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A goal is not a strategy: Focusing efforts to improve New Zealand's prosperity

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The New Zealand Institute PO Box 90840 Auckland 1142 New Zealand P + 64 9 309 6230 F + 64 9 309 6231 www.nzinstitute.org 'A goal is not a strategy' concludes that New Zealand needs to *focus* on the internationalisation of high value, differentiated export sectors, *prioritise* labour productivity improvement efforts on these sectors, and *reallocate* resources from low to high productivity sectors.



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EXECUTIVE SUMMARY

Economic prosperity is a worthwhile goal for New Zealand and Government has set a goal of matching Australia's GDP per capita by 2025. The dominant approach to economic development in New Zealand since the mid-1980s has been economic liberalisation. Economic liberalisation comprises a set of ten standard prescriptions that all countries are encouraged to implement to achieve economic prosperity.

An alternative, termed the 'diagnostic approach' has emerged more recently. It involves identifying the binding constraints to growth and establishing policies to overcome those constraints. As the diagnostic approach "is a framework for figuring out what to do (and maybe what not to do) in different kinds of cases and different kinds of countries" (Rodrik, 2005, p.1) it does not necessarily contradict economic liberalisation; they can be used together.

New Zealand had a relatively high GDP per capita prior to the early 1970s but the United Kingdom's entry to the European Union led to a relative decline until around 1990. Despite strong doses of economic liberalisation, New Zealand's GDP per capita remains lower than the Organisation for Economic Co-operation and Development (OECD) average and much lower than Australia's.

The main driver of GDP per capita is labour productivity and New Zealand's private economy labour productivity is 57% of Australia's. Labour productivity is not the only important measure of economic prosperity though. For a small trading nation exports are very important too. New Zealand's exports have grown much more slowly than the OECD average partly because global trade in commodities (where New Zealand exports are concentrated) has grown more slowly than trade in differentiated goods and services.

In recent years weakening trade performance has combined with imported private debt to erode the current account balance. Now New Zealand needs to improve labour productivity and grow exports enough to reduce the debt load and increase prosperity.

Lifting labour productivity depends on improving the drivers of labour productivity; entrepreneurship, innovation, skills and talent, investment, and natural resources. For some drivers New Zealand has made choices that differ from those made in other advanced economies and there is good reason to believe that those choices have eroded relative economic performance. New Zealand is fortunate that there is great potential for improving performance on the labour productivity drivers.

New Zealand's most important sectors for exports are tourism, agriculture, and manufacturing. All three sectors have average or lower than average

productivity so simply growing these activities without also substantially lifting productivity would not lift GDP per capita materially.

Denmark is one of the world's wealthy countries. Denmark's food and agriculture exports per capita are similar to New Zealand's and Denmark's agricultural productivity performance is similarly low. But Denmark's differentiated goods and services exports are much higher and that difference explains Denmark's high prosperity.

There are many opportunities in agriculture, natural resources, and tourism, and these should be pursued where competitive advantage and high value jobs are available. But information, communications and technology (ICT), and niche manufacturing, along with value-added and differentiated goods and services based on primary production, are where New Zealand should invest most aggressively.

New Zealand's success at exporting differentiated goods and services has been limited by the obstacles of small domestic market size and distance from markets. Applying the diagnostic approach reveals internationalisation of businesses as a critical binding economic constraint. But over-reliance on economic liberalisation has led to New Zealand committing less effort than other small trading countries to overcome the internationalisation challenge. If the issue had been recognised sooner, and remedial action had followed, the country would be in a much stronger economic position now.

Examples of successful internationalising firms from New Zealand demonstrate that success is possible. Increased efforts to develop entrepreneurs, to train managers and others to become high-skilled workers, and to ensure adequate capital supply are all possible.

Other small countries are becoming prosperous by exporting differentiated goods and services and New Zealand must find a way to join them or find another strategy for success.

A strategy is a reallocation of resources to achieve a valued goal. If the goal is important and the strategy is sound then the reallocation should be material; sufficient to change the outcome. A few tens of millions of dollars is not material. Competing small countries are committing hundreds of millions of dollars to efforts they regard as strategically important.

Our conclusion that supporting internationalisation success for differentiated exports should be the economic strategy priority should be tested and debated. If the conclusion survives that scrutiny then a material reallocation of resources should follow.

While internationalisation is the main opportunity, the overall economic strategy proposed is to:

- Focus economic development effort on high value export sectors selling differentiated products and services;
- Prioritise labour productivity effort to improve performance of these high value export sectors with growth potential;
- Reallocate resources from low productivity domestic activities into high productivity export activities and sectors;
- Focus on the internationalisation stage of the business development process and ensure New Zealand firms can overcome the size and distance barrier successfully;
- Continue to defend agriculture competitiveness to sustain export revenues and provide a sound platform for differentiated exports based on primary production;
- Apply sufficient resource.

CREATING A PROSPEROUS NEW ZEALAND ECONOMY: PROJECT STRUCTURE

1. Standing on the shoulders of science Improve innovation commercialisation 2. A goal is not a strategy Focus on growing exports of differentiated goods and services



3. Internationalisation Policy proposals to

improve firm outcomes

ECONOMIC PROSPERITY

Economic prosperity is a worthy objective. Prosperity provides people with the goods and services they want to consume, and with wealth that can be used to provide future benefits. A strong economy allows investment in human and social capital, and social services. When economies are weak, countries may have few options to obtain cash and satisfy material needs that do not damage their environments. In the long run, a strong economy is essential for securing good social and environmental outcomes.

The most widely accepted measure of economic prosperity is gross domestic product (GDP) per capita. It is calculated by dividing the total market value of all final goods and services produced within a country (GDP) by the population. GDP per capita is used to indicate the effectiveness of the economy in providing high income and consumption for the average individual.

However GDP per capita is a long way from being a perfect measure of societal success, or even of economic success. GDP gives credit for the costs of crime and waste and does not take into account depletion of environmental assets. For example a large, more environmentally damaging activity contributes more to GDP than a small efficient one. For a broader approach to measuring societal success see the NZahead Report Card¹ and for a wide-ranging critique of GDP as an indicator of economic performance and social progress see Stiglitz, Sen & Fitoussi (2009).

Despite these well-recognised deficiencies, GDP per capita is widely used and changes in GDP per capita do provide an indication of changes in economic prosperity.

ECONOMIC DEVELOPMENT

The dominant approach to economic development in New Zealand since the mid 1980s has been economic liberalisation. In 1990 Williamson summarised the emerging economic liberalisation approach as ten standard prescriptions for development including: fiscal policy discipline, government focused on core services only, tax reform, market determined interest rates and exchange rates, liberalisation of trade and of inward foreign direct investment, privatisation of state-owned assets, market deregulation, and secure property rights. This became known as the Washington Consensus, as the International Monetary Fund, World Bank, and other Washington D.C. based institutions sought to impose these policies on countries in economic crisis. The countries in crisis were mainly developing nations, but the standard prescriptions had a profound impact on economic development in many advanced nations, including New Zealand.

¹ View at http://www.nzinstitute.org/index.php/nzahead

With this approach the challenge of economic development is to get the policy settings right and leave markets to do their work. Businesses should identify opportunities to achieve competitive advantage and their actions will be sufficient to create growth. Governments should minimise their interventions and should not attempt to 'tilt the playing field' to advantage their own businesses, industries, or economy.

The economic liberalisation approach remains very influential in New Zealand today. The 2025 Taskforce for example, recommended several liberalisation proposals to Government to close the GDP per capita gap with Australia, including reducing government activities and spending, reducing taxes, and deregulating the economy.

An alternative, labelled the 'diagnostic approach' (Rodrik, 2005, pp.13-22), is derived in part from the empirical observation that economic liberalisation has not been very successful for many of the countries that have tried it, and that many countries have accelerated growth without economic liberalisation. Rodrik found that only 15% of growth accelerations studied were preceded or accompanied by economic liberalisation, and only 18% of economic liberalisations were accompanied by growth accelerations (2005, p.17). In other words, the majority of economic growth stories did not occur as a result of economic liberalisation.

Rodrik points out successful East Asian economies, such as Singapore, South Korea, Taiwan and Japan have grown rapidly despite rejection of the standard policy prescriptions of economic liberalisation, whereas Latin American economies that followed economic liberalisation have been much less successful (2004a pp.6-20).

The diagnostic approach is based on identifying and overcoming countryspecific binding constraints on economic growth. Policies should be designed to address the specific identified constraints so the policies are likely to be different for each country because each country has different circumstances.

For New Zealand, the strategic choice is not whether to abandon economic liberalisation in favour of the diagnostic approach, but whether to use the diagnostic approach while retaining the best features of economic liberalisation. When designing policies for economic development, different approaches may be complementary and should been seen as parts of a broader package for development (Rodrik & Rosenzweig, 2010). Using the diagnostic approach would add specific strategies designed to overcome specific constraints that impede economic growth for New Zealand. Deciding whether to deploy both approaches requires an understanding of what interventions would be required and the likely benefits of any interventions. Generally, good interventions have clear benefits for the economy, have well defined sunset provisions, do not have unacceptable negative consequences, and are performance-managed well with a focus on outcomes.

WHERE WE ARE AND HOW WE GOT HERE

Until the beginning of the 1970s New Zealand was among the highest income countries in the world. That position was based on exports of agricultural commodities to the United Kingdom (UK). When the UK entered the European Union in 1973, New Zealand's privileged access to the UK market was lost and new markets had to be found.

Concentration on agricultural commodities, a protected economy, and union power made it difficult to respond quickly. Agricultural subsidies were used to encourage volume increases to offset price reductions while new markets were developed. The subsidies were funded by increased government borrowing, which led to a fiscal crisis in the early 1980s.

In response, the reform process of the 1980s was launched. Over the following decade many changes were made, resulting in more diversity of products exported, and of markets served, along with the development of world-class institutions, deregulation, improved market efficiency, and sound macroeconomic settings.

Despite these changes, by 1990 New Zealanders' relative income was almost 20% below the OECD average. New Zealand was hit hard by the 1987 stock market crash and the early 90s recession, while many other OECD countries were gaining greater benefits from economic integration (McCann, 2009, p.281).

As shown in Figure 1, since 1990 New Zealand has held position relative to the OECD average GDP per capita but has not managed to close the gap.

Prior to the global financial crisis and recession, New Zealand had shortages of skilled and unskilled labour, high commodity prices, and a property boom. When the crisis hit the world's financial industry, New Zealand was less affected because banks here had not invested in the instruments that were most affected. However, New Zealand was affected by capital shocks, recession in export markets, and by domestic recession. As a result, unemployment has increased and many finance companies have collapsed. Stimulus packages and lower tax revenues are increasing government debt, although this is from relatively low levels.



As a result New Zealand's economy has performed better recently than many other developed economies, especially those in the USA and Europe. If, following recent trends, markets continue to stabilise and economies grow then New Zealand should emerge relatively stronger than it was prior to the recession. That is not because of strong economic performance here, rather it is because other OECD economies are being harmed more.

New Zealand's recent economic performance has been helped by increasing labour force participation, and a debt fuelled property boom. Neither of these trends is likely to contribute to economic growth in the future; the labour force participation rate is relatively high and debt is being reduced. New sources of growth are needed.

The challenge now is to set New Zealand on a course for long term economic success, competing with weakened rich countries that have high labour costs, and with strengthened emerging economies which have capital for investment, low labour costs, and a growing appetite for innovation.

This paper begins by looking at the economic imperative facing New Zealand. More specifically, Section 2 considers the economic outcomes New Zealand needs to achieve and the key requirements for success.

Sections 3, 4 and 5 examine three challenges for New Zealand: to lift labour productivity, to grow differentiated goods and services exports, and to overcome the barriers to international business success.

The concluding section draws together the findings in the paper, summarising the proposed strategy to lift New Zealand's economic prosperity.

ESTABLISHING A GOAL

Government's economic goal is to match Australia's GDP per capita by 2025. New Zealand's GDP per capita for the year ending December 2009 (The Conference Board, 2010) is NZ\$46,683 while Australia's is NZ\$66,771.² Australia plans to increase its GDP per capita to lift its position from sixth among OECD countries in 2009 to fifth in the world by 2025.

Achieving the Australian GDP per capita goal would require a long period of outstanding economic performance by New Zealand. If Australia does become fifth in the world then New Zealand should aim to sustain a GDP per capita growth rate between 4% and 5% over a period of more than 10 years to close the gap, according to the New Zealand Institute estimates. Table 1 shows growth accelerations in OECD countries, illustrating the scale of the challenge.

TABLE 1: ACCELERATED GROWTH PATTERNS DURING 8-YEAR PERIODS							
Country	Period	Average growth	Contributors to growth				
Japan	1958-1966	9.0%	Integration of value chain in domestic productionStimulating private sector growth				
Spain	1959-1967	8.0%	 Liberalising foreign trade and encouraging foreign direct investment Tourism and car industry growth 				
South Korea	1984-1992	8.0%	 Export led strategy supported by cultural incentives Active industrial policy and liberalisation for foreign trade 				
Finland	1967-1975	5.6%	 Second-highest public spending on higher education Investment in broad-based, open- access education system 				
Denmark	1957-1965	5.3%	Liberal trade policies, shifting to a service and manufacturing society				
Ireland	1985-1993	5.0%	 Opened economy to serve European markets Large inflows of foreign direct investment Tax rates cut for business and individuals 				
New Zealand	1957-1965	3.8%	Meat, wool, and dairy exports to the United Kingdom				

Source: Country data from Hausmann, Pritchett, & Rodrik (2004). 'Contributors to growth' from the New Zealand Institute research.

² Figures are real GDP per capita, at purchasing power parity (PPP).

Despite the challenge, the goal is useful. It is such a stretch that it requires thinking beyond business as usual or incremental change. Australia is a good country to compare New Zealand with because it has a similar economic history, an economy and society that are similar, and also has a relatively small population distant from major global markets. These similarities make it easier to understand the economic differences between the two countries and to use that understanding to identify opportunities to close the gap.

Many New Zealanders migrate to Australia seeking higher incomes. Australia competes with New Zealand for skilled migrants and for international investment. Relative performance matters when countries compete for important resources so New Zealand will benefit from reducing the gap, even if closing it proves too great a challenge.

Since the mid-1980s, New Zealand's dominant economic strategy has been liberalisation so New Zealand performs well in assessments of the quality of institutions and macroeconomic settings. However, persistent underperformance relative to our aspirations, and relative to Australia, raises the question of how New Zealand could do better.

THE SUCCESS REQUIREMENTS

Labour force participation

Labour force is defined as the number of people who are available to work, regardless of whether they are employed or unemployed. The labour force participation rate is defined as the ratio of the labour force to the working age population, expressed as a percentage.

As Figure 2 shows, New Zealand's labour force participation rate is similar to Australia's so participation cannot be the major source of the GDP per capita gap.

Size of government

Public spending on core government activities has an important role in enabling economic development. Spending on core services in education, community services, health, social security, and social work help ensure people are equipped to work and contribute to prosperity.

Total government expenditure as a percent of GDP is much higher in New Zealand than in Australia, as shown in Figure 2. The difference between New Zealand's government spending and Australia's is largely due to spending on social benefits (e.g. sickness, unemployment, retirement, and housing) and



FIGURE 2: DRIVERS OF GDP PER CAPITA, 2008

social transfers in kind (e.g. reimbursements, transfers of goods and services, other benefits in kind), and not due to core government activities. In 2007, social benefits and social transfers in kind represented 21.4% of GDP in New Zealand compared to only 18.2% in Australia, whereas the proportion of GDP spent on core government activities is similar for New Zealand (17.6%) and Australia (17.1%). Social insurance contributions explain most of the residual difference, accounting for 1.23% of GDP in New Zealand and zero percent in Australia.

More importantly Figure 2 highlights that New Zealand's private economy labour productivity is the dominant source of the difference in GDP per capita. New Zealand's private economy labour productivity is just 57% of Australia's and this difference flows through into both the GDP per worker (61%) and the GDP per capita (63%).

Exports, debt, and the current account

Exports of goods and services play an important role in helping the economy to grow, through increased employment and increased productivity. Exports also pay for foreign imports, providing a country with access to specialised goods and services at lower prices than would be possible with domestic production.

New Zealand's export growth has been slower than the average growth in the OECD as shown in Figure 3. Slower than average export growth is mainly because New Zealand's exports are concentrated in commodities, which have grown slower than trade in value-added and technology based products and services (Skilling & Boven, 2005, pp.17-19).



FIGURE 3: REAL VALUE OF GOODS AND SERVICES EXPORTS, 1971-2007

The trade account balance is the difference between total exports and total imports of goods and services. Weak export growth, especially from 2004 to 2009, has led to a deficit on the trade account balance; although latest figures for 2010 show a trade account surplus, due in part to strong commodity prices, improved terms of trade, and lower import demand. The trade deficit was exacerbated by a property market boom that increased housing investment and decreased savings in the economy. A higher exchange rate resulted, encouraging imports and discouraging exports. Borrowing to fund the



Note: *Year ending March. Source: Statistics New Zealand. property boom and to fund the trade account deficit contributed to a marked deterioration of New Zealand's investment account to 2009, as shown in Figure 4.

The current account balance indicates whether a country is a net debtor or creditor to the rest of the world and consists of the trade account balance and the investment account balance. Figure 4 shows New Zealand's current account balance and its components from 1988-2010. It shows that New Zealand's current account has been in deficit over this period. While a current account deficit is not always a bad thing, it does indicate the extent to which a country is accumulating obligations to foreign countries. A surplus shows a country is producing an abundance of goods and services, more than is required to meet its current domestic demands and capital requirements. Current account surpluses are considered more desirable than deficits.

One positive feature on the export front for New Zealand is the increasing demand for high protein food in developing economies, along with the emergence of global food supply constraints. Figure 5 shows that New Zealand's terms of trade declined sharply following the United Kingdom's entry into the European Union but have improved recently.

One option for New Zealand to increase prosperity and match Australia's GDP per capita would be to concentrate on exporting agricultural and other commodities and rely on sustained future increases in commodity prices. However if commodity prices do continue to increase this would still not make a material difference to closing the gap with Australia. To illustrate, even if export





prices for agriculture, forestry, and horticulture doubled, the increase in GDP per capita would be \$4,599, or 23% of the current GDP per capita gap

Commodities are well known for their cycles, and reliance on them would mean New Zealand would continue to be exposed to volatility and price shocks.

No other small, advanced economies have chosen to pursue a strategy concentrating heavily on commodities. Instead, they are focusing on innovation and export of differentiated products and services to grow their wealth. New Zealand already has examples of successful value-added niche businesses such as Tru-Test, HamiltonJet, and F&P Healthcare; the challenge is to create and grow more.

SUMMARY

Labour force participation rates are similar in Australia and New Zealand so do not explain New Zealand's economic underperformance relative to Australia. Government expenditure as a percentage of GDP is larger in New Zealand than Australia, but the difference only explains part of New Zealand's underperformance.

By far the most important driver of New Zealand's economic underperformance compared with Australia is the much lower labour productivity that has persisted and been lamented for many years. Increasing labour productivity in the traded sectors would improve export performance by increasing the volume or value of exported goods and services.

High private debt is also an important issue to address because interest payments have contributed to the large current account deficit. Increasing high value exports would generate income that would reduce the current account deficit, allow repayment of debt, and lift prosperity.



3 LABOUR PRODUCTIVITY

Labour productivity is measured as the economic output generated per hour worked. Labour productivity can be increased by producing a larger quantity of goods or services per hour worked or by receiving higher prices for the output produced.

In conventional modern economic theory, increasing output per worker results from increasing capital per worker and from combining technology, skills, and capital in more effective ways to produce goods and services. Using better technologies, improving skills, increasing the amount of capital per unit of labour, or using capital more effectively, are all ways to lift the quantity or value of output per worker.

More recently, additional drivers of labour productivity have been highlighted. In its publication, Putting Productivity First (Kidd, 2008), the New Zealand Treasury proposed a framework that includes five broad drivers of productivity useful for improving the country's economic performance (pp.6-8). Figure 6 sets out an adapted version of these drivers, described more fully as follows: *Entrepreneurship* (or enterprise) is important because entrepreneurs identify and deliver the innovations that provide productivity improvements; *Innovation* involves generating, adopting, and adapting new ideas using technology to create new businesses and increase profits from existing businesses; *Skills and talent* improve the productivity of previously low skilled labour while improving the ability to innovate and adopt new ideas; *Investment* improves and enlarges the capital stock, is an input to the entrepreneurial process, and increases returns to skill acquisition; *Natural resources*, managed sustainably, increase opportunities and mitigate risk associated with declining availability and resulting cost increases.



FIGURE 6: DRIVERS OF LABOUR PRODUCTIVITY

Source: Adapted from Kidd (2008).

Applying the diagnostic approach to improve productivity requires an understanding of whether improving the quantity or quality of inputs would improve the outcome. Methods used to identify suitable opportunities include international best practice comparisons and looking at what is not working well.

In the following section the five labour productivity drivers will be considered in turn; entrepreneurship, innovation, skills and talent, investment, and natural resources. The emphasis is on understanding how well New Zealand is performing relative to Australia, relative to other OECD countries, and relative to potential.

IMPROVING LABOUR PRODUCTIVITY

Figure 7 demonstrates that New Zealand has a large labour productivity disadvantage relative to Australia across all major sectors of the private economy, apart from property and rental.

Importantly the difference in labour productivity between the countries is not driven by one dominant sector. For example, while mining has high productivity, and requires high value services, it occupies a very small proportion of the workforce so it is not the explanation for Australia's GDP per capita being so much higher than New Zealand's.



FIGURE 7: RATIO OF LABOUR PRODUCTIVITY AUSTRALIA TO NEW ZEALAND, 2008

Note: Ratio above 1.0 Australia more productive, below 1.0 New Zealand more productive Source: OECD; Statistics New Zealand; Australian Bureau of Statistics.

Entrepreneurship

Entrepreneurs are business leaders who initiate or lead ventures; they are the ones who get the profit (or loss) once suppliers of capital and labour have been paid.

New Zealand scores well on measures of entrepreneurship. The Unitec Global Entrepreneurship Monitor 03/04 (Frederick, 2004, pp.12-13) placed New Zealand fifth (out of 41 countries) for the proportion of the adult population engaged in entrepreneurship. New Zealand entrepreneurs also scored well on pursuing overseas markets, ranking first (out of 41) for those who expect to have more than 11% of their customers living overseas (p.20). The World Bank has consistently ranked New Zealand as one of the best countries in the world for the ease of doing business. In 2010 New Zealand is ranked second overall, scoring particularly well on the ease of starting a business, registering property, getting credit, and protecting investors. In the Heritage Foundation and Wall Street Journal (2010) measures of business freedom, New Zealand ranks the highest overall in being easy to start, operate, and close a business. On face value, these results would indicate that all is well for entrepreneurship in New Zealand.

However, such an interpretation would be quite misleading. To see why, consider two types of entrepreneurship. The first type is the domestic small business. Frederick reports that two-thirds of New Zealand entrepreneurs are home based and tend to be 'solo' operators with few employees (p.26). Many of these people are satisfying their desire for independence, to be their own boss, and to have a good lifestyle (p.27). These people are assisted by an environment that makes it easy to start and administer a business.

These small independent businesses are likely to have quite low productivity, even if successful, as they lack professional management and scale. New Zealand's relative abundance of these small businesses is therefore likely to be contributing to low overall relative productivity.

The other type of business where entrepreneurship is important is those established with the intention of achieving international business success. These go-global businesses need teams of managers led effectively, often by entrepreneurs. This second type of entrepreneur must be highly skilled and supported by strong management and governance teams, and if successful they can make a strong contribution to New Zealand's economy.

The dilemma is that while New Zealand has arguably too many small independent business-people called entrepreneurs, it has too few highly skilled entrepreneurs targeting international business success. The shortage means

the product of New Zealand's inventiveness – large research output, inventions, and new business opportunities – is not being converted into international business success.

Entrepreneurship has not been seen as an aspirational career. Frederick (2004) noted, "In New Zealand, the media and the public regard entrepreneurs as dishonest and opportunistic" (p.54) and "Government appears to have no explicit economic policy directed at promoting entrepreneurship, nor do the political parties." (p.8)

Despite worthwhile efforts to encourage and develop entrepreneurs at the University of Auckland and in incubators, business schools, and entrepreneurship competitions around the country, the effort remains fragmented, too small, and under-resourced. While there are ten MBA programmes being offered around the country, not one of these focuses on developing the skills needed for international business success. New Zealand should ensure one MBA provider offers a full-time world class programme focused on international entrepreneurship, establish a large internship programme, and offer many more development opportunities for practicing and aspiring entrepreneurs.

Unfortunately, offering training opportunities for New Zealand entrepreneurs is unlikely to be enough. In a report benchmarking management practices in New Zealand manufacturing firms against the practices in other countries, New Zealand managers were found to over-rate their firms' management performance and as a result "are unable to recognise the potential areas for improvement." (Ministry of Economic Development, 2010, pp.39-40)

Given the substantial challenge of penetrating international markets with new offers, it is concerning that entrepreneurs and associated managers are not keen on training. Both demand for entrepreneurship training and its supply must be increased. Attracting more entrepreneurial migrants would contribute too.



Innovation

Profit potential for a business depends on having a competitive advantage. Advantage may come from having a lower cost position than competing suppliers or being able to offer customers something they value that commands a higher price. Finding those advantages and establishing them within businesses depends on innovation.

In New Zealand innovation is often confused with inventiveness. As a result there is a tendency to think that if R&D output is increased then innovation will increase. Unfortunately for New Zealand, which is quite good at inventiveness, innovation also depends on successful commercialisation of the new way of doing things, and New Zealanders are not so good at this.

The World Economic Forum (WEF) argues that innovation effectiveness is <u>the</u> principal determinant of labour productivity and GDP per capita for advanced economies like New Zealand (Schwab, 2009, pp.7-8).



Figure 8 shows the relationship between the WEF innovation and business sophistication index and GDP per capita for OECD countries. The data follows a curve indicating that a country with a low innovation and business sophistication score can improve GDP per capita by lifting innovation performance but once a score of around 5.0 is achieved further innovation index increases do not add as much.

New Zealand's innovation and business sophistication score is low relative to the scores for many other advanced economies indicating there is great potential to improve innovation, and that doing so would lift economic performance substantially. The figure shows that increasing New Zealand's innovation and business sophistication score to 5.0 could lift GDP per capita by around \$13,000, making a very worthwhile contribution to closing the GDP per capita gap with Australia.

New Zealand's innovation opportunity is explored more comprehensively in the New Zealand Institute publication, 'Standing on the shoulders of science: Getting more value from the innovation ecosystem' (Boven, 2009).

Skills and talent

Education and skills are critical to improving the productivity capacity of an economy (MacCormick, 2008). New Zealand performs comparatively well on several important labour and skill indicators (Kidd, 2008, pp.17-20). Overall, New Zealand's education system is world class (refer NZahead website). Student achievement in secondary education and tertiary education participation rates are among the highest in the OECD. While the labour force participation rate is similar to Australia, New Zealand out-performs Australia on cooperation in labour-employer relations, and has much more flexible wage determination (Schwab, 2009, p.75 & p.239).

However, there are also important deficits that imply worthwhile opportunities for improvement. School completion rates in New Zealand are low relative to OECD countries (20th out of 25) and the school-to-work transition is not working well, so the youth unemployment rate is one of the highest in the OECD³ (OECD, 2009). Research shows that while the proportion of New Zealand adults with very low literacy skills reduced substantially over the decade to 2006, a proportion with low literacy skills persists and there are large adult subpopulations with low numeracy and problem-solving skills (Satherley, Lawes & Sok, 2008, p.4). Around half the adult population have numeracy skills below the minimum considered necessary for full participation in the knowledge society and economy (Satherley & Lawes, 2009, p.8). The ability to make informed judgements and effective decisions regarding the use and management of money is also important with research showing that around one-third (31%) of adults surveyed have low levels of financial knowledge (ANZ-Retirement Commission, 2009, pp.9-11).

In addition, too many skilled New Zealanders leave the country to work and live overseas, contributing to New Zealand having the highest proportion in the

³ New Zealand's share of youth (15-19 years) unemployment out of the total unemployed was ranked second highest in the OECD for 2008. In the March 2010 quarter, 25% of the youth (15-19 years) labour force was unemployed (Statistics New Zealand, Household Labour Force Survey).

OECD (equal with Ireland) of highly skilled people living in other OECD countries (Dumont & Lemaitre, 2005, p.13 & 27).

To grow labour productivity by improving skills Government should improve educational outcomes for New Zealand's most disadvantaged people; manage the school-to-work transition more effectively; improve adult literacy, numeracy, and financial skills; and train more people with valuable skills in short supply such as entrepreneurs, engineers, and scientists.

To make better use of existing skills, the agenda should focus on increasing engagement with the approximately one million New Zealanders living abroad; either encouraging them to bring their skills back to New Zealand or connecting with them to help New Zealand succeed internationally. More academic researchers should be encouraged to conduct research that will improve outcomes for New Zealanders. In addition, Government should become more strategic about immigration, targeting recruitment of people with the specific skills required in New Zealand and getting them established, certified, and employed quickly.

Investment

One important difference between advanced and developing economies is the amount of productive capital available per worker. Workers using larger quantities of more advanced equipment can produce higher value goods and produce more output per working hour.

Figure 9 shows that New Zealand's net capital per worker is low relative to Australia's for all major sectors.



FIGURE 9: NET CAPITAL STOCK PER WORKER, 2008, NZ\$000s

Source: OECD; Statistics New Zealand; Australian Bureau of Statistics.

TABLE 2: SAVINGS AND INVESTMENT POLICIES								
New Zealand	 New Zealand Superannuation Fund scheme invested government budget surpluses to pay for future pensions State Sector Retirement Savings Scheme for public servants Kiwisaver; a voluntary superannuation scheme with employer, employee, and government contributions No tax on capital gains from residential assets 	 Gross savings is 15.8% of nominal GDP (2007) Household net wealth, NZ\$404k (2007) Non-residential net capital stock per worker of NZ\$127k (2008) 						
Australia	 Superannuation Guarantee; a compulsory scheme whereby employers contribute 9% of employees salary (will be increased to 12% by 2019) into a superannuation fund Australian Government Future Fund; an independently managed fund where government deposits its budget surpluses (similar to the New Zealand Super Fund) 50% net capital gains tax on investment properties 	 Gross savings is 22.5% of nominal GDP (2007) Household net wealth, NZ\$710k (2007) Non-residential net capital stock per worker of NZ\$250k (2008) 						

Note: Household net wealth equals total household financial and non-financial assets minus total household financial and non-financial liabilities. Source: National accounts of OECD countries database (2010); Statistics New Zealand; Australian Bureau of Statistics;

The Allen Consulting Group (2007).

In 2008 New Zealand's non-residential (excludes property and rental) net capital per worker was 51% of Australia's (see Table 2). The OECD (Guillemette, 2009, pp.8-10) has identified that low capital intensity is an important reason why New Zealand has relatively low labour productivity. Capital per worker depends in part on policy choices. If policies encourage saving there will be more capital available and if policies encourage investment in productive assets rather than residential housing then capital available per worker will be higher. Table 2 compares New Zealand and Australia's saving and residential investment policies along with results on three important capital measures. New Zealand's savings and investment levels are well below those of Australia.

If New Zealand has insufficient domestic capital available then foreign direct investment (FDI) may help fill the gap. Attitudes towards FDI in New Zealand

have not been very positive following the privatisation experience with some State Owned Enterprises. However, it would be a serious mistake to conclude from those experiences that FDI is inherently bad for New Zealand.

Multinational corporations on average have higher quality management than domestic New Zealand firms so their presence can lift the performance of New Zealand firms by "advancing knowledge diffusion and building of skills leading to enhanced business innovation across partnering organisations" (Ministry of Economic Development, 2010, p.41). Domestic exporting manufacturers have recorded productivity gains as a result of increased foreign ownership presence elsewhere in the supply chain (lyer, Stevens & Tang, 2010, p.1 & 15). Multinationals also bring valuable products and services that might otherwise not be available.

Further, New Zealand firms targeting international markets frequently benefit from foreign investment that may provide skills, market access and connections, along with capital. There is a balance required here. Foreign investors may be simply acquiring future value growth that would otherwise be available to New Zealand investors because there is insufficient capital for expansion in New Zealand. Alternatively, they may be gaining access to future value because New Zealand business leadership is insufficiently skilled or well-connected so the business needs 'smart money'. Foreign investment needs to be assessed on a case-by-case basis but New Zealand should ensure foreign investment is readily available for New Zealand businesses expanding into international markets.

When Israel introduced policy to develop its venture capital industry it required partners from overseas investors to encourage value-adding connections (Senor & Singer, 2009, p.166; Avnimelech & Teubal, 2002, pp.19-22). The New Zealand venture investment fund model did not have this feature. Given the importance of channel access, governance, and access to follow-on investment to venture success, that additional connectedness may have contributed to the greater success of the Israeli venture capital firms.

FDI may also be valuable because it fills a gap. Savings and tax policies have contributed to a need for catch-up investment in productive assets in New Zealand. If there are valuable opportunities then FDI may allow them to proceed when otherwise they would not.

To summarise, New Zealand needs to increase capital availability for productive activities. Changes to tax policies that will encourage saving and productive investment will help but more needs to be done to encourage savings. Capital availability can be increased by increasing saving, shifting investment towards productive and exporting businesses, and encouraging growth of beneficial FDI.

Natural resources

New Zealand is well-endowed with natural resources, including water, biodiversity, land, energy, and minerals.

The search for new sources of economic growth, observation of Australia's mining success, and New Zealand's availability of mineral resources has triggered a debate about developing these. The debate is informed by a discussion paper (Ministry of Economic Development & Department of Conservation, 2010) proposing to develop mining on land set aside for conservation.

After public consultation, the Government has decided not to remove any land from Schedule 4 of the Crown Minerals Act and will instead add 12,400 hectares to what is already protected. It will undertake aeromagnetic surveys of non-Schedule 4 land in Northland and the West Coast of the South Island to identify prospective mining areas that may exist. However broader questions remain as to the potential for resource-based development, and how New Zealand should assess the opportunities.

Minerals provide a good example. Mineral resource development opportunities are attractive for a country with full employment if:

- The resource has competitive advantage. For mining that usually means a large, high grade ore body close to the surface with ready access to transport. For other kinds of resources the drivers of competitive advantage are different, but the common feature is that there must be a sufficiently large margin between the expected price realised for the resource and the cost of extraction, processing, and delivery.
- The net benefit for New Zealanders from developing the resource is worthwhile and material. The combination of royalties, high wages, and sales of goods and services, should produce benefits that exceed both the costs of development and any spill over effects onto other sectors of the economy.
- *Environmental costs are acceptable.* Environmental considerations include clean-up costs, local and global pollution, tourism outcomes, and reduced resource availability for future generations.

To illustrate, an Australian mine may be attractive because it has a competitive resource, is locally owned, and has low environmental impact. A New Zealand mine with the same mineral may be unattractive because the resource is poor quality, it would be developed using foreign capital inputs and labour alone, there is a very low royalty or tax opportunity, it would produce unacceptable local pollution, and it would have high remediation costs.

The criteria for attractive resource development reveal that it is not possible to say that New Zealand should or should not develop mineral (and hydrocarbon) resources in general; decisions should instead be made on a case-by-case basis within a policy framework that ensures the three criteria are examined carefully.

New Zealand's agriculture and other primary production provide resources that can be used to produce differentiated value-added products. Examples include: antimicrobial manuka honey, merino wool clothing, branded wine, and possum-fur rugs. The resources differ from dairy products and meat in that few other countries are able to compete because the resources are not widely available. Having a unique and diverse environment with low population density means these types of differentiated resources can make a worthwhile economic contribution.

SUMMARY

Examination of the five drivers of labour productivity reveals many worthwhile directions for productivity improvement, with improvement opportunities for each driver. That is good news because each opportunity offers a step towards closing the GDP per capita gap with Australia. However, there is no single silver bullet to lift labour productivity.

Raising the level of entrepreneurial activity and encouraging training for international business success should be a core part of the labour productivity agenda.

Innovation policies have changed a lot recently. There is now strong commitment to improving inventiveness and focusing research efforts where there is potential for commercial returns but more needs to be done to convert inventiveness into productivity gains.

Despite efforts to lift skills in the workforce, New Zealand continues to perform relatively poorly in several important aspects of talent. Many improvement efforts are under way but here too there is potential to do a lot more.

Tax and savings policies have not encouraged productive investment sufficiently. Despite some recent positive steps, much more can and should be done to increase savings and to encourage investment in productive activities.

Natural resources offer potential too, but opportunities should be carefully assessed to ensure they are in New Zealand's interests.

New Zealand is fortunate that there is great potential for improving performance on the productivity drivers.

4 FOCUS ON DIFFERENTIATED GOODS AND SERVICES EXPORTS

WHY FOCUS EFFORTS?

Lifting labour productivity would improve New Zealand's GDP per capita, and the previous section argues there are many worthwhile opportunities that should be pursued.

Two principles of strategy are important when deciding where to re-allocate resources. The first is to focus efforts where they can have the greatest effect.

The second is that a strategy is a plan to win. For a strategist it is not enough to make improvements at the margin. For New Zealand, winning economically means rejoining the world's wealthiest countries and closing the GDP per capita gap relative to Australia.

The combination of these two principles implies that interventions that make a big difference should be focused and sufficient. In turn that implies the interventions should be based on a sound diagnosis of the opportunity. This section surveys the sectors of the New Zealand economy to identify where the effort should be focused.

As a small trading nation, New Zealand's prosperity depends on exports.

A country's export options are strongly influenced by its endowments. With low population density, temperate climate, reliable water supply, and agricultural know-how, New Zealand is well positioned to produce dairy products. Singapore is never going to be competitive in pastoral agriculture so it participates in sectors where it can be competitive, such as financial services and machinery.

Each industry sector has a unique combination of different features, challenges, and opportunities, and specific success factors that countries must have to be successful. Sector strategies are complicated but in this paper they will be simplified to draw out conclusions for focusing economic development effort.

Before considering the export sectors individually it is helpful to understand New Zealand's merchandise export portfolio. Figure 10 shows the relative size of each sector (based on the share of total workers) along with the productivity and output growth of each sector.

The three sectors shown: tourism, agriculture, and manufacturing (which includes a small sub-group of advanced or high-technology manufacturing with much higher than average productivity), are the main exporting sectors. As separate data is not available, export and domestic productivity are combined. While tourism is based on FTEs, for manufacturing and agriculture only employee numbers are available. As a result the true output per hour value for



FIGURE 10: LABOUR PRODUCTIVITY, OUTPUT GROWTH, EXPORT SECTORS, 2008

Notes: Mining excluded. Data includes export and domestic. Tourism based on FTEs but manufacturing and agriculture based on number of employees. Source: Statistics New Zealand; Ministry of Tourism; Australian Bureau of Statistics.

these two sectors is likely to be somewhat higher than shown and vary based on the portion of part-time employees. However these three sectors have average productivity approximately equal to the overall New Zealand private sector average (\$42). While tourism is growing rapidly the other two sectors are growing only slowly.

The most important point to note is that none of the three sectors attains Australia's average labour productivity of almost NZ\$74 per hour worked (see Figure 2). Therefore, increasing the size of any or all of these sectors, with the current average sector economics, will not close the labour productivity gap.

Commodity agriculture

Agriculture has long been the mainstay of New Zealand's trade and in 2009 accounted for 48% of total merchandise exports (including the manufacturing of agricultural food products). New Zealand's performance in agriculture and other primary industries has been assisted by research efforts to lift productivity and to develop new opportunities.

An important constraint on agricultural productivity is downward pressure on prices received by New Zealand exporters because of competition from producers in destination markets, who may benefit from tariffs and other forms of protection. Many countries subsidise their agricultural producers for food security reasons, remembering blockades and starvation in the Second World War. Surplus production from those countries leads to low priced product being sold in New Zealand's destination markets; e.g. for dairy products competition from EU countries is important. New Zealand also competes with lower labour

cost suppliers such as South America, Africa, Asia, and Eastern Europe where investment and output are rising so competition will increase further (Proudfoot, 2010, p.5).

These competitive pressures mean the labour productivity of agriculture is very close to the average labour productivity for New Zealand as a whole, and therefore much lower than the labour productivity required to substantially lift GDP per capita. Simply growing agriculture with existing average productivity will not change much, especially given that there is not a lot of additional land available. Agricultural land is being lost to urbanisation and additional land that is available is likely to be lower quality.

However, the outcome remains uncertain because demand for the protein products New Zealand produces is expected to grow as population grows and developing countries become wealthier. Globally, food prices have risen substantially in recent years and that trend is likely to continue. With the exception of land under forests and reserve land, almost all the land on earth that is suitable for agriculture is already in production. Climate change is expected to further constrain food supplies, especially in developing countries.

In 1990 New Zealand had around five hectares of agriculture and forestry land per person; today it has less than three hectares per person.⁴ Population growth will reduce that further. Declining productive land per person is one reason that dependence on agriculture cannot continue, low agricultural productivity is the second, and the opportunity from innovation in ICT, niche manufacturing goods and services, and other medium and high technology activities is the third.

For New Zealand agriculture to continue to be successful, the most important requirement is to increase productivity so commodity products remain competitive. Without competitive commodity production the viability of agriculture would be threatened, along with export revenues and the potential for differentiated products derived from agriculture.

Differentiated agriculture

With a foundation of competitive commodity production, agriculture can be developed in three directions; value-added products, industry products and services, and intensification.

The idea that New Zealand should add value to primary production before export has been around since at least the 1980s but the results have been disappointing so far, with a large proportion of agricultural output still exported in commodity form, and few value-adding exporting firms that have become big winners.

⁴ View at http://www.nzinstitute.org/index.php/nzahead/measures/agricultural_and_forestry_land_per_capita/

New Zealand's agricultural technology can be exported to other countries in the form of products and services; for example, electric fences from Gallagher. A few companies have built successful businesses but again overall the results have been modest.

The third direction for development of New Zealand's agriculture is to intensify. With world food supply increasingly constrained, and a high value being placed on New Zealand's quality and brand, there are opportunities to increase output by intensifying land use. Many intensification options will present challenges in business development and market entry so strategies that assist with valueadding product and service businesses would also be valuable for intensification.

There is a fundamental difference between selling the commodity agricultural and other primary products New Zealand has historically sold and selling value-added and differentiated products. Selling commodities requires being able to produce a high quality product and agreeing a price in a well-informed and competitive market. Selling value-added and differentiated products and services requires much stronger marketing and sales skills. So far New Zealand's export performance with differentiated products and services has been relatively disappointing. It is important to observe that challenges facing internationalising differentiated businesses based on agriculture are similar to those facing ICT and niche manufacturing businesses.

In summary, continuing to drive productivity performance to maintain competitiveness in agricultural commodities is critical. Depending on how global agricultural markets evolve, productivity may be essential to defend margins in the face of low cost competition, or it may be valuable to lift margins to take full advantage of growing demand from consumers whose incomes are increasing. It will also be valuable to build successful new international businesses based on value-added products, industry products and services, and intensification if New Zealand firms can overcome the obstacles that have restricted success in the past.



Tourism

Tourism to and within New Zealand includes activities such as accommodation, restaurants, motor vehicle hiring, transport, travel agencies, tour services, adventure experiences, and entertainment.

Tourism is New Zealand's second largest export earner and has grown rapidly in recent years. In 2008 almost a quarter (24%) of New Zealand's export earnings came from tourism, compared to less than one seventh (13%) in Australia. Tourism contributes 10% towards New Zealand's GDP compared to only 4% for Australia.

Tourism productivity per hour worked in Australia at NZ\$58 per hour is higher than New Zealand's at NZ\$47 per hour. However for both countries the productivity of tourism is low relative to the Australian average of NZ\$74 per hour.

The low rate of productivity is because both countries compete with low labour cost countries for tourists, and because some of the activities in tourism, for example service in hotels and restaurants, require relatively fewer skills than activities in other sectors.

New Zealand invests almost 9% of its workforce in tourism. As tourism has lower than desired productivity simply growing the share of tourism in the economy will not improve overall productivity enough. Despite that, having a large tourist industry can be helpful for New Zealand because it can help sustain exports, and so the trade and current accounts, and because it provides jobs for many low-skilled workers.

However, growing tourism without lifting productivity is a second best solution. It would be better for New Zealand's GDP per capita to retrain the workers, and employ them to grow export sectors that have higher than average productivity. The preferred strategy for tourism therefore is to increase productivity.



Natural resources

Natural resource endowments sometimes make important contributions to national wealth. However, Denmark, Singapore, and Israel demonstrate that a country does not have to have minerals, oil, or gas to become wealthy.

Australia's mineral wealth is often cited as an important reason for Australia's higher GDP per capita. Being very well endowed with minerals, Australia has around five times the share of the workforce in mining and quarrying as New Zealand. Australia's mining and quarrying workers are much more productive than New Zealand's workers too.

Despite that, only 1.2% of Australia's workforce is engaged in mining and quarrying so as a small export sector – albeit with high terms of trade, high impact on incomes within that sector, and demand for services that also have high productivity – the impact on Australia's overall GDP per capita is modest.

The New Zealand Institute calculations show that if New Zealand increased its share of output from mining and quarrying and raised productivity to Australia's level in 2008, this would have improved New Zealand's GDP per capita by only \$1,833, accounting for only 9% of the 2008 GDP per capita gap.

Developing natural resources may be valuable but resource development is not essential for lifting GDP per capita performance, as demonstrated by the many resource-poor wealthy countries, nor would it be sufficient to close the gap with Australia.

Manufacturing

One important reason for the slow growth of New Zealand's exports is that they are concentrated in primary commodity products that have grown more slowly (The Boston Consulting Group, 2004, pp.72-73).

Denmark provides a powerful illustration of the potential for a small country to trade in high value-added manufactures. New Zealand and Denmark have similar small populations yet the New Zealand Institute calculations show that Denmark's GDP per worker (NZ\$170,386) is more than twice New Zealand's GDP per worker (NZ\$83,842).

Productivity per hour worked in agriculture is not very different between New Zealand (NZ\$40) and Denmark (NZ\$50). But in New Zealand the productivity of agriculture is around 83% of the average for the whole economy (NZ\$48) whereas Denmark's agricultural productivity is only around 47% of Denmark's overall average productivity (NZ\$106). Despite outperforming New Zealand in agriculture, agriculture is not the powerhouse of the Danish economy.



FIGURE 11: EXPORTS PER CAPITA, 2009, NZ\$000s

Source: OECD; Statistics Denmark; Statistics New Zealand; Reserve Bank of New Zealand.

The fundamental driver of Denmark's higher GDP per capita is shown in Figure 11. Denmark and New Zealand have almost identical food and agriculture, beverages and tobacco exports per capita. However, New Zealand uses a greater share of its total workforce (6.8%) than Denmark (2.6%) to achieve the same result.

Excluding food and agriculture, beverages and tobacco exports, Denmark has almost five times New Zealand's exports per capita and the difference is mainly in manufactured goods, spread across a wide range of activities. Denmark demonstrates that a small country can be successful without a single large successful technology business such as Finland's 'Nokia'. However, Denmark, Finland, other Scandinavian countries, and the Netherlands, have all leveraged their natural resources, some with a heavy agricultural basis, encouraging innovation within traditional sectors, while also over time growing high value, high-tech industries (Smith, 2006, pp.35-40).

New Zealand's manufacturing labour productivity is the same as that of agriculture, at NZ\$40 per hour worked. In comparison, Denmark's manufacturing labour productivity is almost 90% higher than New Zealand's, at NZ\$75 per hour worked. Denmark has more of its workforce in manufacturing (15.2%) compared to New Zealand (12.6%).

The foundation of prosperity for a small economy is to export goods and services that are highly valued in other countries. Denmark has succeeded at that mission and performs well on GDP per capita. New Zealand has not succeeded and performs relatively poorly.
Manufacturing includes a wide range of activities, including production of goods for the domestic market as well as for export. As a category, the label manufacturing does not quite capture the opportunity for New Zealand. Value-added primary products, exports of high value niche services, software, and intellectual property sales all fit within the class of exports that New Zealand would grow if it was to follow a Danish-style strategy.

The ideal sectors to develop would have three important characteristics: high growth, high export potential, and high value jobs. Denmark's manufacturing labour productivity shows that high value jobs are available. New Zealand's own experience with internationalising technology companies confirms that conclusion; the average revenue per employee for the 100 largest technology exporters is \$285,000 (Technology Investment Network, 2009, p.34).

Contrast this with commodity agriculture where trade growth has been much slower and labour productivity is lower than the national average.

There is compelling evidence that New Zealand can succeed in ICT and niche manufacturing goods and services; many successful and growing businesses demonstrate the potential. Further, New Zealand has many of the requirements for success and can develop the ones it does not have.

A well-educated population, tertiary education and research infrastructure, inventiveness, improving transport and communication links, and a supportive environment for businesses provide the foundations. But the foundations are not enough; there is insufficient aspiration and lack of a sufficient focus.

Aspiration is missing partly because there is not yet sufficient agreement that ICT and niche manufacturing should be the priority sectors. As yet there is no consensus that agriculture and natural resource development will be insufficient, nor that New Zealand can build a prosperous economy based on innovation and exporting value-added goods and services.

Examining New Zealand's experience so far is helpful to understand the potential. For at least the last decade New Zealand has been encouraging development of innovation-based businesses with some success. ICT and niche manufacturing goods and services businesses are growing and exports have become significant. The latest Technology Investment Network report estimates that the top 100 technology companies in New Zealand accounted for \$5.1b (p.6) about 10% of goods and services exports in 2009.

Domestic sectors

Even though it is critical to concentrate on developing differentiated exports, the domestic sectors are also important. If productivity is low in domestic sectors they drag down the national average and use resources that could be available for more productive export activities.

Figure 12 shows the productivity and output growth for the major domestic sectors in New Zealand. As noted previously, output includes both export and domestic for all sectors, and the true output per hour is likely to be somewhat higher than shown and vary based on the portion of part-time employees in the sector.

Labour productivity is low in construction, hotels and restaurants, and wholesale and retail. Finance and property sectors have relatively high productivity and the high output growth in finance suggests there are opportunities for New Zealand to improve its exports through providing specialist analysis and advice.

The construction sector contributes nearly 5% of GDP (Building and Construction Sector Productivity Taskforce, 2009, p.4). Construction provides infrastructure to support economic development and generates employment for tens of thousands of unskilled, semi-skilled, and skilled workers. In New Zealand, population growth from net inward migration has led to demand for housing and infrastructure which has contributed to GDP growth.

Yet the construction sector, which employs around 8% of workers, combines low productivity and low productivity growth. The poor sector performance



FIGURE 12: LABOUR PRODUCTIVITY, OUTPUT GROWTH, DOMESTIC SECTORS, 2008

Notes: Energy excluded. Data includes export and domestic. Based on number of employees, not FTEs. Source: OECD; Statistics New Zealand; Australian Bureau of Statistics.

is most obvious in comparison with Australia (see Figure 13), where a slightly higher proportion of workers are engaged in the sector but both their productivity and productivity growth is much higher, noting as before that the true output per hour is likely to be somewhat higher than shown because of the portion of part-time employees. Performance in construction matters; it has been estimated that a 10% efficiency gain in construction improves GDP by 1% (Nana, 2003, p.3). Lifting construction productivity should be a priority.

In August 2008, a Building and Construction Taskforce was established by the Department of Building and Housing to investigate ways to improve sector productivity and skill levels, and to improve approaches to procurement of construction projects.

The Taskforce recommended a range of initiatives designed to improve the skill and expertise levels among the sector's workforce, including management skill and capability. The Taskforce acknowledged that, while the government can better support the sector, the construction sector itself needs to take greater ownership and leadership of the skills and procurement issues. Productivity in construction should remain a priority until acceptable outcomes are achieved.

There are many relatively small firms in the domestic sectors, probably because it is very easy to start a business and New Zealanders like the independence and lifestyle. However, smaller firms on average are less productive so there would be a productivity benefit from lifting firm size, potentially through policies to encourage aggregation.



FIGURE 13: CONSTRUCTION LABOUR PRODUCTIVITY, 2008

Note: Based on number of employees, not FTEs. Source: OECD; Statistics New Zealand; Australian Bureau of Statistics.

SUMMARY

There are many opportunities in agriculture, natural resources and tourism, and these should be pursued where competitive advantage, high labour productivity, and high value jobs are available. But ICT and niche manufacturing, along with value-added and differentiated goods and services based on primary production is where New Zealand should invest most aggressively.

New Zealand is unusual among advanced economies in focusing its export strategy on agriculture and tourism. Yet, on average, those sectors are not performing well on labour productivity. Although valuable opportunities for higher than average labour productivity do exist, for example specialised, niche dairy products, generally the productivity potential of commodity agriculture and tourism is low. Productivity potential for differentiated products and services is higher and that is where New Zealand should focus to lift prosperity.

The capabilities and capacities that are required for success in ICT and niche manufacturing are strongly aligned with the requirements for success in valueadded and differentiated primary sector opportunities. Therefore pursuing a strategy that emphasises differentiation should include differentiated primary exports too.

Sector strategy needs to provide sufficient jobs to employ the workforce, sufficient volume of exports, and mix changes to grow higher value exports. The best way to achieve this is by growing the high value opportunities (e.g. ICT and niche manufacturing goods and services), shifting resources from low productivity sectors to higher productivity sectors (e.g. from retail/wholesale to ICT and niche manufacturing goods and services), and addressing pockets of poor productivity (e.g. construction). Table 3 illustrates the implied development directions for important sectors of the economy.





TABLE 3: SECTOR PRESCRIPTIONS							
Sector	Current position	Prescription					
Agriculture	 A large part of New Zealand's export revenue Little available land for expansion Potential for intensification but environmental issues must be managed well Potential for increased value-add but requires successful innovation 	Increase value per hectare and per worker					
Tourism	 Useful to provide jobs for low skilled people Tourism labour productivity is much lower than Australia's overall average 	Increase value offered and raise prices					
Natural resources	 Potential opportunities but economic attractiveness depends on margin available to New Zealanders 	Grow selectively					
ICT and niche manufacturing	Material, with high value jobs, and growingSubstantial further potential	Lift performance and grow aggressively					
Construction and other domestic sectors	Effort required to lift productivity and sector performance	Address low productivity and shift resources to high productivity sectors					

5 INTERNATIONALISATION

Successful advanced economies become wealthy by exporting value-added, differentiated, and technologically advanced products and services. It seems obvious that New Zealand should pursue the same strategy. Despite efforts to date and some examples of success, results so far have been disappointing.

One possible response to the poor outcomes from efforts to grow differentiated exports would be to increase efforts to expand primary production and tourism. That strategy is limited by the insufficient productivity of existing primary and tourism sectors, and a growing population that must be supported by a limited land resource.

The second option, recommended by Guillemette (2009, p.37-38) of the OECD and being followed by the Government, aims to avoid unnecessary policy disadvantages by establishing policy settings that are better than those in competing OECD countries in as many domains as possible. Improving regulation, the performance of the public sector, and adjusting tax settings are examples. New Zealand has already established a competitive position on many of these dimensions and the potential benefits are limited by the relatively small gaps to top performers, in those few areas where New Zealand is not already in the top ten.

A third option, also being followed by Government, is to increase New Zealand's inventiveness and to focus inventiveness on commercial opportunities. Implicitly, that strategy is to increase the number of firms succeeding internationally by increasing the number of firms trying.

All three options can be pursued concurrently.

These three strategies are all helpful and collectively they will make a worthwhile difference, but they are not likely to be sufficient to close the gap with Australia. Much more effort is required by New Zealand to establish the basis for success of wealthy small countries; that is having large exports of differentiated products and services.

The point is important. If strategy is about winning and winning implies having a large volume of differentiated exports, then New Zealand will still lose if reliance on primary exports and agriculture continues. It is like growing the economy by increasing labour force participation, fuelling a property investment boom, or promoting inward migration. It helps in the short run but does not solve the fundamental problem. So what are the binding constraints that need to be addressed?

SIZE AND DISTANCE

As a thought experiment, imagine a country that is remote, has become wealthy by harvesting the fruits of the land (and water) and shipping them off in bulk, has idyllic landscapes, and whose citizens enjoy an enviable climate and lifestyle. The people in such a country might be regarded by others as friendly but a little provincial and complacent.

The inhabitants of such a country, when faced with gradual relative economic deterioration might be slow to recognise the emerging issue and less than vigorous in developing responses. They might also find it difficult to compete in a world where intense competition has raised performance standards.

Add to the mix self-reliance plus a desire for independence, and layer on top strong reinforcement of the values of individualism and self-interest, and those people might find it difficult to recognise that they need to work together, giving up some short term individual benefits, to achieve better long term outcomes for all. They might also be less willing than people in some other countries to support changing from activities they have been traditionally good at, i.e. production of commodity exports where low cost and market access are sufficient, to new differentiated exports where different skills in management and marketing are needed. The country, of course, is New Zealand.

New Zealand's size and distance from major markets is a well recognised obstacle. Many authors have pointed out that New Zealand's small size and distance from large global markets make it difficult for businesses to succeed (Guillemette, 2009; McCann, 2009; Procter, 2010; Skilling & Boven, 2007). Authors such as Deardorff (1998) and Nicoletti et al. (2003) have found that distance to markets adversely impacts merchandise trade. However, Battersby & Ewing show that while New Zealand exports have performed relatively poorly compared to the OECD average, once size and distance are accounted for, actual trade is similar to what is expected (2005, p.17).

New Zealand's growing businesses have a small domestic market and are much smaller than businesses in many other countries when they begin to sell offshore. Further, the markets entered are likely to be a long way away, making the international leap even more difficult because of the time and cost involved.

One conclusion that might be drawn is that New Zealand cannot be successful in manufacturing because our domestic market is not large enough to support a world scale manufacturing operation and because the markets served are too far away. It would then follow that New Zealand should aim to grow commodity exports and tourism and satisfy itself with prosperity towards the bottom of the OECD rankings.

The alternative conclusion is that New Zealand should specialise in segments of high-value and areas of manufacturing and related sectors where a small distant country can be successful. Success is more likely where the costs of shipping are small because the exports are 'weightless', for example software services, or where small specialised markets allow relatively small New Zealand companies to be world leaders. These sectors might be described as information, communications and technology (ICT), and niche manufacturing goods and services.

So while size and distance is well recognised as an issue, what is not yet well recognised is the scale of the obstacles that must be overcome for successful internationalisation so New Zealand firms can thrive on the world stage. Companies are small when they internationalise, and they try to launch new products into distant new markets, which is difficult even for large established firms. They fail often, or take a long time to succeed. Slow progress consumes capital and erodes competitive position against firms from other countries that develop more quickly. Efforts so far made to address these factors have been insufficient.

Using a simple presence (tick) versus absence (cross) analysis, Figure 14 identifies where other countries have implemented policies to help domestic businesses overcome the size and distance barrier challenge. New Zealand has not pursued the range of policy initiatives that other countries have, and all of these countries have been more successful in growing differentiated exports.

South Korea is a useful comparator nation where, as the case study shows, Government aggressively pursued export growth by applying country and situation-specific policies to lift performance, rather than relying only on the

	New Zealand	Singapore	South Korea	Denmark	Australia	Israel
Financial support	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
R&D tax credits / exemptions	×	x	\checkmark	\checkmark	\checkmark	\checkmark
Skill development programmes	x	\checkmark	x	×	\checkmark	\checkmark
Creation of public enterprises / industrial parks	x	×	\checkmark	\checkmark	×	\checkmark

FIGURE 14: INTERNATIONALISATION POLICIES

Notes: Tick indicates strong presence of policies in country. Cross indicates minor or no presence of policies found. Source: South Korea, Denmark, and Singapore assessments made by scanning government websites. New Zealand, Australia, and Israel sourced from Durufle (2010). market. From 1990 to 2005, South Korea's real GDP per capita grew at a compound rate of 4.8% per annum, the second highest growth rate in the OECD during this period, and its ranking among OECD countries improved from 23rd to 21st. Over the same time period, New Zealand's real GDP per capita grew at a compound rate of 2.0% per annum and its ranking among OECD countries declined from 18th to 20th.

CASE STUDY: SOUTH KOREAN EXPORT POLICY

South Korea is an example of where an active industrial policy since the 1960s directed at growing exports has been highly successful. Since the 1980s, merchandise exports per capita have grown at a compound rate of 10% per annum, to the point where South Korea is now the ninth largest exporting country in the world, according to the CIA World Factbook (2009). Export production focuses on electronics, automobiles, ships, machinery, petrochemicals, and robotics. Smith (2003) identified 21 major export promotion-oriented industrial policy interventions that had been used by South Korea up to 2002 to drive export growth and substantially raise its income. Noting that only some of the policies were in effect in any one industry at any one time, these policy interventions are summarised below (pp.139-141).

- 1. Currency undervaluation.
- 2. Preferential access to imported intermediate inputs needed for producing exports, with strict controls to prevent abuse.
- Targeted infant industry protection as a first stage before launching an export drive. South Korea has had high dispersion of effective rates of protection even with a relatively low average.
- 4. Tariff exemptions on inputs of capital goods needed in exporting activities. (This is a price incentive, while preferential access (#2) is based on quantity restriction).
- 5. Tax breaks for domestic suppliers.
- 6. Domestic indirect tax exemptions for successful exporters.
- 7. Lower direct tax on income earned from exports.
- 8. Accelerated depreciation for exporters.
- 9. Import entitlement certificates (exemptions from import restrictions) linked directly to export levels. Korea has long maintained an extensive list of items generally prohibited for import, including both luxury goods and import substitution targets. Profitable exemptions from this prohibition have often been available for firms exporting specified goods having low profit margins.
- 10. Monopoly rights granted to the firm first to achieve exports in targeted industries.
- 11. Subsidised interest rates for exporters.
- 12. Preferential credit access for exporters in selected industries, including automatic access to bank loans for the working capital needed for all export activities. Medium and long-term loans for investment are rationed and often available only to firms meeting government export targets and pursuing other requested activities.
- 13. Reduced public utility taxes and rail rates for exporters.

- 14. A system of export credit insurance and guarantees, as well as tax incentives for overseas marketing and post shipment export loans by the Korean Export-Import Bank.
- 15. The creation of free trade zones, industrial parks, and export-oriented infrastructure.
- 16. The creation of public enterprises to lead the way in establishing a new industry.
- 17. Activities of the Korean Traders Association and the Korea Trade Promotion Corporation to promote Korean exports on behalf of Korean firms worldwide.
- 18. General orchestration of sector-wide efforts to upgrade the average technological level, through use of a new generation of machinery.
- Government coordination of foreign technology licensing agreements, using national bargaining power to secure the best possible terms for the private sector in utilising proprietary foreign technology.
- 20. The setting of export targets for firms (since the early 1960s). Firms set their own targets, which may be adjusted by the government.

Since 2003 South Korea has established a number of cities as Free Economic Zones to encourage foreign investment. The strategy was supported by a range of incentives from lower taxes and regulations, key supporting infrastructure, and administrative support through a special planning office within the Ministry of Finance and Economy.

Smith (2003, p.146) argued, "As a preliminary conclusion, the case of South Korea suggests that it is a combination of industrial policies addressed to specific market failures, and consistent with underlying market forces (as well as the local political economy) that promotes industrial development." However a caveat was also noted, "Without proper attention to incentives (for both market and rent-seeking activities), these same industrial policies can prove counterproductive."

Performance at the internationalisation stage by New Zealand firms has been weak. There is a shortage of entrepreneurs, experienced directors and well-trained managers, of capital, and of connections. Efforts to lift innovation effectiveness have focused mainly on inventiveness, not on internationalisation.

New Zealand's response to the size and distance constraint has been weak for four reasons:

- There has not been a consensus that establishing differentiated export businesses is the fundamental requirement to re-join the most prosperous advanced economies. The old commodity export strategy does not work anymore;
- 2. The importance of the internationalisation obstacle has been underestimated and the market failure in overcoming it has not been recognised;
- Economic liberalisation has created a bias toward reliance on market forces, and reluctance to intervene or 'tilt the playing field';
- 4. Lack of a strong and clearly articulated value proposition sufficient to secure resourcing.

In Section 3, numerous opportunities to improve labour productivity were highlighted. These opportunities could be pursued broadly within the economy and that would be valuable. However, Section 4 argued that growing differentiated exports will be necessary for New Zealand to rejoin the most prosperous OECD countries. That implies the priority to lift labour productivity should be on differentiated exports. The argument in this section implies further focus of improvement efforts on the internationalisation stage of business development.

Internationalisation success can be improved by other efforts, beyond the drivers of labour productivity, and the remainder of this section highlights these enabling opportunities.

Infrastructure

Infrastructure plays an important role in enabling an economy to function and develop well. Quality infrastructure, such as roads, rail, ports, airports, and telecommunications, reduces the effective distance between regions to create a highly interconnected economy. This same infrastructure is also vital in supporting international connectedness for firms.

New Zealand scores relatively poorly on measures of infrastructure development, placing 35th in the world (Schwab, 2009, p.238) with the quality of roads, railways, and electricity ranking worse than the OECD average. However the 2004 audit of the Ministry of Economic Development's infrastructure stock-take project was more positive, concluding that "at a national level, New Zealand's infrastructure is in reasonable condition" but acknowledging there "are significant local and sector-specific issues" (PricewaterhouseCoopers, 2004, p.2). The report contained limited comparisons between New Zealand and other countries.



Efforts to improve New Zealand's infrastructure, including establishment of a National Infrastructure Unit within Treasury, adoption of a National Infrastructure Plan, and additional funding to improve state highways, rail, and the national grid are positive.

Connectedness via the Internet is increasingly significant for building successful international businesses. Cloud computing enables resources, information, and software to be shared by computers and other devices on demand, at any time of the day or night. With the substantial capacity and capabilities available via the cloud, access is important and efforts to improve access are valuable. Government funding to accelerate the roll-out of fast broadband throughout the country is helpful, along with the potential offered by a private proposal for a new fibre cable linking New Zealand, Australia, and the United States delivering unconstrained international bandwidth to everybody (Morgan, 2010). Low cost, fast, ubiquitous Internet access is good for day-to-day business. Its provision to domestic premises will help reduce traffic congestion as more people will telecommute, and will allow domestic and international business development to occur from homes.

Improving sea and air ports, e.g. shipping frequency, flight frequency, and locations served, will also improve the competiveness of New Zealand businesses.

Exchange rate policy

The floating exchange rate is a mixed blessing. If New Zealand was only going to be a dairy product exporter the floating exchange rate would be beneficial because it provides a natural hedge, smoothing out the effects of dairy price changes. When commodity exports are strong the exchange rate appreciates and the outcome is as it should be – the high value of the New Zealand dollar is earned by the fundamentals of our export position. When commodity exports are weak the dollar depreciates so the country earns more New Zealand dollars for each unit of volume exported. Earnings in New Zealand dollars are smoothed.

The outcome for exporters of differentiated products and services is not so good. Exports are usually priced in the currency of the destination market so the consequence of the exchange rate rising and falling for non-commodity exporters is that earnings fluctuate. A government inquiry into the future monetary policy framework in New Zealand found the exchange rate had been "volatile and subject to prolonged periods of under and overvaluation, potentially constraining growth in both the value and the volume of New Zealand's exports" (Finance and Expenditure Committee, 2008, p.14). Volatility of earnings is very harmful for small growing firms and causes financial distress that makes it even

more difficult for them to succeed. Uncertainty creates risk that discourages investment, so policies to reduce exchange rate volatility or its impacts are needed to grow differentiated exports successfully.

Supporting sectors

There is an ongoing debate about whether or not governments should select and support certain industries, sectors, or firms to become 'winners'.

Industry policy involves encouraging the development of the kinds of economic activity that are regarded as more valuable. Deciding to employ industry policy requires two conclusions: there is an opportunity to improve economic outcomes that will deliver a net benefit; and the intervention will produce the required result without unacceptable adverse effects.

Opportunities arise at a number of levels within the economy; sectors, subsectors, clusters, and firms. At the sector level, for example agriculture, governments can make assessments based on understanding the market opportunity and the status of inputs to production; skills, capital, level of technology, resources. For example, New Zealand's natural resource endowment suggests it can be successful in agriculture.

At the next level down, for a sub-sector, for example Health IT, the potential is different. Research examining export sub-sectors has shown that countries whose endowments equip them with potential to participate in a sector find themselves with positions in sub-sectors via a process that cannot be managed by governments (Rodrik, 2004b, pp.10-12).



The process starts with a firm that identifies a success formula and demonstrates success. Imitators emerge and sector growth commences. The success formula cannot be identified ex ante, so there is little point in trying to pick the sub-sectors to compete in without evidence of firm success (Hausmann & Rodrik, 2003, pp.28-32).

The industry policy response should be to wait until a sub-sector shows signs of success and then to provide assistance by removing obstacles to further success so that the sub-sector can flourish.

Supporting cluster development

Clusters are geographic concentrations of similar businesses or of businesses that form part of the same value chain. They may compete in some areas of their businesses (e.g. for talent and customers) while having common interests in other parts (e.g. sector-specific infrastructure, accessing scale in production).

New Zealand compares unfavourably on measures of cluster development. In 2000, New Zealand ranked 35th in the world for cluster development (Porter, 2001, p.42), but by 2009 had slipped to 56th (Schwab, 2009, p.239).

When Professor Michael Porter from Harvard Business School assessed New Zealand's competiveness in 1990 and again in 2001, he argued that New Zealand would benefit greatly from improving the development of clusters (2001). Following a six month pilot in 2001/02 a Cluster Development Programme led by New Zealand Trade and Enterprise (NZTE) was launched in 2002/03 but an evaluation of the programme in 2006 found it to be "too small, too thinly spread and its objectives and outcomes were insufficiently defined to support true cluster development" (Ministry of Economic Development, 2006). The programme was abandoned noting that regions were in a better position to prioritise and make decisions that suit their needs which may include cluster funding. There are some clusters in New Zealand, including the film and related technology cluster in Miramar and the food cluster near Auckland airport but there is no cohesive policy framework supporting cluster development. The establishment of an Auckland Council provides an opportunity to develop and implement cluster policy across the greater Auckland region.

Supporting firms

At the firm level there are several options for governments; to offer assistance evenly to all firms, to wait for firms to begin to succeed and then help them to grow more rapidly, or to pick firms that seem likely to succeed and help those. The last of these options is not attractive. It is possible to identify opportunities where firms can succeed but it requires expertise that is not usually available within government, and is high cost to purchase. In response, governments who wish to provide assistance to individual firms are best to identify emerging firms that have achieved revenues, have competitive advantage, and have growth potential, and then invest in removing obstacles and accelerating growth.

It may be helpful to think about the approach to helping firms as classifying firms into three types: 'invest', 'respond', and 'avoid'. 'Invest' firms should be those that are already demonstrating potential for success and are in priority subsectors. 'Respond' firms should be those that may not yet be successful or may be in non-priority sectors. If those firms have a promising business proposition and competent management and governance then they should be supported too. Firms in non-priority sectors with limited prospects and poor leadership teams should be encouraged to improve their situation or disband.

Such an approach means that public assistance can be focused where it can have the best effect.

If firms are going to be assisted it is important to be clear about how value will be added. Firms that already have all the capabilities, access, and resources required for success should be left to get on with it. There is little point in making available information firms can find for themselves at low cost, or providing introductions that firms can secure for themselves. There may be high value in helping firms overcome resource constraints, or providing public good benefits such as standard distribution contracts, or accommodation in enclaves in target markets where local networks can be established and accessed.

If public money is invested in firms it should be done with great care because there are many examples around the world where direct investment has gone wrong because of insufficient competence or inappropriate behaviour. Successful investment is not as easy as it looks; when the reason for government investment is to access positive externalities it is easy to neglect the importance of skilled commercial decision-making.

Governments around the world do assist firms to succeed and New Zealand is no exception. However, in New Zealand the antipathy towards picking winners has led to an approach of making a small amount of help available as widely as possible. The previous Government's R&D tax credit was made available for all firms doing R&D, and NZTE's matching grants for marketing expenditure are available to all, provided certain conditions are met. Government's current approach is to be more selective, which will concentrate scarce resources where they can provide the greatest benefit.

SUMMARY

New Zealand has a greater internationalisation challenge than other small trading nations and has done less than others to address it. If the issue had been recognised sooner, and remedial action had followed, the country would be in a much stronger position now.

The good news is that the problem can be fixed. Abundant differentiated resources, adequate education, strong inventiveness and business formation, and New Zealand's strong international reputation provide the potential for success of differentiated products and services.

Examples of successful internationalising firms demonstrate that success is possible. Increased efforts to develop entrepreneurs, to train managers and others, and to ensure adequate capital supply are possible. Building stronger international networks and business connections is possible also.

Ensuring infrastructure will support internationalising businesses, finding ways to overcome the effects of exchange rate volatility, supporting sectors and firms demonstrating some level of success and skills, and supporting cluster development are areas of opportunity.



CONCLUSION

New Zealand needs to improve its economic performance to provide the goods and services consumption, wealth, and social services that people want. Improved economic performance allows businesses to attract and retain talented people and investment capital, and provides capacity for resilience in difficult times.

Prior to the early 1970s, New Zealand maintained relatively high incomes from exporting high margin primary and agriculture goods such as furs, whale oil, meat, and wool to the United Kingdom. Concentration of exports on meat and wool set the scene for an economic shock when the United Kingdom entered the European Union in 1973. Agricultural subsidies in response to this shock helped to maintain export earnings but led to a public debt crisis.

Reforms to stabilise the economy attempted to diversify exports but were not sufficient to lift New Zealand's relative GDP per capita, which fell from above the OECD average (118%) in 1970 to below the average in 1990 (86%). Since then efforts to improve GDP per capita, including growing exports of commodity products and attempting to improve innovation, have had disappointing results relative to those achieved by competing OECD countries.

The reason for those disappointing results is clear. The economy has performed poorly because commodity exports and tourism are not a sufficient basis for prosperity, and New Zealand has failed to successfully internationalise sufficient goods and services businesses.

Growing labour force participation, attracting immigrants and tourists, and borrowing to fuel a housing boom have all contributed to recent increases of GDP per capita but they have not addressed that fundamental issue. The three strategies being pursued currently: expanding commodity output, improving policy settings, and lifting inventiveness, will improve outcomes too but they will not be sufficient either, because they do not address the fundamental problem.

The diagnostic approach to economic development advocates looking beyond economic liberalisation for opportunities to lift economic performance that are country-specific and situation-specific. Applying the diagnostic approach for New Zealand reveals several ways that New Zealand has chosen a different path from most other small advanced countries and encountered problems as a result. For example, New Zealand has failed to:

- Sufficiently encourage savings and encouraged residential housing investment so capital for productive activities and internationalising businesses is scarce;
- Sufficiently encourage innovation and entrepreneurship;

- Remain competitive with the most advanced countries in developing the enablers of differentiated export success; clusters, scientists and engineers, etc;
- Ensure firms are well prepared and well-equipped to overcome the internationalisation obstacle.

For each of these failures, economic liberalisation has encouraged New Zealand's policy makers to rely almost exclusively on the market. That exclusive reliance is not evident in the policies chosen by other OECD countries.

In strategic thinking it is important to distinguish improvement from success. Improvements may make outcomes better but the overall outcomes may still remain unacceptable. Success means that the outcomes targeted are achieved.

Other small countries are becoming prosperous by selling differentiated goods and services so New Zealand must find a way to join them or find another strategy for success. The transition required is shown in Figure 15.



New Zealand's small size and remote location means the effort required to make the transformation is greater than the effort required in other countries. Persistence in relying on economic liberalisation alone as the paradigm for economic management has led to committing less effort than other OECD countries.

Many of the points made in this paper have been made previously. For example the New Zealand Institute has identified the importance of international

commercial success (Skilling & Boven, 2006a, 2006b, 2006c, 2005). This paper goes further in arguing for a focus of effort on the internationalisation step for differentiated exports and for a material reallocation of resources.

A strategy is a reallocation of resources to achieve a valued goal. If the goal is important and the strategy is sound then the reallocation should be material; sufficient to change the outcome.

If New Zealand's internationalisation challenge was recognised as important then the country's resources would be mobilised to ensure success. Wars are important. When soldiers are sent to war they are provided with the best possible equipment and training because it is important to win wars. But New Zealand does not have a single world class university degree focused on training entrepreneurs to internationalise businesses; instead our entrepreneurs learn on the job. There are very few opportunities to learn international sales best practice. Capital for expansion is scarce. New Zealand's major agency for supporting internationalisation puts most of its effort into making introductions. The results reflect the lack of effort. Competing countries do much more.

A material reallocation for New Zealand is not a few tens of millions of dollars. Government's debt is low relative to the average for OECD countries and much lower than that in Greece and Italy. New Zealand's private debt is high, fiscal prudence is important, and global economy risks persist, so caution is advisable when increasing government debt. But consider a thought experiment. Imagine New Zealand was prepared to invest strategically to improve internationalisation success and willing to commit to increasing the government debt to GDP ratio by 20% over a period of five years. That would be equivalent to spending an additional \$8 billion per year. That would be a material reallocation of resources.

The point is not that New Zealand should allocate any particular amount but that it should commit enough resource to change the aggregate internationalisation outcome from failure to success. Examples of successful international businesses selling differentiated goods and services, availability of opportunities, potential to improve the drivers of labour productivity, and the absence of a credible alternative strategy combine to imply that overcoming the internationalisation barrier should be New Zealand's economic strategy priority.

Our conclusion that supporting internationalisation success should be the economic strategy priority should be tested and debated. If the conclusion survives that scrutiny, then a material reallocation of resources should follow to transform the economy and provide a step change in GDP per capita.

The specific actions, resource reallocations, and policies required to lift internationalisation performance remain to be identified and agreed. Research

exploring those tactics more fully is in progress by the New Zealand Institute and will be the subject of a subsequent publication.

Efforts to expand commodity output, improve policy settings, and lift inventiveness are worthwhile and should be continued. But New Zealand must do much more if it is to achieve the goal of matching Australia's GDP per capita by 2025.

While internationalisation is the main opportunity, the overall economic strategy proposed is to:

- Focus economic development effort on high value export sectors selling differentiated products and services;
- Prioritise labour productivity effort to improve performance of these high value export sectors with growth potential;
- Reallocate resources from low productivity domestic activities into high productivity export activities and sectors;
- Focus on the internationalisation stage of the business development process and ensure New Zealand firms can overcome the size and distance barrier successfully;
- Continue to defend agriculture competitiveness to sustain export revenues and provide a sound platform for differentiated exports based on primary production;
- Apply sufficient resource.



GLOSSARY

Current account

Records the credits and debits of a country to the rest of the world over a period of time.

The credit side of this account records the export of goods and services, investment income earned and, under 'transfers', the offsetting entries to resources received by residents without payment required.

The debit side records the import of goods and services, investment income paid and, under 'transfers', the offsetting entries to resources supplied to foreign residents without payment required. – *Statistics New Zealand Glossary*

Current account balance, deficit, or surplus

A current account 'balance' is the credits less debits for a particular item, or group of items. A negative sign represents a deficit, while a positive sign represents a surplus.

For the Balance of Payments, certain balances are calculated as follows. Balance on merchandise trade; this is merchandise exports (credits) less merchandise imports (debits). Balance on services; this is services exports (credits) less services imports (debits). Balance on invisibles; this is the credit sum of services, investment income and transfers, less the debit sum of services, investment income and transfers. Balance on current account; this is the sum of the balance on merchandise trade and the balance on invisibles. – *Statistics New Zealand Glossary*

Economic growth

Yearly increases in Real GDP, often referred to as volume increases in GDP, expressed as a percentage.

Exports

Goods and services that have been produced domestically and are sold to a foreign country. In the context of this paper, the meaning of the term exports is extended (informally and for convenience) to include revenues of New Zealand owned businesses with foreign domiciled business units, and of New Zealand owned businesses that produce goods and services in foreign countries (e.g. China and India) and then sell them to foreign markets (e.g. UK and USA).

Foreign direct investment (FDI)

Inward FDI is the purchase, by non residents, of 10 percent or more of the total equity of a New Zealand enterprise. Loans from overseas investors to New Zealand firms where those investors hold a significant equity stake are also counted as FDI. The idea underlying the 10 percent threshold is to capture foreign investment in domestic enterprises, where the purpose of the investment is to obtain or sustain a lasting interest in the enterprise and exercise a significant degree of influence on its management. – *Iyer et al.*, (2010, p.2)

Gross domestic product (GDP)

A measure of economic activity in a country. It is calculated by adding the total value of a country's annual output of goods and services.

GDP = private consumption + investment + public (government) spending + the change in inventories + the value of exports - the value of imports.

GDP per capita

GDP divided by the total population within a country. GDP per capita is the measure most frequently used to represent the economic well-being of a country's residents. – *Statistics New Zealand Glossary*

Gross debt

Gross debt consists of all liabilities that require payment of interest and/or principal by the debtor to the creditor at a date or dates in the future. New Zealand's overseas debt is a gross measurement of debt held. – OECD Glossary of Statistical Terms, Statistics New Zealand Glossary

Innovation

Is the dynamic process of creating and introducing new ideas and new ways of doing things. Innovations may be incremental (small, stepwise improvements), major (substantial improvements), or radical (new lines of business, paradigm shifts). – *Ministry of Economic Development*

Internationalisation

The business process of planning and implementing a domestic firm's efforts to sell and distribute products and services in foreign markets.

Labour force participation rate

The proportion of the working-age population who are either employed or unemployed (looking for or available for work).

Labour productivity

Output per unit of labour input. - OECD Glossary of Statistical Terms

Merchandise trade (exports or imports)

Goods that add to or subtract from the stock of material resources of a country, as the result of their movement to and from that country. Includes goods leased for a year or more. Excludes goods for repair.

- Statistics New Zealand Glossary and Technical Notes

Merchandise trade does not include trade in services.

Net debt

Total liabilities (gross debt) less the value of any assets held. – *Statistics New Zealand Glossary*

In the context of this paper, net debt refers to debt accumulated by private individuals.

Net capital stock

The sum of the written-down values of all fixed assets still in use within a country. It can also be described as the difference between gross capital stock and consumption of fixed capital. – *OECD Glossary of Statistical Terms*

Nominal GDP

Is GDP expressed in current dollar prices.

OECD

The Organisation for Economic Co-operation and Development brings together governments from 31 countries to share and coordinate policy, problems, and good practice. For over 40 years the OECD has provided a comprehensive range of comparable statistics, economic, and social data.

Purchasing power parity (PPP)

The rate of currency conversion that equalises the purchasing power of different currencies by eliminating the differences in price levels between countries. In their simplest form, PPPs are simply price relativities which show the ratio of the prices in national currencies of the same good or service in different countries. – *OECD Glossary of Statistical Terms*

Real GDP

GDP expressed in constant prices i.e. in the dollar values of a particular year, which is known as the base period. Real GDP is nominal GDP after adjusting for inflation.

REFERENCES

ANZ-Retirement Commission (2009, June) '2009 Financial Knowledge Survey-Summary', research conducted by Colmar Brunton, available at <u>www.financialliteracy.org.nz</u>

Avnimelech, Gil & Teubal, Morris, (2002, October) 'Venture Capital Policy in Israel: A Comparative Analysis & Lessons for Other Countries', Research paper. The School of Business Administration and Department of Economics, The Hebrew University, Jerusalem.

Battersby, Bryn & Ewing, Robert, (2005, June) 'International Trade Performance: The Gravity of Australia's Remoteness', Treasury Working Paper 2005-03, Canberra: Commonwealth of Australia.

Boven, Rick (2009, December) 'Standing on the shoulders of science: Getting more value from the innovation ecosystem', The New Zealand Institute Discussion Paper 2009/1.

Building and Construction Sector Productivity Taskforce (2009) 'A Modern Efficient and Productive New Zealand Built Infrastructure Industry', Report.

Central Intelligence Agency (2009 est) 'The World Factbook', retrieved July 1 2010, from <u>https://www.cia.gov/library/publications/the-world-factbook/</u> <u>rankorder/2078rank.html</u>

Deardorff, Alan (1998) 'Determinants of Bilateral Trade: Does Gravity Work in a Neoclassical World?', in Frankel, J. (Ed.), The Regionalization of the World Economy, (pp.7-32) National Bureau of Economic Research, Inc, University of Chicago Press.

Dumont, Jean-Christophe, & Lemaitre, Georges, (2005) 'Counting Immigrants and Expatriates in OECD countries: A New Perspective', OECD Social, Employment and Migration Working Papers No. 25.

Duruflé, Gilles (2010, May) 'Government involvement in the venture capital industry: International comparisons', Canada's Venture Capital & Private Equity Association with financial support from The Government of Ontario.

Finance and Expenditure Committee Report (2008, September 18) 'Inquiry into the future monetary policy framework' Forty-eighth Parliament, presented to the House of Representatives retrieved July 9 2010 from http://www.parliament.nz/en-NZ/PB/SC/ Documents/Reports/1/1/d/48DBSCH_SCR4210_1-Inquiry-into-the-future-monetary-policy-framework.htm

Frederick, Howard H. (2004) 'The Unitec Global Entrepreneurship Monitor 03/04: Toward High Growth Enterprise in New Zealand', Unitec New Zealand's Centre for Innovation & Entrepreneurship Research Report Series, Vol. 3, No. 1. Auckland: Unitec New Zealand.

Guillemette, Yvan (2009) 'Structural Policies to Overcome Geographic Barriers and Create Prosperity in New Zealand', OECD Economics Department Working Papers No. 696, OECD Publishing, available at <u>www.oecd.org/eco/working papers</u>

Hausmann, Ricardo, Pritchett, Lant, & Rodrik, Dani, (2004, July) 'Growth Accelerations', Harvard University, John F. Kennedy School of Government Working Paper Series RWP04-030, National Bureau of Economic Research Working Paper 10566.

Hausmann, Ricardo, & Rodrik, Dani, (2003, April) 'Economic Development as Self-Discovery', retrieved June 28 2010, from <u>citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.116</u>

lyer, Kris, Stevens, Philip, & Tang, Kam Ki, (2010, July 1) 'Foreign and Domestic Ownership: Evidence of Productivity Spillovers from New Zealand Firm Level Longitudinal Data', presented at the New Zealand Association of Economists 2010 Conference, Concurrent Session 5, retrieved July 12 2010, from <u>http://www.nzae.org.nz/</u> <u>conferences/2010/Papers/Session5/lyer_et_al_Foreign_and_Domestic_Ownership.pdf</u>

Kidd, Neil (2008, April) 'Putting Productivity First', New Zealand Treasury Productivity Paper 08/01.

MacCormick, John (2008, April) 'Working Smarter: Driving Productivity Growth Through Skills', New Zealand Treasury Productivity Paper 08/06.

McCann, Philip (2009) 'Economic geography, globalisation and New Zealand's productivity paradox', New Zealand Economic Papers, Vol. 43, No. 3, pp.279-314, New Zealand Association of Economists, Abingdon UK: Taylor & Francis.

Ministry of Economic Development (2010, April) 'Management Matters in New Zealand – How does manufacturing measure up?', Findings from the New Zealand Management Practices and Productivity global benchmarking project, research conducted by the University of Technology Sydney as part of a world-wide study led by the London School of Economics Centre for Economic Performance.

Ministry of Economic Development (2006) 'Cluster Development Programme: Fact Sheets on Evaluations Released 12 May 2006' Research, Evaluation and Monitoring Team, retrieved July 1 2010, from <u>http://www.med.govt.nz/templates/</u> <u>MultipageDocumentPage 19934.aspx</u>

Ministry of Economic Development & Department of Conservation (2010, March) 'Maximising our Mineral Potential: Stocktake of Schedule 4 of the Crown Minerals Act and beyond', Discussion Paper.

Morgan, Sam (2010, March 11) quoted in 'Entrepreneurs reveal broadband vision' Business News, Television New Zealand Limited, retrieved July 9 2010, from <u>http://tvnz.</u> <u>co.nz/business-news/entrepreneurs-reveal-broadband-vision-3405778</u>

Nana, Ganesh (2003, August) 'Assessment of the Economic Impact of Efficiency Improvements in Building and Construction', Business and Economic Research Limited (BERL) Report to BRANZ Inc., Wellington: BERL.

Nicoletti, G., Golub, S., Hajkova, D., Mirza, D., & Yoo, K.Y., (2003) 'Policies and International Integration: Influences on Trade and Foreign Direct Investment', OECD Economics Department Working Papers, No. 359, OECD Publishing.

Organisation of Economic Co-operation and Development (2009) 'Education at a Glance 2009: OECD Indicators' available at <u>www.oecd.org/edu/eag2009</u>

Porter, Michael E. (2001) 'New Zealand Competitiveness: The Next Agenda', Presentation to the 'Catching the Knowledge Wave' Conference, Auckland, August 3 2001.

PricewaterhouseCoopers (2004, January) 'Ministry of Economic Development Infrastructure Stocktake: Infrastructure Audit', retrieved July 1 2010 from <u>http://www.med.</u> <u>govt.nz/templates/MultipageDocumentTOC</u> 9018.aspx

Procter, Roger (2010) 'Towards an Updated Economic Development Strategy for New Zealand', Ministry of Economic Development Occasional Paper, Forthcoming in 2010.

Proudfoot, Ian (2010) 'KPMG Agribusiness Agenda: The big opportunities and challenges facing New Zealand agriculture. Reflections on the views of industry leaders', retrieved June 11 2010, from http://www.kpmg.com/NZ/en/IssuesAndInsights/ArticlesPublications/Pages/Agribusiness-Agenda.aspx

Rodrik, Dani (2004a, August) 'Growth Strategies*', retrieved June 11 2010, from http://www.dagliano.unimi.it/media/rodrikbackgroundpaper.pdf

Rodrik, Dani (2004b, September) 'Industrial Policy for the Twenty-First Century', retrieved June 28 2010, from <u>citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.111.7348</u>

Rodrik, Dani (2005) 'WIDER Annual Lecture 8: Rethinking Growth Strategies' UNU World Institute for Development Economics Research.

Rodrik, Dani, & Rosenzweig, Mark R. (Eds.), (2010) 'Preface: Development Policy and Development Economics: An Introduction', in Handbook of Development Economics, Vol. 5, North-Holland, pp.xv-xxvii.

Satherley, Paul, & Lawes, Elliot, (2009, August) 'The Adult Literacy and Life Skills (ALL) Survey: Numeracy Skills and Education in New Zealand and Australia', Wellington: Comparative Education Research Unit, Ministry of Education.

Satherley, Paul, Lawes, Elliot, & Sok, Saila, (2008, March) 'The Adult Literacy and Life Skills (ALL) Survey: Overview and International Comparisons', Wellington: Comparative Education Research Unit, Ministry of Education.

Schwab, Klaus (Ed.) (2009) 'The Global Competitiveness Report 2009-2010', Geneva: World Economic Forum.

Senor, Dan, & Singer, Saul, (2009) 'Start-up nation: The Story of Israel's Economic Miracle', Council on Foreign Relations Book, First Edition, New York: Twelve, Hachette Book Group.

Skilling, David, & Boven, Danielle, (2007, March) 'So far yet so close: Connecting New Zealand to the global economy', The New Zealand Institute Discussion Paper 2007/1.

Skilling, David, and Boven, Danielle, (2006a, July) 'The flight of the Kiwi: Going global from the end of the world', The New Zealand Institute Discussion Paper 2006/1.

Skilling, David, and Boven, Danielle, (2006b, August) 'Developing Kiwi global champions: Growing successful New Zealand multinational companies', The New Zealand Institute Discussion Paper 2006/2.

Skilling, David, and Boven, Danielle, (2006c, November) 'Competing to win: An external strategy for a changed world', The New Zealand Institute Discussion Paper 2006/3.

Skilling, David, & Boven, Danielle, (2005, December) 'Dancing with the stars? The international performance of the New Zealand economy', The New Zealand Institute Discussion Paper 2005/4.

Smith, Keith (2006, May) 'Public Policy Framework for the New Zealand Innovation System', Ministry of Economic Development Occasional Paper 06/06.

Smith, Stephen C., (2003) 'Case Studies in Economic Development' 3rd Edition, George Washington University, Department of Economics, a supplement to Todaro, M. and Smith, S., Economic Development, 8th Edition, Boston, MA: Addison-Wesley.

Statistics New Zealand (2009) 'Tourism satellite account: 2009', retrieved June 11 2010 from the Ministry of Tourism research website, <u>http://www.tourismresearch.govt.nz/Data--Analysis/Economic--Satellite--Data/Tourism-Satellite-Account-/Pivot-Tables/</u>

Stiglitz, Joseph, Sen, Amartya, & Fitoussi, Jean-Paul, (2009) 'Report by the Commission on the Measurement of Economic Performance and Social Progress', Commission established February 2008 by the President of the French Republic, Nicholas Sarkozy.

The Boston Consulting Group (2004, May) 'Export Development and Promotion: Lessons from Four Benchmark Countries', Report jointly commissioned by the Ministry of Economic Development & Ministry of Foreign Affairs and Trade, retrieved June 28 2010, from http://www.med.govt.nz/upload/63634/export-development.pdf

The Conference Board (2010, January), 'Total Economy Database', retrieved June 11 2010 from http://www.conference-board.org/data/economydatabase

The Heritage Foundation & Wall Street Journal, (2010) '2010 Index of Economic Freedom: Executive Highlights', retrieved June 28 2010, from http://heritage.org/index/

The World Bank, IFC, & Palgrave MacMillan, (2009) 'Doing Business 2010: Comparing Regulation in 183 Economies', Washington, DC: Author.

Technology Investment Network (2009) 'TIN100 Industry Analysis: 2009 New Zealand Company Survey', 5th Edition, NZTE and Ernst & Young Commissioned Report.

The Allen Consulting Group (2007, August) 'Australia's National Saving Revisited: Where do we stand now?' Report to Investment & Financial Services Association.

Williamson, John (1990, April) 'What Washington Means by Policy Reform', in Williamson, J. (Ed.), Latin American Adjustment: How Much Has Happened? Washington DC: Institute for International Economics, retrieved July 8 2010 from http://www.iie.com/publications/papers/print.cfm?researchid=486&doc=pub

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