservation Strategy is less successful than projected.

40. Passenger transport was discontinued in the 1990s, except for commuter train services in Wellington and Auckland.

41. Some of this fall is likely to be explained by the change in Australia's welfare policies for NZ citizens in early 2001. Another factor may have been the increased insecurity worldwide following the terrorist attacks of September 2001.

42. The main data on net migration flows concern so-called "Permanent and long-term" migrants. These are people who, on arrival in or departure from New Zealand, declare their intention to remain in their country of destination for more than one year. Such inflows thus include many people with temporary work permits and returning New Zealanders, in addition to those who have obtained a settlement visa, while it is only the latter who are included in the planning totals. Outflows include people emigrating definitively or for "overseas experience" as well as people who have been in New Zealand temporarily.

43. Resident spouses of NZ citizens can apply for citizenship after two years of residence.

44. About 30 000 intended to stay longer than one year, but not permanently (this distinction – that between "permanent" and "long-term temporary" – can be made in the Australian statistics, but not in New Zealand's) and around 17 per cent of these were not NZ-born, In this three-year period, China, Hong Kong, Taiwan and South Korea together provided one in four of the non-NZ-born settlers, one in six of the long-term

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temporary; Pacific Islanders constituted about 20 per cent of the non-NZ-born total flow, and the United Kingdom some 13 per cent.

45. Furthermore, since the changes in Australian welfare arrangements for NZ citizens, arrivals in Australia of NZ citizens born in Asia have fallen much more that those of NZ-born. But no obvious fall in applications to enter New Zealand from Asia has occurred, as would be expected if this were a significant factor.

46. See L.E.K. Consulting (2001). Although the sample was quite large (1 500 people), it may not be representative of New Zealanders abroad. Little other concrete information is available, however.

47. International English Language Testing System. This rates English language ability on a scale of 1 to 9 with 1 being a non-user and 9 being an expert user. Principal applicants under the General Skills or business categories are required to take the test if they cannot demonstrate that they have an English-speaking background (*e.g.* by coming from an English-speaking country or having an academic or professional qualification from an English-speaking country); since November 2002 General Skills applicants are required to score a minimum of 6.5 (between "competent" and "good" user), whereas 5 ("modest" user) is required of Business skills applicants, increased from 5 and 4, respectively. Average scores in 2001-02 for successful applicants from various countries were: South Africa 7.0; Philippines 6.6; India 6.4; Romania 6.2; Russia 5.8; China 5.7; Japan 5.6; South Korea 5.5.

48. Parents, children and adult siblings are admitted subject to various additional conditions. These include requiring the "centre of gravity" of the family to be in New Zealand or, for adult children and siblings, a suitable job offer. NZ residents can also "sponsor" family members not otherwise eligible for entry, guaranteeing them accommodation and financial support for the first two years; this is subject to an annual quota, currently set at 250.

49. The Pacific Access Category (PAC) includes a quota of 1 100 Samoans a year, allowed entry if they have a job offer and are aged 18-45. Smaller quotas exist for Tonga (250 people), Tuvalu (75) and Kiribati (50, increased to 75 in July 2003); in July 2003, a quota of 250 was introduced for Fiji nationals, not previously eligible under the PAC. Apart from asylum seekers decided on a case-by-case basis, there is a quota of up to 750 people per year for refugees nominated by the United Nations High Commission for Refugees.

50. This total is the sum of the three streams, but the government intends to treat each stream independently and not compensate for over- or under-runs in one stream by varying admittances under other streams.

51. The NZ government fears that moves to restrict entry to well-qualified applicants will have an adverse effect on the quality of future applicants, though it is not clear whether empirical evidence supports this. Some research shows that rapid processing times for applications can have an impact on choice of destination country for some migrants. Oliver (2000) finds that Chinese emigrants tend to be indifferent *ex ante* between Canada, Australia and New Zealand, looking basically for physically and politically congenial destinations. New Zealand's rapidity in processing applications was taken by many as meaning that the country was keen to admit people because it needed them; hence, potential migrants assumed, jobs would be easy to get.

52. Onshore applicants already working in New Zealand may be exempted from this requirement if they pre-pay for English language tuition, on a scale that varies inversely with their IELTS test score. The partners and adult children of skilled and

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business migrants must also meet English language requirement, a little less strict than for the principal applicant, or else pre-purchase English language tuition.

53. According to Stuart (2000), (Asian) business migrants found that the business plan they submit to the New Zealand Immigration Service is irrelevant and is ignored in New Zealand.

54. A thorough investigation of applicants' qualifications and work experience will be undertaken only when they apply from the pool.

55. Larsen and Vincent-Laurin (2002) estimate that revenues due to foreign students were around US$ 200 million in the year 2000, 4.7 per cent of total NZ services exports. Australia earned ten times as much, almost 12 per cent of services exports, and the United Kingdom and the United States were even bigger earners in absolute terms, but in terms of the importance of such revenue in exports of services, New Zealand was thought to be second only to Australia.

56. One of the growing areas in education exports is distance learning, the modern version of correspondence courses, where students do not actually leave their home country; direct familiarity with the exporting country is obviously not a by-product in this case.

57. Seven per cent of all foreign tertiary students in OECD countries in 1999 were from China, and 5 per cent were from Korea. Concerning China, the latest "wave" of student movement from there, and inflows of business oriented migration, contrast with a previous significant movement in the late 19th century, when inflows of unskilled Chinese labour were important in a number of countries – this was the origin of a long-established community of Chinese in New Zealand whose ancestors were involved in New Zealand's gold rush.

58. In the past, students would often have had to return to their home country and apply from there; this restriction now applies only to students benefiting from scholarships offered under New Zealand's development aid programme.

59. This instruction may not have been sufficiently clear. There are suggestions that in some cases schools took account only of current operating costs in calculating fees to be charged overseas students and may therefore have overburdened their investment budgets. This practice does not seem to be widespread, however.

60. One might also compare immigrant arrivals with turnover in the labour force, but it is hard to know what measure is appropriate. For example, in 2001, an average of about 85 000 people obtained jobs in each quarter who had not been working in the previous quarter, compared with an average of 10 to 15 000 immigrants arriving each quarter. This still takes no account of those who change jobs or of higher frequency movements into and out of employment.

61. A pilot project has been undertaken to set up a longitudinal survey of immigrants ("LisNZ") similar to that which already exists in Australia. Useful results will not be available for several years, although some preliminary results are discussed below. For research purposes it would be helpful to have a parallel longitudinal survey of the NZ-born – one of the limitations of the otherwise extremely valuable Longitudinal Survey of Immigrants in Australia is the lack of directly comparable information on the Australian-born.

62. As indicators of how well New Zealand integrates its immigrants, these figures do not take into account variations in the characteristics of successive cohorts of immigrants and natives, nor of how each cohort changes through time (notably, it gets older and gains experience on the job relative to the population average), however.

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63. Note that these data concern employed people. Since the Pacific Islanders also have relatively high unemployment early on, as discussed in later sections, the relative income of the average recent Pacific Island immigrant will be even lower.

64. In 1991, only 28 per cent of Pacific Island origin people had an upper secondary qualification (62 per cent overall), and the Household Labour Force Survey was not able to report a figure for tertiary education since it was too small compared with the sampling error (see Ministry of Social Policy, 2001).

65. This is consistent with the finding (discussed in Chapter I) that differences in proficiency at school are related to a large extent to ethnic background. Pacific Island immigrants and their NZ-born descendents, who with Maori are the most disadvantaged groups, probably represent a larger percentage of the non-English speaking children than of total immigrant children of NZ-born children of immigrant parents.

66. This survey interviewed a sample of immigrants who arrived or whose application was approved in late 2000 or early 2001; they were interviewed 6 and 18 months after arrival (or after approval in the case of on-shore applications).

67. Information from the Australian longitudinal survey shows that while 63 per cent of immigrants arriving in 1993-95 (principal applicants only) were unemployed or out of the labour force 4-5 months after arrival, this figure falls to 48 and 42 per cent after 1½ and 3½ years, respectively. These figures for Australia varied enormously according to the immigrant category. For skilled migrants the figures were 33, 15 and 11 per cent, respectively, for preferential family migrants (which would include many spouses) they were 69, 56 and 51 per cent.

68. These data have been produced from a LisNZ pilot test and are restricted to a small sample of migrants settling in specific areas, speaking a given set of languages and arriving in New Zealand over a particular two month period (December 2000 and January 2001). Wave 1 of the pilot consisted of 690 migrants and Wave 2 of 540 migrants. Data from this test are indicative only, as they are derived from a sample designed to evaluate the LisNZ methodology, not to produce reliable statistics. The data should therefore be treated with caution.

69. Again, as these are not longitudinal data, the improvements with length of stay are a function of time but also of other possible differences in the characteristics of the different cohorts of immigrants.

70. BERL (2003) uses data from the 2001 census to look at fiscal receipts and public expenditures accounted for by immigrants, distinguishing them principally by length of residence and region of origin, and compares their contribution with that of the NZ-born. Being based on census data, it is not able to look at immigrants according to the programme under which they were admitted, unlike recent work for Australia (Access Economics, 2002). It cannot take direct account of how the contribution varies through time, notably as immigrants age and become likely recipients of greater amounts of pension and health expenditure, and some expenditure estimates for migrants are based on the assumption that they have similar behaviour to NZ-born with similar age and incomes. The authors further note that the results cannot necessarily be seen as the fiscal *impact* of immigrants, since some of these impacts would show up through the effects on revenues and expenditures accounted for by enterprises and by NZ-born people whose position had been affected by migration. Other aspects of the methodology include the assumption that expenditure items not mentioned in Table 14 are invariant with respect to population size. Many items are calculated by applying, for example, statutory tax rates applicable to people as a function of their incomes, in the absence of census data on actual tax payments. For each kind of tax and expenditure item, the

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amounts calculated in this way for each population group identified are grossed up in equal proportions so that the overall totals match actual budgetary expenditures and revenues.

71. This view is shared in other traditional "settlement" countries – Australia and Canada, for example – and is based partly on the fact that these populations and societies would not exist in anything like their current form without the substantial and consistent (albeit fluctuating) immigration flows that have continued for more than a century. It is also partly based on the observation that certain "agglomerations" tend to have higher productivity growth rates, with this growth appearing to be associated with high research and development activity. If successful research and development activity itself depends on geographical concentrations – or "critical masses" – of researchers in particular fields, then larger populations are likely to generate higher per capita income growth.

72. For example, a recent empirical study on economies of scale at the whole economy level (Ades and Glaeser, 1999) restricted itself "to the poorer economies where increasing returns seem to operate".

73. Eaton and Eckstein (1997) suggest little relation between city size and growth in a study of France and Japan. Wheeler (2002) showed a similar result for city data in the United States, but found a U-shaped relationship between population and growth using data on counties.

74. Many immigrants – recent policy measures are likely to make this an increasing proportion – arrive with jobs already set up for them, and thus add to supply almost immediately; the share with jobs of course increases with time since arrival. Once people have jobs, however, they become more creditworthy. If they were credit-constrained before finding employment, they could potentially do even more dis-saving than before, and add more to demand than to supply, even as output rises as immigrants move into employment.

75. The study does not specify precisely what is meant by the short term, though it is less than one year.

76. Some of these inflows were probably accounted for by business immigrants who subsequently placed their "investment" funds on deposit, rather than adding directly to demand. These inflows may also contribute to a rise in the exchange rate, which occurred in the mid-1990s and signs of which have recurred of late. The close link between the fluctuations in these inflows and in migration flows is partly artificial, since the data are estimated on the basis of a link between migration flows and transfers; the transfers are not observed directly. Estimates of current account transfers due to migrants ("workers' remittances") are not separately available in the balance of payments data, as the methodology is thought insufficiently reliable to allow their separation from other current flows. They seem to be much less important than the capital flows, however.

77. The differences in share between the two populations are negligible except for construction and agriculture. A survey by NZIS of migrants who arrived in 2000-01 shows larger, but still small, differences for nearly all industries, with the same exceptions of construction and agriculture.

78. See, for example, the 2003 OECD Economic Surveys of Spain and Luxembourg. NZ agriculture employs a number of working holiday makers for seasonal jobs, however. These would not show up in the labour force survey data quoted in the text.

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79. New Zealanders abroad are well-known for their use of networks for information; it is unlikely that many of them who move abroad and remain there did not have fairly good information about what to expect when they left. They can therefore be expected to have made a "rational" decision.
80. Or at least their welfare is increased. Many abroad may choose low-skilled or part-time work to benefit from greater leisure but perhaps lower incomes, for part of their stay.
81. This was a non-representative sample of some 1 600 expatriates, contacted, for example, through university alumni associations, employers organisations or New Zealand consulates.
82. The research covered a group of people who graduated from Irish universities in 1992 and were resident in Ireland in 1998. Males who had worked abroad between the two dates had incomes some 10 per cent higher than those who had not. No difference was found for females.
83. The study by Winkelmann and Winkelmann (1998) was commissioned by the government in 1997 to investigate this issue.
84. This includes the planned longitudinal survey of immigrants mentioned earlier.
85. See *e.g.* Chiswick *et al.* (2002), and, for similar results for the United Kingdom, Shields and Wheatley Price (2001).
86. Since this survey did not cover employers who had the ability to take on immigrants but did not, it will be biased towards favourable outcomes if employers select successfully. It was based on a study of 387 employers in 2000-01.
87. See *www.newkiwis.co.nz* and *www.hi-q.org.nz/main/index.html*
88. The Auckland Chamber of Commerce believes that as many of 70 per cent of vacancies are not normally advertised but filled through word of mouth, an obvious disadvantage for newly arrived immigrants.
89. Of those who received the unemployment benefit continuously for the two years from October 1997 to September 1999, half stayed on the benefit for the following 12 months, while a little over a quarter left and remained independent. Gobbi and Rea (2002) looked at a cohort of both short-term and long-term unemployed who left the unemployment register in 1993. Half were back on the benefit within a year and 70 per cent were back within four years.
90. In 2003, 83 per cent of long-term (more than one year) unemployment benefit recipients had no dependent children. The proportion is roughly the same for the sickness benefit.
91. See Tables 3.2 and 3.5 of OECD (2002f). The paragraph refers to net (after tax) replacement rates relative to a job paying two-thirds of the average wage (as the majority of beneficiaries who are able to find work are likely to be in a low-paying job).
92. See OECD (2003f) and Blundell (2002) for a more thorough discussion.
93. See OECD (2001d) and Fredriksson and Holmlund (2003) for reviews of the theory and evidence.
94. In June 2003, 4.1 per cent of the population aged 15-64 receiving either a Sickness or an Invalids benefit. This is similar to levels in Germany and Canada, but is well below the OECD average of 5.8 per cent (in 1999). Some countries, such as Poland, Norway, the Netherlands and Sweden have disability rates above 8 per cent of the working-age population. See OECD (2003h).
95. This is based on a University of Auckland Business School survey released in June 2003.

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96. In a sample of around 1000 collective agreements struck under the ERA, the Department of Labour (2003) reports that three-quarters of agreements covering two-thirds of employees contained clauses dealing with the sale or transfer of all or part of the business (by law it should be 100 per cent, but there are no penalties for non-compliance). The vast majority of these say that workers that remain employed with the new owner on the same terms and conditions will have no entitlement to redundancy compensation.

97. Germany is the only OECD country where a worker who voluntarily quits in such circumstances would be entitled to redundancy compensation. An EU Directive specifies that staff will continue to be employed on the same terms and conditions, but leaves it up to member states to decide what should happen when someone voluntarily decides not to work for the new owner. In Denmark, severance payments can be received if a worker quits because the change in ownership results in a serious deterioration of his position. See Blanpain and Engels (1998), IPD (1995) and Watson Wyatt (1997) for details on labour law at the EU level and in its member states. The EU Directive referred to is number 77/187 as amended by Directive 98/50. Practice in Australia varies across states, with some providing neither continuity of employment nor the automatic transfer of accrued benefits.

98. Unless otherwise noted, GDP refers to the production-based measure which is regarded as more reliable than the expenditure-based measure.

99. In raw form the surplus was only NZ$ 2.0 billion (1.5 per cent of GDP), which was slightly below both the previous year's outcome and the Budget forecast, despite much higher revenue growth than expected: a reduction in the assumed discount rate led to a large reduction in the balance because of its effect on the valuation of the government's unfunded pension liability for its employees (NZ$ 10.7 billion) and of outstanding accident insurance claims (NZ$ 9.2 billion in gross terms and NZ$ 4.3 billion in net terms). Higher estimates of long-term labour-cost increases also contributed to the rise in estimated accident insurance claims, as did investment losses and asset devaluations in defence and electricity. Full funding of the accident claims liability is targeted for 2014.

100. Statistics New Zealand has not published any accounts for general government since those for 1997. All such statistics in the text below are OECD estimates.

101. The full government contribution is nearly NZ$ 1½ billion per year. The Fund is expected to start investing in the final quarter of this calendar year. At mid-year it had assets of NZ$ 1.9 billion.

102. This figure differs from the government's published net debt estimate as it subtracts off the financial assets of the NZ Superannuation fund.

103. Indeed, if the analysis went further out into the 21st century, the estimated gap would get much larger as the operating balance would deteriorate at an accelerating rate and net debt would rise explosively. Some other countries (such as Denmark) are trying to ensure that their public finances are balanced over a much longer horizon than 50 years.

104. This would go so far as including demographically driven changes, settlements of legal claims and estimated student loan losses. Some pre-specified volatile items will be excluded and covered only in end-of-year assessments. While capital spending will of course be included, it is to be hoped that the revised approach will allow a clearer trade-off between current and capital initiatives.

105. The impact of the latter will need to be limited and largely net out over time, or else the credibility of the process will be at risk.

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106. The priority areas for change identified by that review were: "*i*) Achieving better integrated, people focused, service delivery;… *ii*) Addressing fragmentation and improving alignment;… [and] *iii*) Enhancing the people and culture of the state sector…" (Briefing for Parliament, Public Finance (State Sector Management, Bill, p. 4).

107. Crown entities number around 2 780 of which some 2 600 are School Boards of Trustees. The remainder have various forms: some are statutory bodies (the ACC, for example), others are companies (such as the nine Crown Research Institutes) and a few are single-member entities, like the Commissioner for Children.

108. Such a proposal was also made by the State Services Commission (2003).

109. On current prices, without the emission charge, coal-fired plants have a slight economic advantage and would make up 31 per cent of the new 2 200MW to be installed, against 14 per cent for combined cycle gas turbines (Ministry of Commerce, 2000). Even at low levels, the emissions charge could substantially change that balance, as a tax of NZ$ 13 per tonne (about US$ 8) of CO_2 would lift the price of coal relative to gas by 9 per cent. This could encourage further exploration efforts as gas fields run out.

110. Leaving the farm sector aside indeed means less emission reductions than what a first-best tax would bring. New Zealand will hence have fewer permits to sell on the international market, which generates negative effects on the terms of trade and on national income. The estimated economic loss is very small, however, at 0.1 per cent of household consumption, because the forecast for the price of permits (NZ$ 13 per tonne of CO2) is very low, in line with the current consensus (see IEA, 2002 and NZIER, 2001a).

111. OECD calculation based on data reported in NZIER (2001b). The NZ$ 40 figure is drawn from the equalisation of net present values at a discount rate of 10 per cent as indicated in NZIER (2001b). Though NZIER (2001b) mentions a 10 per cent discount rate, it finds a different figure for the threshold because it equalises the respective internal rates of return, a methodology which is not appropriate.

112. Recent national data are not comparable with the previous report on the subject (Ministry of the Environment, 1997). A national update on water quality, which should identify trends over time, is due for public release in early 2004. Such a long interval since 1997 hinders the public from being able to follow the evolution of water quality nationwide. Regional councils, however, issue public reports with comparable data more regularly, which allow some trends to be identified.

113. Having increased by 51 per cent to 3.9 million cows between 1990 and 2002, the dairy herd generates effluent equivalent to that from 52 million people (Poore, 2003).

114. An average of 7 839 such bacteria per litre was found in surface water samples taken at 465 stations in the period 1995-2001, a level suitable for livestock watering but well above the swimmability threshold of 2 000 per litre.

115. Campylobacter was found in 60 per cent of water samples taken at 25 sites in a study carried out for the Ministry of Health (2002).

116. Under the RMA of 1991, all discharges of contaminants must have a resource consent from the relevant regional council or be authorised by a rule in a regional plan.

117. This remark is based on conclusions in Statistics New Zealand (2002b), but no data have been reported to the OECD to substantiate it.

118. This estimate includes capital expenditure on sewage collection and treatment but also on drinking water supply and stormwater collection.

119. At the 6-digit Harmonised System level.

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120. The Quad countries comprise the United States, the European Union, Japan and Canada.

121. Tariff rates now in the range 17-19 per cent, such as those on textile, footwear and clothing, will decrease to 10 per cent by July 2009. Other rates will fall to 5 per cent by July 2008.

122. New Zealand imports no fresh eggs or poultry and bans all non-pasteurised cheese apart from a closed list of specific cheeses made in Switzerland. Some WTO members have officially expressed their criticism of the requirements that New Zealand imposes on the import of dairy products (WTO, 2003).

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Table A1. **Structural surveillance assessment and recommendations**

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
	Policies to promote business creation and innovation	
Enterprise support programmes		
Reduce overlaps among programmes, and target them to address well-identified market failures.	The two main agencies running enterprise support programmes, Industry NZ and Trade NZ, have been merged. A schedule for the evaluation of existing programmes over the next three years has been announced.	These measures are consistent with the previous recommendation. In evaluating individual programmes the government should identify the failures they address, and monitor the reasons for low take-up.
Sectoral focus		
Avoid introducing subsidies or tax preferences.	The government-appointed task forces in the three sectors identified in the GIF (biotechnology, ICT and creative industries), have presented recommendations. In the case of biotechnology the government's strategy, presented in May 2003, envisages supporting education and research and introducing some regulatory changes, but no subsidies. On the other hand, for the film production industry there is a scheme providing grants equivalent to 12.5 per cent of total costs.	The subsidy provided to the film industry represents an unfortunate precedent, which could encourage rent-seeking activities in other sectors. The government should consider sunsetting it. More generally, it should avoid tilting the playing field toward some sectors, as this can lead to resource misallocation.
Innovation framework		
Simplify the R&D tax regime, but avoid introducing tax breaks.	The new tax rules introduced in 2001 clarified tax deductibility of development expenditures and simplified the tax regime by bringing definitions for tax purposes in line with accounting definitions.	The 2001 changes have improved things, but the present regime is still too complex. The government should consider extending immediate deductibility to R&D expenditure that does not give rise to an identifiable and valuable asset and removing the so-called "black holes" (R&D expenditure that can be neither deducted nor capitalised if it does not result in a depreciable asset).
Clarify guidelines about intellectual property ownership.	Intellectual property rights resulting from publicly-funded research continue to be vested on the performing entity (including CRIs and universities). As a counterpart, research institutions take on a commitment to having a sound internal IP management process, maximising national benefit through IP commercialisation and reporting on IP generation and usage.	The IP regime is well designed. Encouraging CRIs and universities to manage IP themselves while allowing individual researchers to receive a share of the profits is an efficient approach. Although details ought to be left to individual institutions, guidelines should ensure that the researchers' share is broadly in line with international practice.

Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
Crown Research Institutes (CRIs) (*New Issue*)		Encouraging CRIs to commercialise their IP is appropriate, but the allocation of public funding should be consistent with its public good rationale. CRI dividends should be reallocated to finance other research on a contestable basis, rather than allowing individual CRIs to retain them.
Minimise regulatory compliance costs for biotechnology research.	In its Biotechnology Strategy, released in May 2003, the government proposed streamlining approval procedures in several areas, including the development and import of low-risk GMOs.	Implement the proposed changes.
E-commerce		
Implement the new Electronic Transactions Bill.	The Electronic Transactions Act was passed in October 2002. In April 2003 the government presented a set of draft regulations for its implementation.	
Business compliance costs		
Quickly implement the recommendations of the 2001 Ministerial Panel.	The government has implemented or is in the process of implementing a majority of the Panel's recommendations, with some exceptions, in particular with regard to compliance costs related to the RMA (see below).	The government should proceed speedily with the implementation of recommendations it has already agreed to.
Resource Management Act (RMA)		
Impose and enforce deadlines on local councils' decisions, introduce the possibility of direct referral to the Environment Court and increase Court resources.	The government has given the Environment Court an additional NZ$ 2 million annually, helping to reduce backlogs; has provided local councils with more training and best-practice benchmarks; and has introduced a regime of "limited notification" of consents where they have minor impact. It has not agreed with the recommendations to allow direct referral to the Court and to set time limits for council decisions.	The results achieved suggest that providing the Environment Court with further resources could have a large payoff. But reducing delays and ensuring better-quality decisions also at the local level remains essential. Thus, previous EDRC recommendations to allow direct referral to the Court and to set time limits for local council decisions are maintained. In addition, a mechanism should be introduced for taking national interest into account in cases where a project's impact goes beyond the local level.

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Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
	International linkages	
Trade policy		
Re-start the phase-out of tariffs.	A restart of unilateral tariff reductions from 2005 was announced in September 2003. Tariffs on textiles and footwear will be lowered from 17-19 per cent to 10 per cent by 2008 and other tariffs to 5 per cent. A new review to be conducted in 2006 will determine any further reductions.	The decision was an important step in the right direction. The process should be pursued further, pre-announcing a complete phase-out of tariffs.
FDI taxation		
Weigh potential gains from lowering tax rates on FDI against the losses from distorting competition between foreign and domestic companies.	The government has decided against introducing a lower corporate tax rate for foreign investors (which had been proposed by the 2001 Tax Review Panel).	The decision is consistent with previous EDRC recommendations. In the future, if international competition increases the pressure for lowering taxes, cutting the corporate tax rate across the board, *i.e.* for both domestic and foreign investors, should be considered.
Regulatory harmonisation		
(*New issue*)	In the context of the Closer Economic Relations agreement with Australia, progress has been made in harmonising several areas of business law.	Proceed further with business law harmonisation with Australia, and increase cooperation at the policy development level. Undertake regulatory harmonisation also with other trade partners.
	Product market regulation	
Dairy sector		
Move to a market-based allocation of export quotas when the transitional regime is reviewed, or even earlier.	No action taken.	Maintain previous recommendation.

Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
Electricity		
Invest in upgrading the state-owned transmission grid.	The government has set out basic principles for the regulation of transmission pricing and has given the Electricity Commission responsibility for approving grid investments.	In conjunction with appropriate price regulation, the government needs to define the criteria that should guide investment in upgrading the grid, ensuring that the benefits from its effects on competition are also taken into account.
Reduce the risk of future power crises	New recommendation. The government has announced its intention to contract for additional dry-year generating capacity, to be financed by a levy on power consumption. The reserve capacity would be activated when the price reaches a pre-announced threshold, but some scope is left for discretion.	To better assess how much extra capacity is needed, if any, the government should do more to boost demand-side response, in particular by increasing retail competition and considering the costs and benefits of installing time-of-use meters. As a ring-fencing mechanism, a straight price trigger (without provisions for activating the reserve even at prices below the threshold) would be preferable in order to remove uncertainty and encourage investment. Creating the conditions for such a trigger to function reliably should be a priority.
Monitor progress in achieving greater transparency of the hedge market.	The government has proposed establishing a market for financial transmission rights and empowering the Electricity Commission to require generators to post prices for hedge contracts.	The proposed measures should help improve market functioning and foster competition. The government should implement them and monitor their effects.
Telecommunications		
Monitor whether access regulations are hindering competition and infrastructure investment, and review the unbundling of the local loop.	In its draft report presented in September 2003, the Commerce Commission recommended the unbundling of Telecom NZ's local loop and fixed Public Data Network. It will deliver its final recommendations in December.	The experience of other countries indicates that unbundling the local loop can spur competition and generate potential benefits for consumers. It can also help expand broadband uptake, in which New Zealand is lagging other OECD countries.

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Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
	Labour market and social programmes	
Unemployment and related benefits		
Shift towards in-work benefits.	New recommendation.	The government plans to improve the income support system if funds are available. An employment-conditional benefit, possibly targeted at key groups such as sole parents and the long-term unemployed, would improve work incentives and maintain income support for people on low incomes.
Make the benefit system less passive by strengthening activation policies.	New recommendation. The government is strengthening case management by increasing the number of case managers and concentrating on groups who are more likely to respond.	Contact with the public employment service is too infrequent for some jobseekers, but a reduction in case loads may help.
Broaden and enforce the work test.	The work test has now been imposed on the unemployed aged 55-60. The government has clarified that the unemployed are to be available and looking for work and has streamlined the sanctions process.	These are positive steps, but their effectiveness will depend on how rigorously they are enforced. A formal work test should be reinstated on groups such as sole parents with children above an appropriate age.
Avoid increasing the minimum wage.	The adult minimum wage was increased by 6.25 per cent in March 2003. It is currently a little on the high side compared with other OECD countries.	This risks reducing employment prospects for vulnerable groups such as immigrants and young people. Reforming the in-work benefit system provides an opportunity to lower or freeze the minimum wage without reducing incomes of those in work.
Evaluation		
Evaluate ALMPs.	Little progress. The government has said it wants to step up evaluation of future labour market policies.	A framework exists to guide evaluations, but few have actually taken place.
Evaluate the paid parental leave scheme.	No evaluation has been published.	Recommendation maintained. Consider whether the social objectives could be achieved in other (cheaper) ways.
Evaluate the cost and impact of the income-related rent programme.	No evaluation has been published.	The scheme adds to marginal effective tax rates and risks reducing labour mobility.

Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
Industrial relations		
Be cautious in promoting centralised bargaining.	The government is reviewing the *Employment Relations Act* 2000 because it has failed to promote collective and multi-employer bargaining.	Make sure that multi-employer contracts are flexible enough to take individual firm circumstances into account. If promoting collective bargaining is an objective, do it in a way that does not add to labour or employment costs.
Avoid reducing labour market flexibility or increasing employment costs.	New recommendation	Employment flexibility is a key driver of productivity growth. Some current proposals, such as employment continuity when a business is sold or contracted out, may reduce that flexibility. Other proposals, such as holiday reforms, would raise employment costs.
Simplify personal grievance provisions and institute a minimum trial period for new employees.	New recommendation.	Procedural requirements regarding personal grievances are becoming increasingly litigious. A trial period for new workers would help marginal groups, including immigrants, get a foot in the door.
	Education	
Improving school performance		
Implement a nation-wide school assessment and publish indicators.	No action taken.	Past recommendations are maintained.
Increase the supply of teachers through merit-based pay and/or by differentiating pay to reflect shortages in certain subjects.	No action taken.	Past recommendations are maintained.
Ensure the efficient use of resources available for teaching remedial reading.	No action taken.	Past recommendations are maintained.

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Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
Tertiary education		
Encourage competition and treat public and private institutions equally.	The unequal treatment of public and private providers, intended as a temporary measure, is still in place.	Private training enterprises (PTEs) have led to greater diversity and innovation in tertiary education and have been especially useful for people on welfare and for those with low skills. The previous recommendations are maintained.
Implement any steering of tertiary enrolment in a way that does not reduce access and that treats private and public providers equally.	The Tertiary Education Strategy 2002/07 calls for skills forecasting and focussing the development of highly specialised skills toward high-priority areas (including ICT, biotechnology and creative disciplines). So far, funding for developing tertiary providers' capability is not restricted to specific fields and is to be allocated on a contestable basis. A programme for providing students with better information is being developed to orient student enrolment.	The initiatives taken so far are consistent with past EDRC recommendations. Encouraging tertiary institutions to develop more relevant curricula through closer contact with employers and providing students with timely information is a good approach. The government should continue to refrain from selectively steering resources to specific sectors.
Evaluate the impact on tertiary enrolment of the earlier decision to increase the generosity of the student loan programme.	No such evaluation has taken place. The government has reduced costs for students by continuing the no-interest-while-studying policy and, more recently, freezing tuition fees and capping course fees.	Poorly targeted and possibly cost-ineffective reforms. Little is know about their socio-economic impacts, but setting price caps on course fees may lead to supply constraints at universities, in which case merit-based rationing mechanisms may become more common. That is likely to hurt students from poorer backgrounds.
	Tax policy	
Introduce a comprehensive capital gains tax.	No action taken.	Maintain previous recommendation.
Tax the imputed rental value of owner-occupied housing while making mortgage interest deductible.	No action taken.	Maintain previous recommendation.
Align the top personal tax rate with the corporate rate.	No action taken.	Maintain previous recommendation.

Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
Tax-base mobility.	The government rejected the Tax Review Panel's proposal to set a NZ$ 1 m cap on personal tax liabilities (aimed at attracting wealthy individuals), and is considering instead a temporary tax exemption for new migrants' foreign-sourced income.	Given New Zealand's system, which taxes residents on their worldwide income, a temporary exemption for foreign-sourced income is a better way of removing disincentives to immigration.
Incentives for private retirement savings.	The government decided against introducing new saving incentives, in line with the recommendation of the 2001 Tax Review Panel. Instead, it is considering moving to progressive taxation of employers' pension contributions, which would favour lower-income employees.	The decision not to introduce new incentives for retirement savings is consistent with previous EDRC recommendations. Progressive taxation of contributions would be appropriate if the objective is to encourage participation of lower-income employees in employer-financed retirement savings plans.
	Public management	
Undertake regular and comprehensive evaluation of baseline expenditures.	No action taken.	Evaluation of outcomes remains weak. A "value for money" initiative should be launched, based on the questions in Box 3 of the previous *Survey*.
Reduce fragmentation of Budget allocations, and improve strategic management.	The government is reviewing the size of its Budget allocations, has proposed reforms to the *Public Finance Act* to make it easier to re-allocate among outputs, and is improving the governance arrangements of arms-length agencies (Crown Entities).	These changes, based on the government's *Review of the Centre*, should help the reallocation process and improve public management.
Make more use of market mechanisms.	No action taken. Mechanisms such as contracting out and user charges are still not being encouraged. Congestion pricing for existing roads has been explicitly ruled out, although scope for building new toll roads has been introduced.	Maintain previous recommendation.
Strengthen top-down expenditure control (by retaining the provisions framework, improving capital budgeting, etc.).	The provisions framework (in effect, a pre-announced cap on new policy initiatives) has been removed.	This step reduces elements of top-down expenditure control. The government will have to find equally effective ways of containing spending pressures.

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Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
Strengthen fiscal management at the local government level.	No action by central government. The Auckland Regional Council has introduced differential rates (taxes), reducing the cross-subsidy between households and businesses.	Previous recommendations included setting a top-down fiscal framework, considering binding fiscal rules, legislating principles of appropriate activities for local government to undertake and encouraging economically efficient funding mechanisms such as user-charges. Recommendations are maintained.
	State owned enterprises	
Resume the privatisation process.	No action taken.	The privatisation process should be resumed. Scarce capital resources should be channelled toward the areas of greatest need (*e.g.* infrastructure).
Tranz Rail (*New issue*)	In June 2003 the government intervened to rescue Tranz Rail from the risk of insolvency, agreeing to take over from it ownership of the track and to invest NZ$ 200 million to rebuild it. Tranz Rail, which in October was taken over by an Australian company, Toll Holdings, will have access to the track on a cost-recovery basis.	The government should conduct an overall review of the economic viability of the rail system, on the basis of the overall social cost of rail *vs.* road transport. It should also reassess the economic rationale for any subsidy or cross-subsidy to individual lines.
Re-privatise Air New Zealand as soon as market conditions allow.	In 2002 the government took an 82 per cent stake in Air New Zealand at a cost of NZ$ 885 million. In November 2002 Air New Zealand and the Australian airline Qantas announced an agreement whereby the former would manage the two companies' trans-Tasman and internal New Zealand flights and the latter would take a 22.5 per cent participation in Air New Zealand. However, both the Australian and the New Zealand competition authorities have ruled against the proposed deal.	The Air New Zealand-Qantas deal, which the government supports, may be consistent with its interest as shareholder, but not necessarily with that of NZ consumers. This confirms that public ownership is a source of potential conflicts of interest. Re-privatising the company as soon as market conditions allow (as previously recommended) is the best way to avoid such conflicts.

Table A1. **Structural surveillance assessment and recommendations** (*cont.*)

Issue or previous recommendation	Action taken since the 2002 Survey	Current EDRC assessment and recommendation
	Sustainable development	
Climate change		
Rely on market instruments to meet greenhouse gas emission targets.	The government plans to introduce a carbon tax, whose level will be linked to the international price of emission permits. Exemptions will be given to the farm sector (which will pay a much smaller research levy) and to industrial emitters exposed to international competition, which however must meet industry-specific abatement benchmarks. Credits from forest sinks will be retained by the government.	The carbon tax would be economically optimal if farming and some industrial emitters were not exempt. Exemption agreements with industrial emitters maintain full marginal incentives to reduce emissions, but might prove overly lax if firms can exploit superior information. Credits for forest sinks (except those on farms) should be assigned to their owners in order to maintain the correct incentives.
Water pollution (*New issue*)	Responsibility for setting and enforcing water quality is devolved to local authorities, which rely on discharge permits. However, the only control of discharges from farm activities is through a recent voluntary agreement.	Making discharge permits tradable within catchments would achieve more efficient outcomes. Authorities should closely monitor the effectiveness of voluntary agreements and be ready to introduce compulsory measures if needed.
Development aid and trade		
(*New issue*)	A resumption of the process of tariff reduction in 2006 has been announced (see above).	New Zealand already provides the most open access to its domestic market for farm products among OECD countries. Developing country exporters are entitled to preferences on other tariffs, but in many cases cannot take advantage of them due to administrative obstacles associated with rules of origin. Scheduled tariff reductions will help, but should be taken all the way to zero. The planned monitoring and evaluation of foreign aid should be implemented as soon as possible, and aid should be focused on a core group of countries.

Source: OECD.

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Table A2. **Public expenditure on labour market programmes**

Per cent of GDP

	Programme categories and sub-categories	OECD[1] average	New Zealand 2001-02	Australia 2001-02	Austria 2002	Belgium 2001	Canada 2001-02	Czech Republic 2002	Denmark 2000	Finland 2002	France 2001	Germany 2002
1.	**Public employment services and administration**	**0.16**	**0.13**	**0.20**	**0.14**	**0.20**	**0.20**	**0.07**	**0.12**	**0.12**	**0.18**	**0.23**
2.	**Labour market training**	**0.18**	**0.12**	**0.02**	**0.21**	**0.26**	**0.15**	**0.02**	**0.86**	**0.30**	**0.24**	**0.32**
	a) Training for unemployed adultsand those at risk	0.15	0.12	0.02	0.19	0.16	0.15	0.02	0.67	0.27	0.21	0.32
	b) Training for employed adults	0.06	–	–	0.02	0.10	–	–	0.18	0.03	0.03	–
3.	**Youth measures**	**0.10**	**0.16**	**0.07**	**0.02**	**–**	**0.02**	**0.02**	**0.10**	**0.17**	**0.43**	**0.10**
	a) Measures for unemployed and disadvantaged youth	0.05	0.08	–	0.01	–	0.01	0.02	0.10	0.07	0.25	0.09
	b) Support of apprenticeship and related forms of general youth training	0.09	0.08	0.07	0.01	–	0.01	–	–	0.11	0.18	0.02
4.	**Subsidised employment**	**0.21**	**0.08**	**0.10**	**0.10**	**0.69**	**0.03**	**0.06**	**0.17**	**0.33**	**0.35**	**0.22**
	a) Subsidies to regular employment in the private sector	0.09	0.04	0.01	0.04	0.28	–	0.02	0.02	0.16	0.16	0.03
	b) Support of unemployment persons starting enterprises	0.03	0.03	0.02	0.02	–	0.01	–	–	0.03	–	0.05
	c) Direct job creation (public or non-profit)	0.13	0.01	0.08	0.04	0.41	0.02	0.03	0.15	0.14	0.18	0.15
5.	**Measures for the disabled**	**0.15**	**0.05**	**0.05**	**0.06**	**0.12**	**0.02**	**0.01**	**0.34**	**0.08**	**0.09**	**0.32**
	a) Vocational rehabilitation	0.09	0.01	0.01	0.05	0.01	0.02	–	0.34	0.05	0.03	0.15
	b) Work for the disabled	0.12	0.04	0.04	0.02	0.11	–	0.01	–	0.04	0.07	0.17
6.	**Unemployment compensation**	**0.94**	**1.16**	**0.98**	**1.12**	**1.78**	**0.81**	**0.27**	**1.37**	**1.53**	**1.40**	**2.10**
7.	**Early retirement for labour market reasons**	**0.31**	**–**	**–**	**0.13**	**0.46**	**–**	**–**	**1.67**	**0.53**	**0.24**	**0.03**
	Total	**1.84**	**1.70**	**1.42**	**1.79**	**3.52**	**1.24**	**0.44**	**4.62**	**3.07**	**2.94**	**3.33**
	Active measures (1-5; for inflows, 2-5)	0.76	0.54	0.45	0.53	1.28	0.43	0.17	1.58	1.01	1.30	1.20
	Passive measures (6 and 7)	1.08	1.16	0.98	1.25	2.24	0.81	0.27	3.04	2.06	1.64	2.13
	Active as per cent of total	42.9	31.8	31.7	29.6	36.4	34.7	38.6	34.2	32.9	44.2	36.2

Table A2. **Public expenditure on labour market programmes** (*cont.*)

Per cent of GDP

	Programme categories and sub-categories	Ireland 2001	Italy 2001	Japan 2001-02	Korea 2002	Nether-lands 2001	Norway 2002	Portugal 2000	Slovak Republic 2002	Sweden 2002	Switzer-land 2002	United Kingdom 2001-02	United States 2001-02
1.	**Public employment services and administration**	**0.24**	**. .**	**0.17**	**0.05**	**0.26**	**0.13**	**0.11**	**0.16**	**0.38**	**0.12**	**0.16**	**0.04**
2.	**Labour market training**	**0.15**	**0.04**	**0.03**	**0.08**	**0.47**	**0.05**	**0.15**	**0.04**	**0.29**	**0.13**	**0.03**	**0.04**
	a) Training for unemployed adults and those at risk	0.15	. .	0.03	0.04	0.39[3]	0.05	0.07	0.04	0.28	0.13	0.02	0.04
	b) Training for employed adults	0.01	. .	–	0.04	0.08	–	0.09	–	0.01	. .	0.01	–
3.	**Youth measures**	**0.18**	**0.21**	**–**	**0.02**	**0.04**	**0.01**	**0.22**	**0.01**	**0.02**	**0.01**	**0.13**	**0.03**
	a) Measures for unemployed and disadvantaged youth	0.08	0.01	–	0.01	–	0.01	0.10	0.01	0.02	0.01	0.04	0.03
	b) Support of apprenticeship and related forms of general youth training	0.10	0.20	–	–	0.04	–	0.12	–	–	–	0.09	–
4.	**Subsidised employment**	**0.53**	**0.38**	**0.07**	**0.11**	**0.38**	**0.01**	**0.09**	**0.21**	**0.21**	**0.14**	**0.03**	**0.01**
	a) Subsidies to regular employment in the private sector	0.17	0.27	–	0.01	0.05	0.01	0.01	0.06	0.17	0.04	0.02	–
	b) Support of unemployment persons starting enterprises	. .	0.07	–	0.01	–	–	0.03	0.06	0.04	0.01	–	–
	c) Direct job creation (public or non-profit)	0.36	0.05	–	0.09	0.34	–	0.05	0.10	–	0.09	0.01	0.01
5.	**Measures for the disabled**	**0.03**	**. .**	**0.01**	**0.02**	**0.58**	**0.66**	**0.04**	**0.04**	**0.50**	**0.15**	**0.02**	**0.04**
	a) Vocational rehabilitation	0.03	. .	–	0.02	–	0.50	–	–	0.03	0.15	0.01	0.04
	b) Work for the disabled	0.01	. .	–	–	0.58	0.17	–	0.04	0.47	–	0.02	–
6.	**Unemployment compensation**	**0.63**	**0.53**	**0.46**	**0.14**	**1.88**	**0.53**	**0.69**	**0.49**	**0.92**	**0.79**	**0.42**	**0.56**
7.	**Early retirement for labour market reasons**	**0.07**	**0.08**	**–**	**–**	**–**	**–**	**0.21**	**0.01**	**0.01**	**–**	**–**	**–**
	Total	**1.84**	**1.25**[2]	**0.74**	**0.42**	**3.62**	**1.39**	**1.51**	**0.96**	**2.34**	**1.33**	**0.80**	**0.70**
	Active measures (1-5; for inflows, 2-5)	1.14	0.64[2]	0.28	0.28	1.74	0.86	0.61	0.47	1.41	0.54	0.38	0.15
	Passive measures (6 and 7)	0.70	0.61	0.46	0.14	1.88	0.53	0.90	0.49	0.93	0.79	0.42	0.56
	Active as per cent of total	62.0	51.4	37.8	66.7	48.1	61.9	40.4	49.0	60.3	40.6	47.5	21.4

. . Data not available; – Nil or less than half of the last digit used.
1. Unweighted average of countries for which data is available. Hence, the components often do not add up to the total.
2. Only active categories 2-4 are taken into account.
3. Incorporates an estimate of unemployment benefits paid to participants in training.

Source: OECD database on Labour Market Programmes.

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Table A3. **Examples of employment-conditional benefits**[1]

	Name	Type of recipient	Maximum benefit (% of full-time median wage)[2]	Minimum hours worked per week	Description of benefit	Unit
New Zealand	Family Tax Credit	Low-income families with children (less than 47% of average wage)		30 hours for a couple, 20 hours for a single parent	Provides a minimum income of NZ$ 18 368 per year, or NZ$ 286 after tax per week	Families with children
Australia	Employment Entry Payment	Lone parents and long-term income support recipients (12 months or more)	A$ 104 / year (0.3%)	–	Lump sum paid when entering employment (eligible only once a year)	Both individual and household criteria
Belgium	Refundable tax credit (being introduced)	Wage earners o self-employed with an earned income of between 10% and 45% of average wage	EUR 440 / year in 2004 (1.3%)	None	Lump sum	Individual
Canada[3]	Individual provinces provide employment-conditional benefits: *e.g.* Ontario's Start Up Benefit	Social assistance recipients	C$ 253 / year (0.8%)	None	Lump-sum paid to social assistance recipients who begin/ change employment or join training programme (once a year)	Individual
France[4]	Employment allowance: P*rime pour l'emploi*	Individual with an earned income of between 15% and 70% of average wage (or 106% for a married person with an unemployed spouse)	EUR 720 / year in 2004 (3.3%)	None	Entry phase: benefit increases with income Exit phase: benefit decreases with income Supplement for dependants	Individual
Ireland[5]	Family Income Supplement	Families with children and low wages (threshold from 74% to 111% of average wage depending on number of children)		19 hours	Amounts to 60% of the difference between effective income and eligible income	Families with children

Table A3. **Examples of employment-conditional benefits**[1] (*cont.*)

	Name	Type of recipient	Maximum benefit (% of full-time median wage)[2]	Minimum hours worked per week	Description of benefit	Unit
	Back-to-Work Allowance	Long-term unemployed (min.12 months) and welfare recipients	75% of previous allowance	20 hours	Limited to three years, decreasing over time (50% then 25% of previous allowance in 2nd and 3rd years)	Individual
Netherlands[6]	Employment-conditional tax credit	Wage-earners or self-employed	EUR 920 / year (3.4%)	None	Entry phase: benefit increases with income	Individual
United Kingdom[7]	Working Family Tax Credit	Working parents with low income (threshold depends on household composition)		16 hours (supplement for 30 hours or more)	Exit phase: benefit decreases with income (depends on hourly wage) Supplements for extra dependent children	Families with children
United States[8]	Earned Income Tax Credit	Working families with children and individuals with low salaries		None	Entry phase: benefit increases with income Exit phase: benefit decreases with income	Families with children/ individual

1. The benefits presented here fall into two categories: tax credits for earned income or cash supplements to offset benefits foregone upon return to employment. Other countries (*e.g.* Spain, Finland and Japan) grant wage-earners tax relief, which amounts to exempting a share of their earned income (the relief is usually higher for low incomes). Such exemptions are not included here (for more details, see OECD, 2002b).
2. The figure in brackets refers to the percentage of full-time median earnings in 1998 for Belgium, 1999 for France and the Netherlands, 2000 for others countries.
3. The previous Working Income supplement has been replaced by the National Child Benefit (NCB) supplement. This is a nationwide measure targeted at all low-income families; it does not really constitute an employment-conditional benefit. However, each Canadian province has special benefits for welfare recipients who enter or re-enter employment.
4. In 2003, the maximum benefit was EUR 479.
5. Ireland has other employment-conditional subsidies, including an allowance for returning to part-time work (fewer than 24 hours per week) after a long period of unemployment (at least 15 months).
6. In 2001, the Netherlands tax system underwent radical change, including the introduction of a variety of tax credits. Some families, for instance, can deduct some of their childcare costs from taxes. Welfare recipients are also eligible, under certain conditions, for a back-to-work allowance.
7. As from April 2003, this tax credit for working families is being replaced by two separate benefits, one being employment-conditional and the other covering childcare costs.
8. The first figure applies to one-child families, the second to families with two children or more, and the third to families with no children.

Source: OECD (2003f).

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Annex

Calendar of main economic events

2002

May

Finance Minister Michael Cullen welcomes the latest OECD *Economic Survey of New Zealand*, saying that the OECD and the government are in broad agreement on the challenges facing New Zealand and agree on some of the solutions.

The Reserve Bank raises the overnight cash rate by 25 basis points to 5.5 per cent.

Budget 2002 includes a cumulative NZ$ 6.7 billion of spending initiatives over the period 2001-02 to 2005-06, partly offset by NZ$ 1.3 billion of revenue initiatives. Health care will receive more than half of the extra expenditure, while revenue measures include increases in road user charges. Operating balances are forecast to be around 2-3 per cent of GDP over the coming five years, and gross debt to fall to 28 per cent of GDP by 2006.

The Paid Parental Leave scheme takes effect. This gives up to 12 weeks leave to a parent who had been working for at least 12 months for the same employer. The maximum payment rate is NZ$ 325 per week, paid by the government.

July

The Reserve Bank raises the overnight cash rate by 25 basis points to 5.75 per cent.

The General Election sees the return of a Labour-led coalition, this time in partnership with the Progressive Coalition and with support on supply and confidence votes from the United Futures Party.

September

Dr. Alan Bollard takes up his position as Governor of the Reserve Bank.

The Reserve Bank's inflation target is modified to become "CPI inflation between 1 and 3 per cent per annum … on average over the medium term" rather than "annual increases between 0 and 3 per cent".

The pass mark for immigrants in the general skills category is increased.

October

The government confirms its climate change policy. The key element is a carbon tax that will be introduced in 2008 at a rate that will vary in line with international traded carbon prices. The farming sector is exempted from the tax. Large industrial emitters who face foreign competition

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may also negotiate an easier baseline reduction, but will still face the full incentives of the tax at the margin.

The pass mark for immigrants in the general skills category is increased again.

November

Annual tourist arrivals exceed 2 million for the first time.

Air New Zealand and Qantas, an Australian airline, announce a strategic alliance in which Qantas will take a minority stake in Air New Zealand. The two airlines will code-share on trans-Tasman flights, with Air New Zealand controlling both airlines' flights to, from and within New Zealand.

The minimum English language requirement on business migrants is increased.

December

The Kyoto Protocol on climate change is ratified by the New Zealand government.

2003

February

Two further contracts establishing Centres of Research Excellence are signed, with all seven of now up and running.

March

The adult minimum wage is increased by 6.25 per cent.

The work test is abolished for sole parents receiving the Domestic Purposes or Widows Benefits. Instead, they will be required to work with their case manager to develop and implement a Personal Development and Employment Plan which sets out how they will prepare to return to work when family circumstances allow.

An outbreak of Severe Acute Respiratory Syndrome (SARS) leads to a reduction in tourist arrivals.

April

The Reserve Bank lowers the overnight cash rate by 25 basis points to 5.5 per cent.

The government and The New Zealand Refining Company sign the first greenhouse gas agreement. It gives the company an easier baseline emission reduction than it would face under the carbon tax, in return for a significant investment with the objective of producing cleaner petrol and diesel.

Spot prices for electricity double as a result of low rainfall.

New Zealand's population is estimated to have reached 4 million, possibly the last time it will pass a "million milestone" on the way up.

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May

Changes to work-safety legislation (the Occupational Health and Safety Act) take effect. The changes include explicitly recognising stress and fatigue as hazards, increasing maximum fines, and banning employers from insuring against fines.

The government tables another conservative budget, with few major spending initiatives despite healthy tax revenues. The operating surplus is forecast to rise from 3.1 per cent of GDP in 2002-03 to 4.0 per cent in 2006-07. Expenditure on health and education is increased, with some small amounts for the government's innovation agenda.

Changes to electricity policy are announced. The government will contract with generators to build or set aside ring-fenced dry-year reserve capacity, to be paid for by a levy on electricity users. A new Electricity Commission will oversee the industry.

The government decides against imposing price controls on airfields, despite a Commerce Commission recommendation to do so at Auckland.

June

The Reserve Bank lowers the overnight cash rate by 25 basis points to 5.25 per cent.

The film industry is offered grants worth 12.5 per cent of the cost of each big budget film or television production made in New Zealand.

July

Reserve Bank lowers the overnight cash rate by 25 basis points to 5 per cent.

The Local Government Act comes into force. This legislation grants the power of general competence to local authorities, meaning they are able to undertake any activity not specifically prohibited by law (previously, they were only able to do what was authorised by law).

Changes to immigration policy are announced. The key change is that entry will no longer be automatic for people who meet the points-test cut-off. Instead, the government will select from this pool.

The government and Toll Holdings, an Australian company making a takeover bid for Tranz Rail, the New Zealand rail operator, agree that the government will buy the network for $1 if Toll's bid is successful.

August

The government announces a programme to offer no-deposit mortgages to low-income first-home buyers, but only through the government-owned Kiwibank.

Some welfare reforms are announced, clarifying job-search requirements for certain beneficiaries and signalling that recipients of the Unemployment Benefit must be available for and seeking work.

The government announces the establishment of an integrated work programme to develop family-friendly and other policies promoting work-life balance.

September

The Telecommunications Commissioner recommends, in a draft report, that the incumbent operator, Telecom New Zealand, be required to unbundle its local loop.

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Final financial statements for the 2002-03 fiscal year show a much larger than expected operating surplus, at 4.4 per cent of GDP.

October

The government announces that the process of unilateral tariff reductions will resume in 2006 for a three year period, but will not drive remaining tariffs to zero (as was intended in the pre-2000 policy).

Both the New Zealand and Australian competition regulators reject the proposed alliance between Qantas and Air New Zealand, arguing it would be anti-competitive.

Australia's ANZ Bank buys The National Bank of New Zealand. All four major banks, who control more than 90 per cent of the retail market, are now Australian-owned.

The moratorium on releases of Genetically Modified Organisms is lifted.

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