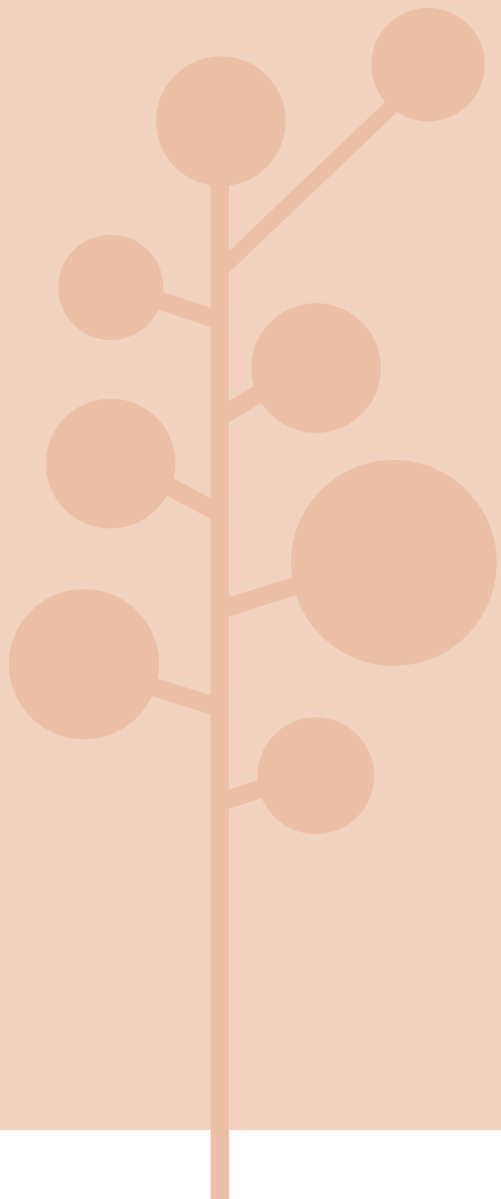


Overview – Advancing Economic Development

The **Ministry of Economic Development** is the Government's principal advisor on economic development strategy. This overview synthesises the key issues all economic development Ministers will need to consider in formulating the Government's economic development strategy.



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Introduction

October 2005

Economic Development Ministers

Advancing economic development requires concerted, coordinated effort across many portfolios and departments. Success depends on taking a broad, holistic view of how the economy works and on being persistent over time.

This overview briefing outlines key issues Economic Development Ministers will need to consider when devising their strategy to raise New Zealand's rate of economic growth. It describes how well we are performing, and areas for further focus in four key areas:

- › fostering innovation
- › strengthening international linkages
- › infrastructure and energy supply
- › regulatory environment for business growth.

Making substantial improvements in these areas requires effort within all the portfolios serviced by the Ministry: Commerce; Communications and Information Technology; Consumer Affairs; Economic Development; Energy; Industry and Regional Development; Small Business; and Tourism. But it also depends on initiatives taken in a range of other areas, such as research and technology development, the education and training system, migration, taxation and regulations that impact on business.

Ministers need to set priorities for action across this broad range of activity, and to ensure that new initiatives are mutually reinforcing in advancing the government's economic strategy.

As the government's principal advisor on economic development strategy, the Ministry has practical experience of advising on and implementing economic development policies. This broad overview draws on that experience.

It is supplemented by more detailed briefing papers on each portfolio and Vote supported by the Ministry. Those portfolio briefings spell out immediate and medium-term decisions and issues for each Minister. This overview briefing paints the bigger picture into which all those decisions need to fit.



Geoff Dangerfield

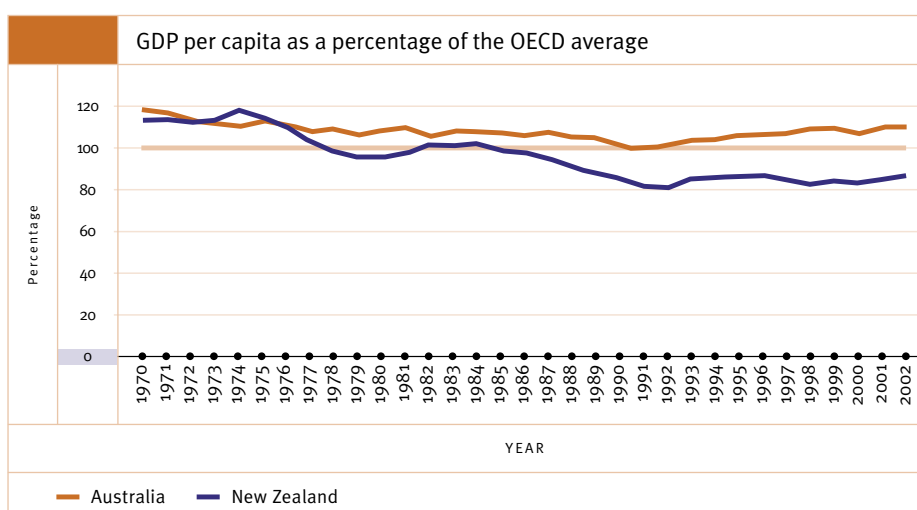
CHIEF EXECUTIVE

New Zealand's Economic Performance

Growth in New Zealand's income per capita has been slightly above the OECD average over the last decade, but we remain in the lower half of the OECD rankings.

New Zealand's income per capita has increased by 2.5 per cent per year since 1995, slightly above the OECD average. This arrested a long period of decline relative to most other OECD countries.

But New Zealand still ranks only 21st in terms of income per capita in the OECD¹, 10 places below Australia. New Zealand's income per capita is more than 30 per cent below Australia's.



Source: OECD Annual National Accounts. Figures are expressed in 2000 prices and 2000 purchasing power parities. The calculation of the OECD mean excludes the Czech Republic, Hungary, Poland and the Slovak Republic due to time series data difficulties

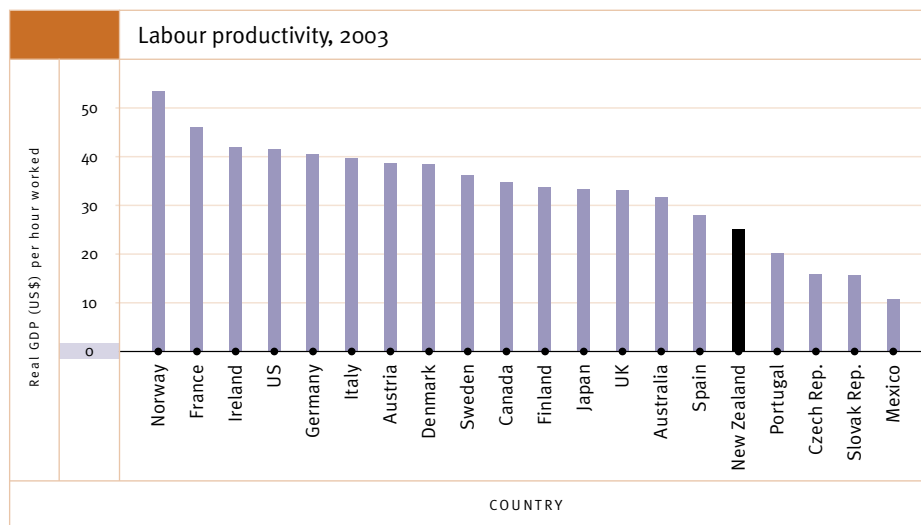
As their incomes rise, other OECD countries will become increasingly strong magnets for the talented people that New Zealand needs to drive its own growth. If New Zealand falls too far behind its OECD counterparts in the growth stakes, it risks losing the ability to retain and attract talented people and hence the ability to catch up. Unless it can generate the innovation that will help quicken the pace of growth, New Zealand risks permanently trailing the field.

New Zealand's employment rate increased strongly over the decade from 1993, accounting for most of the growth in per capita income. Higher productivity is now the key to sustained international competitiveness and growth in incomes because:

- > New Zealand already has relatively high rates of labour utilisation, and the scope for further increases is small
- > New Zealand's population is aging, so a smaller proportion is likely to be working in the future than at present
- > with the rapid integration of large, fast-developing countries into the global economy, New Zealand firms cannot compete on the basis of low cost labour.

1 Gross National Income per capita adjusted for purchasing power parity. Data sourced from the World Bank and the OECD.

Labour productivity in New Zealand is low among OECD countries, and growing more slowly than the OECD median. Understanding the reasons for this and moving to address them is crucial if New Zealand is to keep pace and reduce the gap with the leading OECD economies.

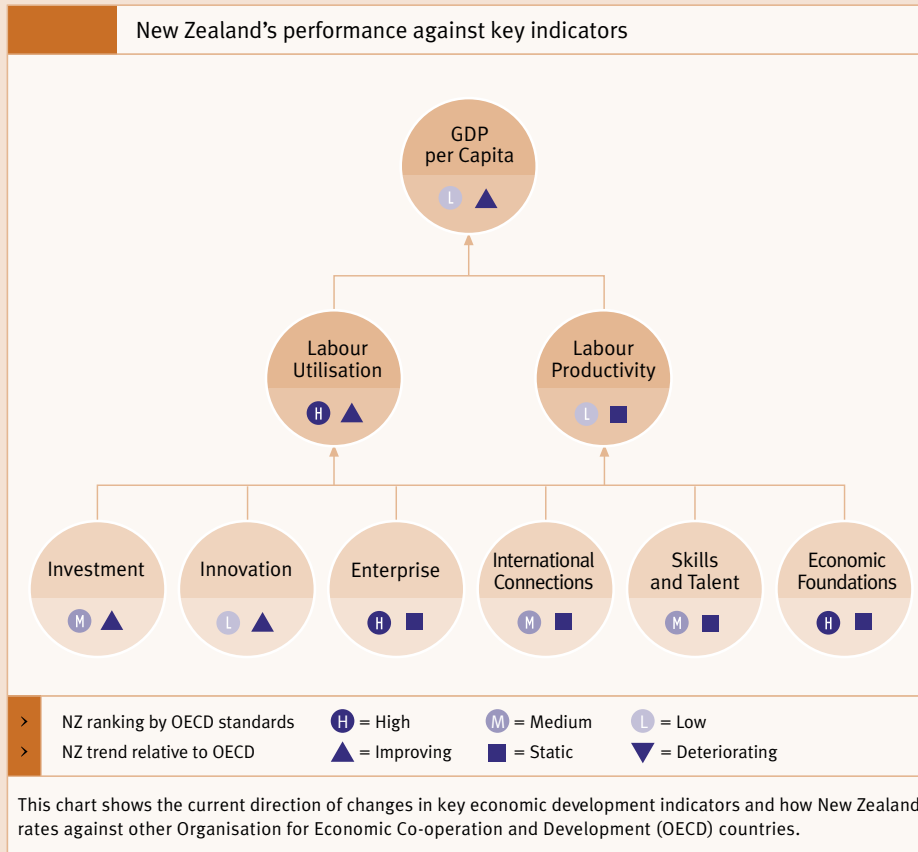


Source: OECD National Accounts and Labour Force Statistics

The short-term outlook for the business operating environment contains a number of downside risks. It is tough for exporters at the moment, it is going to get tougher for other businesses in the next year or two and there are significant challenges in the medium term:

- › The continuing rapid growth of China, India and other Asian economies with abundant reserves of low-cost labour will force New Zealand firms to shift toward the more skilled end of the value chain. This will require more integrated organisation of production across national borders, a trend that has dominated growth in world trade over the last decade or so.
- › The rapid growth and integration of China into the world economy will continue to exert upward pressure on the prices of fuel and raw materials, as well as on transport. At the same time, as incomes rise, China will grow in importance as a potential market.
- › While New Zealand has much to gain from successful completion of the WTO Doha round, it needs to keep options open in bilateral negotiations, should the round fail to liberalise agricultural trade. But a nexus of bilateral Free Trade Agreements (FTAs) carries with it risks of complexity, litigiousness and trade diversion – especially if we fail to keep pace in negotiations with competitors.
- › We are experiencing considerable volatility in the price of oil, driven by both concerns around future production (the peak oil debate) and geopolitical instability.
- › Global distribution networks are increasingly dominated by a few companies. Access to these networks will be vital for continuing export success.

New Zealand's performance against key indicators



The MED/Treasury publication *Economic Development Indicators 2005* sets out New Zealand's performance against a range of indicators considered important as measures of productivity. This chart shows the direction of change against key economic development indicators and how New Zealand rates against other OECD countries. The performance is mixed. New Zealand's ranking against many of these indicators is relatively low. That said, the direction of change is positive for a number of these indicators, and in some cases markedly so.

Fostering Innovation – how New Zealand Performs

The New Zealand picture on business innovation is mixed. Though the data show a healthy, flexible economy with the potential for high rates of innovation and productivity growth, we still have low rates of R&D, capital investment and investment in ICTs. Government provides or funds significant inputs to business – particularly education and training, research, science and technology, and infrastructure. Better identification of issues affecting firms' international competitiveness and coordination of public and private investments will improve the probability of successful innovation and help build scale through improved linkages. More directly, government also provides assistance through industry capability development and export promotion programmes.

Supporting innovation, New Zealand has:

- › low barriers to firm start-ups and high rates of firm turnover
- › a sound framework of business regulation and openness to trade, which keeps competitive pressures on domestic businesses
- › high levels of participation in tertiary education and a moderately well-skilled workforce.

But New Zealand also has:

- › low (though fast growing) rates of R&D and particularly low rates of business R&D. While this largely reflects our industry structure and relative lack of large firms, the strong correlation between R&D and productivity growth suggests grounds for concern.
- › low numbers of researchers, scientists and engineers in the private sector
- › business investment rates that have been lower than the OECD median for most of the years from 1987-2003, though increasing rapidly over the last few years
- › rates of investment in ICTs that are in the lower half of the OECD
- › low uptake of broadband (in terms of percentage of population subscribing). A consequence is a limited broadband infrastructure with lower benefits to firms and higher costs.
- › technological networks, important because they facilitate the transfer of knowledge and technology developed elsewhere, that appear to be weak.

Increasing Innovation – Areas for Focus

Distance from technology leaders and small size means that New Zealand policies need to be different in range and mix from those used in larger, less isolated economies.

- › To a significant extent, knowledge about new technologies is passed on through personal and particularly face-to-face contact and hands-on experience. Distance makes this more difficult and costly. Local R&D effort is crucial to adapting and using many of the innovations pioneered elsewhere.
- › Firms work within an interacting set of networks, institutions and policies. The quality of this “National Innovation System” will impact on the rate at which firms engage in innovation. Understanding how it works will help identify policy changes that will have the most positive effect on firms’ innovation.
- › The Ministry, together with other departments, has commissioned a review of New Zealand’s National Innovation System to identify its strengths and weaknesses and where adjustments and a shift in resourcing will have the most effect in stimulating innovation and productivity growth.

Domestic R&D plays a crucial role in the adoption of technologies from overseas. Business R&D is particularly important for its direct effects on economic growth. The wider benefits to the economy of business R&D gives a strong rationale for government support.

- › Businesses use R&D to increase their competitiveness, focusing on commercial applications. Countries that have higher rates of business R&D are also better at adapting foreign technologies to improve business performance.
- › There is good evidence that there are benefits to growth from business R&D beyond those which the firm captures.
- › The tax treatment of R&D expenditures has become more generous over recent years but, compared to many other OECD countries, little assistance is delivered through this means. The use of non-discretionary subsidies, usually delivered through the tax system, reflects the view that the acknowledged spillovers are unpredictable, and that a general raising of business R&D will have benefits.
- › The best evidence from recent international studies is that a dollar of government support for R&D will, over time, produce at least an extra dollar in private sector R&D expenditures.

Investment in physical capital is positive for firm profitability and in promoting economic growth more generally. Now that the labour market is tight, businesses can increase output and improve productivity by adding more value and investing in plant, machinery and equipment. Recent strong growth in business investment may be evidence that this is already occurring.

- › New Zealand’s investment in fixed capital as a proportion of GDP has been below the OECD average for much of the last 15 years.

- › Australia has had above average investment in fixed capital, and this (after correcting for differences in sectoral composition) can explain much of why growth in labour productivity is higher in Australia than New Zealand.
- › New Zealand devotes a slightly higher proportion of investment to housing than other similar countries and has relatively low investment in ICT – which has been associated with productivity growth in the USA and Australia – relative to most other OECD countries. On the other hand, there is also an above average share of investment going towards productivity-positive machinery and metal products.
- › There is good evidence that investing in modern plant and equipment makes New Zealand firms more profitable. International evidence shows that investment in physical capital plays a significant role in promoting economic growth more generally, and that tax policy has a relatively strong impact on firm investment decisions.

Accelerating the use of ICT in New Zealand firms should raise productivity and increase their international competitiveness.

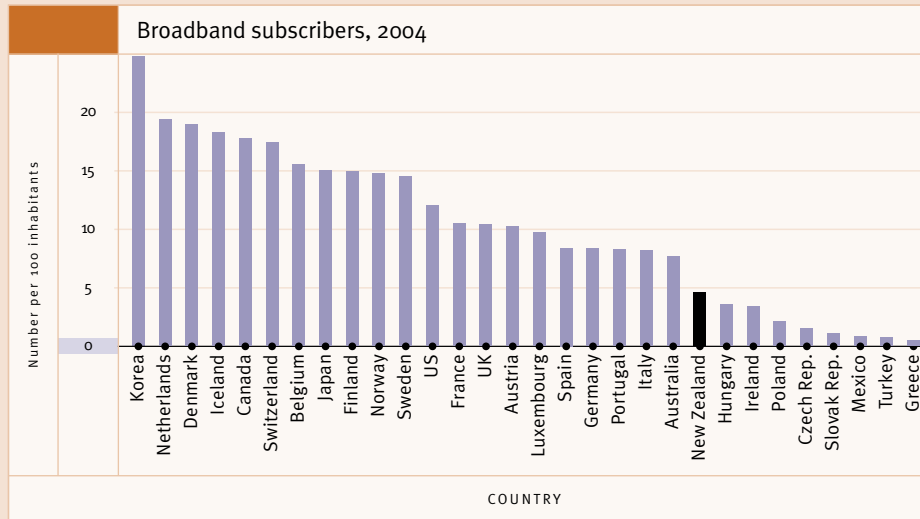
Evidence is mounting that ICT use explains much of the rapid productivity growth over the 1990s in both the US and Australia – two of the fastest growing OECD countries. ICT use made a strong contribution to multi-factor productivity growth (the ratio of outputs to all measured inputs) in the wholesale and retail trades, and in the finance industry in particular.

- › The more firms that invest in ICTs, the higher the rate of return to individual firms – because of the benefits of larger networks and the development of specialised skills.
- › Raising productivity through ICTs requires firms to make complementary investments in organisational change, skills and innovation – and for these to be complemented by the availability of suitably skilled employees and the provision of infrastructure.
- › While low labour costs over the 1990s added to employment growth, they reduced incentives for New Zealand firms to use ICTs to raise profitability.

Government can play a role in accelerating investment in productivity-enhancing ICT by:

- › providing a regulatory environment that supports broadband uptake and increases security in ICT use
- › contributing to network development through extending the range of services using ICTs
- › promoting knowledge of ICT and awareness of its benefits – for instance, by facilitating its use in education and in local communities
- › stimulating ICT development through procurement for its own service delivery – government is a large buyer.

The broadband challenge



Source: OECD Telecommunication Database 2005

Many countries have identified broadband as a technology that will spur economic growth – through increased scope and speed of communications leading to new services (such as video conferencing), enhanced innovation and productivity. Broadband is expected to have a major impact at all levels, from residential and SME use through to major users such as multinationals, research organisations and government.

Strategies to enhance the take up of broadband vary internationally. Regulatory initiatives such as unbundling telecommunications companies' local loops increase competition in the residential and small business area. In a number of countries, governments have proactively invested vast sums, often with incumbent suppliers, to "wire the nation". Increasing demand through government procurement initiatives to provide broadband for schools, universities, hospitals and so on, reduces the technology and investment risks faced by operators and facilitates the roll out of broadband in areas where low levels of competition fail to provide sufficient incentive.

Some countries and regions have been able to benefit from alternative and competing infrastructure, such as cable television or power line companies, which have spurred competition and reduced prices to end users.

In New Zealand, a range of broadband initiatives are in train – in the regulatory environment the Telecommunications Commissioner has recommended a restricted form of unbundling². The government has, through Project Probe, ensured that medium speed³ broadband is available to almost all of New Zealand.

“Big business” use of very high speed broadband⁴ is inhibited by the high cost of services due to limited competition and the traditional business models of the incumbent operators.

The Advanced Research Network will make very high speed broadband services available to universities and research institutes nationwide. Other “commercial” users will eventually have access to the network for research purposes.

The Digital Strategy is proposing to part-fund local fibre rings in major urban centres, to enhance competition in very high speed broadband services and allow affordable access to major users.

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- 2 The bitstream unbundling recommendation was restricted to a 128 Kbps upstream service. MED’s advice on the recommendation was that unrestricted access to the bitstream would spur competition and thus the quicker availability of advanced services.
 - 3 Broadband is usually defined as speeds greater than 128 Kbps. Probe has made available to all schools in New Zealand service at 512Kbps symmetrical and secondary schools up to 4Mbps symmetrical.
 - 4 Broadband between 1Gbps and 10 Gbps is considered very high speed. The Advanced Research Network is set to provide this type of service to universities and CRIs.

Sectors and Regions – another Angle on Innovation and Productivity

Factors impacting on productivity growth and firms' international competitiveness vary by sector and region. Many of these factors will not be very apparent from a national approach. Taking a sector- or region-specific cut on the barriers to and drivers of productivity growth sharpens the focus of policy and programme design and implementation. Issues of co-ordination across government policies and programmes, and between public and private sector investments will, in many cases, be more tractable when approached at the sectoral or regional level.

Sectors

- › Productivity levels and growth vary greatly by sector within a country and across countries in the same sector – suggesting significant scope for improving productivity and competitiveness through a sectoral approach.
- › This requires a detailed understanding of what is driving differences in firm performance across sectors, and across countries in the same sector, and close collaboration between government agencies and business in identifying these factors and designing responses.
- › Fast growing and rapidly changing sectors or niches are the most likely to experience problems with responsiveness of government-funded or government-provided goods and services.
- › Since 2001, New Zealand has pursued a “whole-of-government” approach to working with selected sectors. The objective has been to develop a practical programme for development, using an industry-led, market-focused approach to understand and respond to barriers to international competitiveness. A major engagement with the food and beverage sector is currently underway. NZTE is also working with a range of other sectors.
- › A sector-led approach depends on the willingness of the sector to engage. Sectoral strategy has to be owned by the sector, not imposed.

Sectoral performance – a varied picture

Sectors in New Zealand vary greatly in their contribution to aggregate labour productivity growth – reflecting their size, rates of technological progress and reallocation of resources to more productive firms. Transport and communications made a particularly strong contribution over the last 20 years, reflecting both the effects of reform and the rapid adoption of new technologies. Manufacturing made a strong contribution in the first 10 years (possibly reflecting the exit of less productive industries and firms in the face of increased international contribution), but a slightly negative contribution in the second – perhaps reflecting the increased utilisation of low-skilled labour and reduced incentives for businesses to invest in new capital and innovation.

Sector productivity growth is also different across countries. In most sectors, labour productivity growth in New Zealand has lagged that in Australia, with the exception of transport and communications. The gap in growth rates is the largest in the manufacturing sector.



Source: Statistics New Zealand National Accounts and HLFS

Regions

New Zealand's regions vary in their contribution to economic growth. The experience over the last few years has been one of increasing economic activity across all regions, in a relatively balanced way, with latest year-on-year to June 2005 recording growth ranging between 5.0% (Taranaki) to 1.9% (Hawke's Bay).

A regional development perspective is based broadly on:

- › Firm innovation and adaptation takes place in a regional and local context. Firms operating in an area develop local networks of customers, competitors and suppliers, and through working with other economic actors such as CRIs and educational institutes. These networks cannot be easily replicated, but tend to develop over time and through repeated interactions that build trust and information sharing. The geographical location of firms will encourage specific and unique innovations and adaptations.
- › High-growth companies need environments that sustain and enhance their growth such as support services, infrastructure, research, skills and quality of life. Otherwise they are likely to move to more supportive environments, in some cases, off-shore.

Regions support economic development and firm competitiveness through:

- › developing an environment for sustaining growth – through, for example, the effectiveness of local institutional governance and leadership; the provision of infrastructure, local planning and regulation; and the ability to make strong linkages within the region
- › developing an environment for enhancing growth – through, for example, offering a business environment and quality of lifestyle that attracts and retains investment, firms and skilled people; and education and research facilities that enhance growth.

Auckland

- › As New Zealand's largest city, Auckland is a key to innovation and improving New Zealand's international competitiveness. Around the world, cities are associated with a more than proportionate amount of innovation.
- › Firms benefit from locating with similar firms and related industries in a large city – because of specialised suppliers, the availability of a pool of especially skilled labour and learning from the experience of other firms.
- › Increasingly, some specialised, higher-skilled business functions are being located in a small number of larger cities in the developed world. Auckland is likely to be able to attract some types of economic activity that would otherwise not locate in New Zealand.
- › An effective transport infrastructure, good learning institutions and amenities that make it attractive to well-educated people will help Auckland attract highly productive firms and grow successfully as a centre for innovation.
- › Local government has a key role to play in addressing these issues. Fragmented responsibility for regional infrastructure is an issue both in Auckland and in other parts of the country.
- › The Ministry has led the establishment of a shared policy office in Auckland to strengthen the policy focus on Auckland and co-ordination between agencies.

Industry capability development and export promotion policies

- › Firm turnover contributes to growth. Exiting firms have low and declining productivity, and entering firms that survive eventually contribute positively to productivity growth. More productive firms enter into exporting, and their growth also contributes to productivity growth.
- › Over the 1990s, unlike most OECD countries, New Zealand had only a limited set of industry capability development and export promotion policies. The emphasis was on macroeconomic stability, opening the economy through reducing barriers to trade, and increasing competitive pressures and market disciplines.
- › More recently, New Zealand has made greater use of industry capability development and export promotion policies, drawing on successful experience in other countries, improved understanding of the determinants of economic growth, and a greater focus on the particular circumstances of New Zealand firms. The primary aim is promoting innovation and “shortening the learning curve” to international competitiveness.
- › Venture capital (VC) is a component of private equity markets that has an increasing role in innovation world-wide, particularly in countries with very good commercialisation rates. VC tends to focus on new business opportunities with high risk/return potential. A review of the New Zealand Venture Investment Fund finds that it has been instrumental in stimulating VC capability in New Zealand. Judgements will be required by government on the evolution of the VIF as part of the portfolio of support for innovation processes.

- › Most industry development and export promotion policies are complex to implement and require detailed understanding of the context in which they are being applied. They require judgements about where to apply resources, given uncertainty about how the economy will evolve. Thus they need to be selected carefully and with a clear public policy rationale.
- › Agencies administering these programmes need discretion to make judgements about resource allocation that take account of the issues facing particular segments of the economy. They need to base this on dialogue and collaboration with the relevant sectors.
- › But decisions also need to be transparent to avoid “capture”, and rigorous ongoing evaluation of processes and impacts is required.
- › A wide range of programmes is in place. This challenges scarce policy development and operational resources. It risks overlaps in delivery and may cause confusion among client firms.

Is the mix right?

New Zealand still devotes a relatively small proportion of GDP to industry capability development and export promotion policies. Experience in designing, implementing and evaluating these policies is uncovering some recurrent themes.

- › What is the appropriate scale of industry capability development programmes? Programmes limit the amount of assistance that can be given to individual firms or collaborative innovative projects. Some potentially valuable opportunities have fallen outside these criteria. The wider economic benefits from assisting particular firms and building “critical mass” in centres of innovation should be the main criterion guiding decisions.
- › Should capability development programmes be targeted to larger firms than current criteria allow? Larger firms account for a large proportion of innovation and exporting. They may also stimulate innovation in smaller firms that are suppliers or customers.
- › What is the right balance between central guidance and agency discretion in making the judgements about where to apply resources? NZTE has been developing a framework for consistent administration of industry assistance programmes. Together with the annual review of programme effectiveness, this provides a good basis for determining future delivery options.

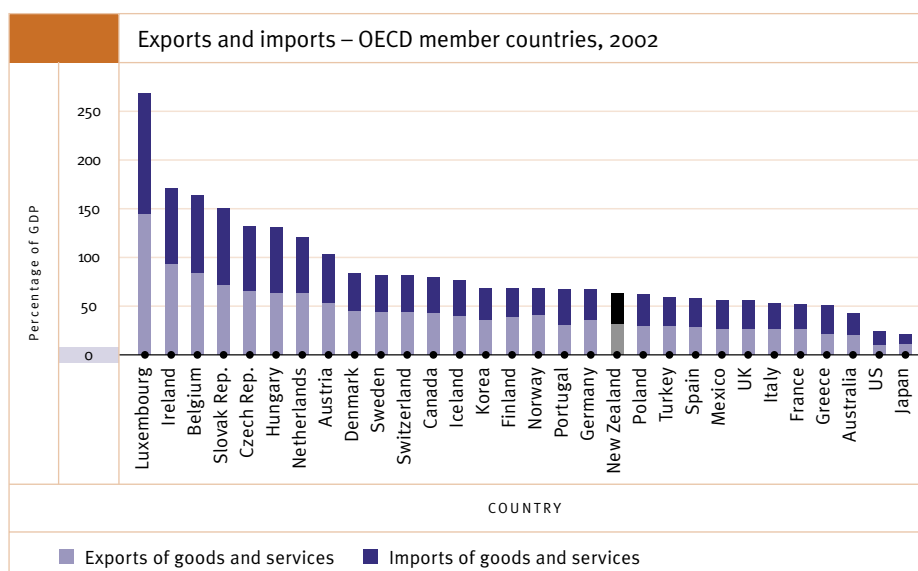
Skills derived from formal education, on the job training and migration are essential if New Zealand firms are to innovate and improve international competitiveness. Though these policy areas are outside the Ministry's direct responsibility, they are an integral part of a successful economic development strategy.

- › There is good New Zealand evidence that firms that adopt good human resource practices (including in particular staff training and performance pay) perform better. Adoption of good HR practices is related to general indicators of good business practices, indicating that underlying management capability is important to firm performance.
- › New Zealand has relatively high participation in job-related continuing education, compared to other countries.
- › However, the IMD World Competitiveness Yearbook rates New Zealand 47th out of 60 countries for the availability of competent senior managers, lower than Australia, the UK and many OECD countries. New Zealand managers are rated as lacking in international experience (47th out of 60) and not giving priority to employee training (26th out of 60).
- › Policy development could usefully focus on more effective and swifter means to relay industry demand for skills through to education providers and students. The sector approach to industry development is a key way to identify upcoming skill requirements and training issues.

Strengthening International Linkages – how New Zealand Performs

International linkages – through trade, the movement of people, foreign direct investment and the flow of new knowledge – are a key determinant of the productivity and competitiveness of firms in a small, distant economy such as New Zealand’s. New Zealand has one of the most open economies in the world. While growth in exports has been faster in the last decade than in the previous two, New Zealand still faces significant barriers to agricultural exports and our share of world exports has been falling.

- › Trade as a proportion of GDP is low for a small country – this reflects the effects of distance and the fact that we specialise in exports which have a low import content.



- › A quarter of all firms with more than 6 staff (FTEs) export to some degree, and half of all firms with more than 50 staff are exporters. Regardless of firm size, the majority of New Zealand exporting firms export less than 10% of their sales.
- › Growth in exports has accelerated over the last decade. Growth in services exports has been faster than the world average – and tourism and export education have made strong contributions.
- › Exports have become more diversified over the last several decades – and this is reflected in reduced terms of trade volatility. The sustained lift in New Zealand’s terms of trade over the last 15 years reflects a lift in the sophistication of exports and more efficient importing.

Strengthening International Linkages – Areas for Focus

Continuing to improve trade access through multilateral (WTO) and bilateral channels will benefit New Zealand exporters. The challenge is to find ways to maximise the benefits of access through assisting firms to identify and develop new opportunities.

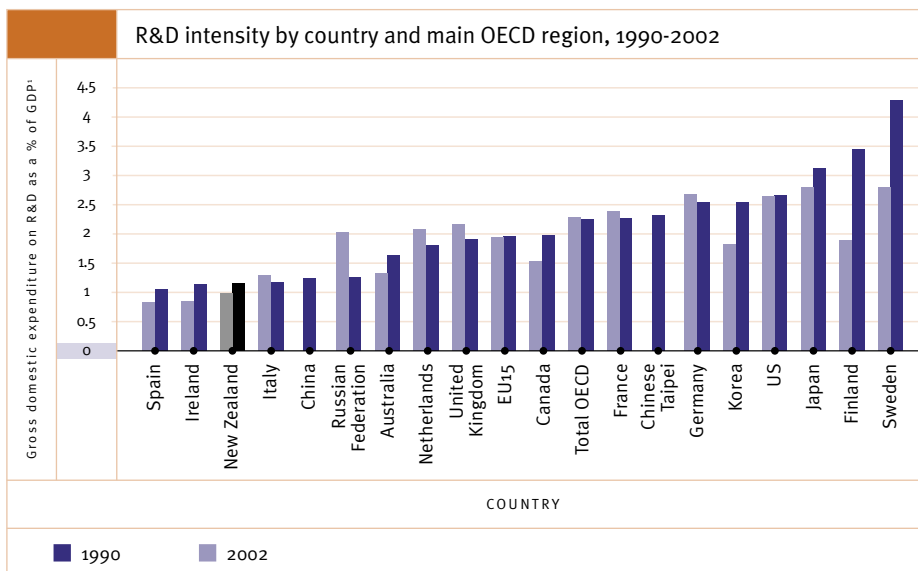
- › New Zealand continues to give the highest priority to achieving a successful outcome to multilateral trade access negotiations under the WTO Doha round. The multilateral process provides the greatest potential leverage for small countries.
- › Like other countries, New Zealand is also pursuing key bilateral trade initiatives. These agreements can tailor and fast-track trade liberalisation opportunities. There is also a risk that other countries will negotiate preferential arrangements ahead of us, putting our exporters at a competitive disadvantage.
- › While trade access is a key objective, so also is addressing constraints on trade arising from technical regulations, including standards and conformity assessment requirements – the so called “behind the border issues”.
- › New Zealand lacks the large firms that dominate exporting in other countries. Small firms face a daunting challenge in bearing the fixed costs of developing markets and moving into exporting. Scaling up production to meet the volumes demanded for many markets is challenging.
- › The most productive firms in an industry are those that successfully make the transition to exporting. Export facilitation policies should target these firms and shorten the learning curve to international competitiveness.
- › Country-specific export facilitation strategies that take account of market specific issues and the capabilities of New Zealand firms and sectors will help New Zealand firms make the most of the opportunities presented by Free Trade Agreements.

Removing or reducing a wide range of regulatory and institutional barriers to New Zealand firms doing business in Australia will help extend the scope and scale of New Zealand’s domestic economy. Despite substantial progress, significant barriers remain – but we need to be clear about the desired path forward, the risks involved and strategies for managing them.

- › A more seamless Australasian business environment would reduce business compliance costs and provide mutual benefits to Australia and New Zealand in better protecting their respective interests in the other country. The larger market would provide greater scope for economies of scale and improved returns from domestic innovation and enterprise, and thus spur productivity growth.
- › Current and planned work on trans-Tasman regulatory harmonisation or cooperation covers regulation for the banking and insurance sectors, administration of intellectual property rights, the development of common accounting standards, coordination of competition policy, and trans-Tasman court proceedings and regulatory enforcement.
- › The advantages of regulatory harmonisation with Australia need to be tempered by the extent to which this may move us away from world practice.

The highly-integrated nature of Australasian capital and labour markets makes Australia our most important partner, and it is also our largest trading partner, although it accounts for only 20% of our trade.

- › Establishing joint institutions may confer additional benefits – such as the ability to influence Australian decision-making over time. But there are also downside risks – how do we respond when New Zealand and Australian interests do not coincide?
- › A Single Economic Market (SEM) increases the risk of trade diversion should we not keep pace with Australia in the negotiation of FTAs.
- › An SEM also makes it easier for firms to relocate activity from New Zealand to Australia – highlighting the need for a broad raft of policies that keep New Zealand an attractive place to do business.



1. Or nearest available year, see source for details.

Source: OECD (2005), Main Science and Technology Indicators 2005-1, July 2005.

China's rise as an economic power provides opportunities and challenges for New Zealand firms – and should be a prime focus for enhanced linkages and adjustment strategies.

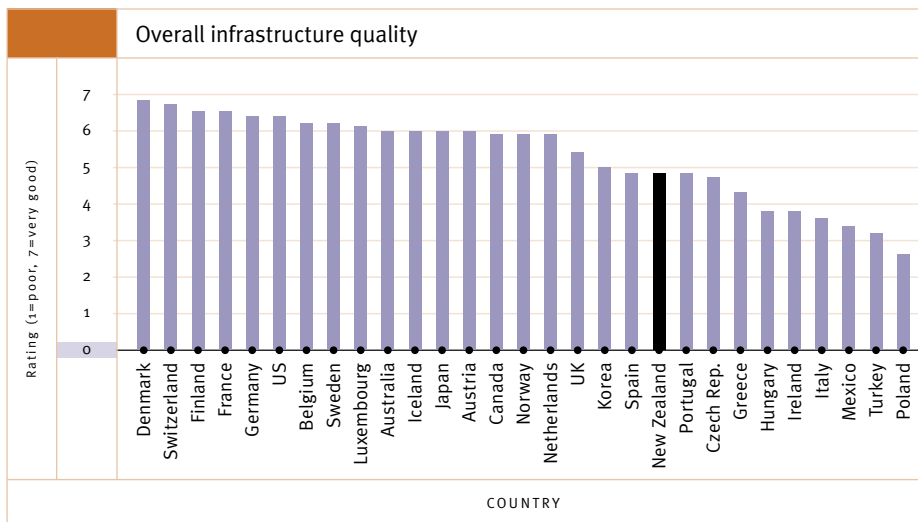
- › The scale, growth and openness of the Chinese economy will increasingly have a major regional and global impact, both in terms of its demand for global resources and its low-cost manufacturing capacity. Large scale relocation of manufacturing to China is taking place, and today many New Zealand firms are investing in a Chinese manufacturing base. Consumers everywhere are enjoying falling prices.

- › For many New Zealand firms, this will require shifting to new models of manufacturing production, with lower-cost functions being performed off-shore. In turn, this will demand changes to managerial skills – with enhanced ability to manage logistics and reassembly across borders.
- › Rising incomes and rapid economic growth in China are providing a growing market for New Zealand goods and services. An FTA with China will open new opportunities.
- › Rapid economic growth in China is one factor keeping the price of oil and other industrial raw materials buoyant, as well as pushing up the costs of shipping in the Asia Pacific region. This is having effects on profitability for New Zealand firms and exporters. If sustained, these changes in relative factor prices will precipitate adjustment in our economy.
- › China is an increasingly strong player in R&D and innovation – the R&D intensity of the Chinese economy is comparable to that of New Zealand, despite a much lower income per capita. China has strengths in biotechnology and biogenetics (for instance), which could be complementary to New Zealand's research specialisations.
- › Chinese investors are increasingly looking for international investment opportunities – particularly as a means to secure supply of the resources needed for their economic growth.
- › Over the 1990s, New Zealand has experienced strong migration by ethnic Chinese, including from China itself. New Zealand firms can build on their knowledge and experience in strengthening links with China.

Infrastructure and Energy Supply

High-quality, reliable infrastructure and a secure supply of energy give firms the confidence to invest and to be internationally competitive. Infrastructure investment needs to keep pace with economic growth so that it is not choked off. New Zealand's infrastructure is reasonably sound, but there are signs of under-investment in some areas. There are also risks to energy supply.

- › New Zealand ranks 19th in the OECD for the overall quality of our infrastructure, and 21st for the adequate planning and financing of infrastructure. These rankings match those for per capita income – suggesting a close association between the two.
- › In 2004, a stocktake of the adequacy of infrastructure in New Zealand highlighted a number of national and local infrastructure concerns. Particular issues were identified with security of electricity supply, lack of investment in electricity transmission, road congestion in some key areas (particularly Auckland), deficiencies in the framework for allocating water between competing uses, and poor quality drinking water in some areas.
- › Following wide-ranging reviews of infrastructure provision and regulation, new policies are being implemented. These include new regulatory regimes for the electricity and gas sector as well as changes to the Resource Management Act.



Source: WEF Global Competitiveness Report 2004-2005

Infrastructure – Areas for Focus

Large investments are needed in land transport, electricity generation, gas prospecting and electricity transmission.

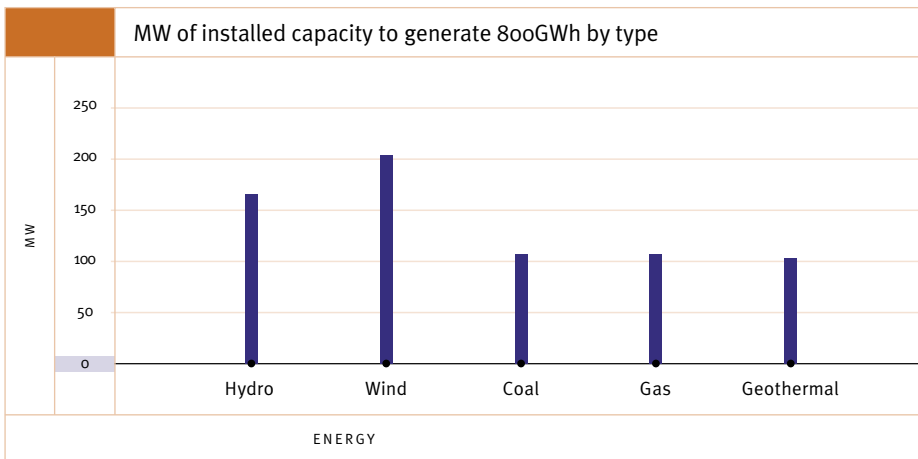
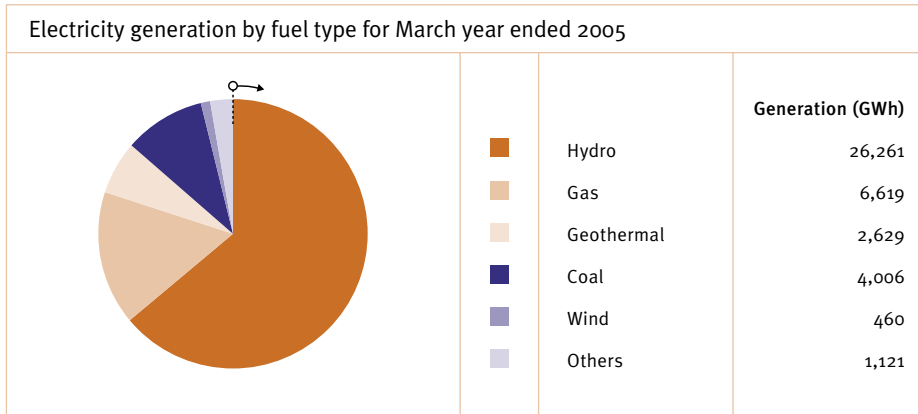
- › Infrastructure involves few suppliers and so competition can be weak. Public provision and financing and/or wide-ranging regulation are usually required – further reducing market disciplines for efficiency and innovation. Reforms over the last 20 years have strengthened these disciplines.
- › Increased use of private sector expertise and market disciplines would improve the performance of the SOE model in energy generation and supply.
- › Infrastructure has big impacts on the environment and serves social as well as economic objectives. Sustainable solutions require integrated packages of measures that address these multiple objectives.
- › Demand management policies such as congestion pricing in transport have proved effective in Britain and elsewhere.
- › Given uncertainty about future conditions, government has an important role in building the information base for investment decisions – particularly so they are made early enough to avoid bottlenecks.

Energy security of supply and pricing has a strong effect on firms' willingness to make long-lived investments. Electricity is essential for virtually all commercial and industrial premises. Oil remains dominant as a transport fuel – but in the long run alternatives will be needed.

- › New Zealand, like other countries, is faced with growing demand for energy, driven by economic growth, and increasing pressure on supply, including the need to control greenhouse gas emissions.
- › Risks to energy supply in New Zealand are exacerbated by the dry-year hydro constraint, the run-down in the Maui gas field and the relative lack of investment in the electricity transmission system in recent years.
- › On current projections, significant new sources of generation will be needed by around 2010. A number of projects are being progressed but as yet relatively few firm commitments have been made (a number of wind projects are proceeding).

The solution will include a mix of:

- › greater dependence on renewable electricity sources
- › discovery of new domestic gas and oil sources
- › making more efficient use of energy
- › strengthening the electricity transmission system, particularly into Auckland
- › monitoring new technologies that may make previously unfavoured options more competitive, both economically and environmentally, and addressing any policy or regulatory barriers to timely uptake
- › development of National Policy Statements and National Environmental Standards under the RMA.



The end of cheap oil?

- › In the long run, oil supplies are finite and, at some point, world production will peak. Despite uncertainty, mainstream informed opinion is that this will not happen until around 2030, and that after the “peak” will come a gradual decline in conventional oil supply. During this period, other factors such as new technologies, price rises making previously uneconomic oil resource economic to produce and increasing alternatives to oil, will all have an impact.
- › New Zealand, like others, needs to plan early for the eventual end of “cheap oil”. We need to monitor technology developments and consider the domestic infrastructure requirements of potential alternatives such as hydrogen.
- › Meanwhile, the government should encourage greater efficiency in transport use and (subject to economics) the development of alternative energy sources, especially biofuels.

Climate change

Climate change is a long-term global problem that requires a long-term global response. New Zealand's main interest lies in influencing other countries to act by making a credible contribution to the global response. The longer the economy has to adjust, the better. Current arrangements will have only modest effects.

- › New Zealand accounts for less than 0.2% of global emissions and we have limited ability to develop world-leading technologies to avoid or manage emissions.
- › The Kyoto Protocol requires countries either to reduce net emissions to the 1990 level (on average over the 2008-2012 first commitment period), or to purchase credits for emissions over that level or offset them against increases in forest sinks. The Protocol does not necessarily require New Zealand to reduce carbon dioxide emissions – countries can choose what mix of the six greenhouse gases to target with domestic policies.
- › An international trading system would allow emission reductions to be made where the cost was lowest.
- › Within New Zealand, it makes sense to reduce emissions where the cost is lowest. This is not necessarily where emissions are currently growing.
- › The agricultural sector accounts for half of New Zealand's greenhouse gas emissions. A stronger research effort could identify significant low-cost abatement opportunities.
- › For the rest of the economy, emissions trading may be a more flexible way for firms to manage emissions than a carbon charge. To be most effective, this requires a viable international market.
- › A carbon charge does give price certainty to emitters, but no assurance to government that its obligations will be met.
- › Transport fuel use is relatively insensitive to price, so a very high charge would be required to substantially reduce emissions there (and might not be part of a least cost solution).

Land transport infrastructure under-investment?

- › Land transport infrastructure investments are decided on the basis of "sustainability" criteria set out in the New Zealand Transport Strategy. These take account of savings in travel times and vehicle operating costs, reduction in accidents and some environmental impacts. In general, only investments with a high benefit:cost ratio proceed expeditiously.
- › This implies that New Zealand could reap considerable further benefit from more land transport infrastructure investment.
- › Investment has been rising in recent years, and careful phasing is needed to avoid undue cost escalation.

Water

- › Water is becoming increasingly scarce in some regions of the country.
- › Clearer allocation and trading mechanisms would help ensure scarce water was allocated to its highest value use.

Regulatory Environment for Business Growth

The quality of the regulatory environment is a key factor shaping the international competitiveness of New Zealand firms. New Zealand regulation rates highly on international comparisons, but business concerns persist and small adjustments can have significant effects on firms right across the economy.

- › The World Bank has assessed New Zealand as the best place in the world to do business, and our competition policy and its enforcement are also highly ranked.
- › Surveys of New Zealand businesses identify employment, occupational safety and health, environmental and ACC legislation, and tax as the areas of greatest concern. Recent adjustments in employment regulation have placed more restrictions on businesses, while changes to the Resource Management Act have been designed to ease the path for new investment.
- › As globalisation gathers pace, there is increasing convergence across countries in improving the design of regulation. New Zealand must keep pace with this if its businesses are to retain their international competitiveness.

The regulatory environment – areas for focus

MAINTAINING THE QUALITY OF BUSINESS REGULATION

- › The Ministry is responsible for the design and oversight of a range of business regulation – including competition policy, regulation of financial markets, insolvency law and the protection of intellectual property.
- › While these regulatory regimes are recognised as being of high quality, they need ongoing review to keep up with evolving international best practice and changing economic conditions. An important influence is the increasing globalisation of regulation.
- › Institutional capability is a big issue for a small economy that must, nevertheless, support the full range of regulatory functions. Regulatory design should take account of available institutional capability, but we also need to look to opportunities to collaborate internationally in the implementation of regulation, particularly with Australia.

MONITORING THE ADMINISTRATIVE BURDEN OF REGULATION

- › The administrative burden imposed by regulation is frequently raised by business as a problem. We need a more systematic and objective means to assess how this burden is changing over time, how proposed regulation will affect compliance costs and which aspects of which particular regulation impose the highest burden.
- › The Ministry is investigating the use of the “Standard Cost Model” originally implemented in the Netherlands and being considered by a number of OECD countries, including Australia and the UK. This could help identify features of regulatory design and implementation that can be adjusted to benefit economic performance, while maintaining adequate protection of social and economic objectives.

Promoting good regulatory design across the public sector

- › The volume and complexity of regulation is growing across the world.
- › New Zealand, like many other countries, requires policy departments to consider impacts on businesses and economic and other objectives before recommending new regulation. In New Zealand, this is overseen by a unit within the Ministry of Economic Development.
- › The effectiveness of this system is limited by the capability and willingness of departments to undertake credible analysis of the costs and benefits of regulation and alternative approaches to achieving policy objectives.
- › In turn, this requires coordinated and consistent support for the system from central control agencies and Ministers. This could be reinforced by a greater focus of resources on regulation with the largest impacts, more formal reporting on compliance of departments with the requirements of the system and evaluation of regulatory proposals following their implementation.
- › In Australia, the regulatory review system is administered by the Office of Regulation Review – an independent agency with the power to review performance and exercise sanctions on regulating departments.
- › Building a dialogue with business on regulatory impacts, for instance through the Small Business Advisory Group, will help identify opportunities for easing the administrative burden of regulation, without compromising regulatory objectives.

