BNZ Insights

April 2011

Treasury Productivity Papers

Up to this point our search to find factors generally considered as contributing to the poor rate of growth in income per capita/labour productivity in New Zealand has been restricted to the major global comparisons of economies. Now we turn our attention to the series of papers released by NZ Treasury in 2008 examining what they consider to be the key drivers of productivity growth. The papers can all be found at the link in the Reference section at the end of this paper.

We have not set out to summarise each paper in terms of describing the importance of each subject tackled, linkages with productivity growth, policy implications etc. Instead we have searched simply for identification of factors considered to be road blocks to faster productivity growth in the New Zealand economy. That is we have undertaken the same exercise as was applied in our examination of the many international ranking surveys.

We start with the first two papers…
Putting Productivity First
New Zealand Treasury Productivity Paper 08/01
April 2008

New Zealand's Productivity Performance
New Zealand Treasury Productivity Paper 08/02
April 2008

Treasury group their productivity research around what they consider to be five main drivers and emphasise the role international connections play across these areas.

- Enterprise – Entrepreneurs identify and realise new market opportunities, create investment opportunities and drive innovation.
- Innovation - Innovators generate, adopt and adapt new ideas and create investment and entrepreneurial opportunities.
- Skills – Skills enhance labour's contribution to growth, improve the economy's ability to innovate and adopt new ideas and increase investment opportunities.
- Investment - Investment improves and enlarges the capital stock, is an input in the entrepreneurial process and increases the returns to skill acquisition.
- Natural Resources - Sustainable resource management increases the opportunities and mitigates the risks associated with the increasing cost and declining availability of natural resources and with consumers' growing demand for environmentally sustainable products.

This internationalisation role is emphasised because research by Treasury and the OECD suggests some 75% of the gap between per capita income in New Zealand and the OECD can be explained by our small size and distance from markets. The latter places a limit on vital interaction between businesspeople, researchers, and capital suppliers which is not so present in other countries which are physically located more closely together. It also tends to limit the competitive boost to local firms from imports which have to overcome transport-related costs to be competitive. That is, distance tends to lock resources in the country into activities more efficiently done overseas and those resources then do not become available for more profitable uses elsewhere. The former factor of small size means it is difficult for firms to achieve economies of scale and gain from specialisation.

From the first Treasury paper in their productivity series we can glean the following comments which give us insight into the sort of things driving their policy developments.

Although there are low barriers to entry to businesses in most sectors of the economy there are some sectors which are dominated by a small number of firms. Sectors typically cited as falling into that category include building materials, supermarkets, and telecommunications. The problem with this is that with competition low the incentive to innovate and boost productivity is low, prices tend to be higher than would otherwise be the case and the range of goods and services available to customers including their timeliness will tend to be restricted.

Less easy to discern is the meaning behind the following comment in the second Treasury paper.
"… the corporate structures of a few large and economically significant firms may be sheltering them from capital and corporate control market pressures, to varying degrees…"

This is not the same as saying a sector is dominated by a small number of players but that certain companies are structured in such a way that market pressures leave them not much affected. It is not clear what this means though the fourth paper in the Treasury series reviewed below may shed some light.

As highlighted elsewhere research and development is low by global standards though this is largely a reflection of low business sector spending and not government R&D expenditure.

Perhaps correlating with business concerns expressed in the World Competitiveness Report Treasury note that NZ has one of the lowest rates of participation in education or training for the 15-20 year age group. That is, not enough young people for whatever reason continue learning in an active manner beyond the school leaving age.

Relevant to the recent reduction in subsidies for childcare provided in centres with more than 80% of staff holding approved qualifications, Treasury note "There is increasingly strong evidence that the greatest gains over the long term will come from improving the quality of education in the early years, and from targeting support to disadvantaged and at-risk children." Perhaps this helps explain why when discussing potential welfare reforms requiring beneficiaries to actively seek work the Finance Minister in early-February noted that this can only reasonably be expected if increased provision is made for provision of childcare services for those beneficiaries.

"Productivity gains over the long term will come from improving the quality of early years' education, and from targeting support to disadvantaged and at-risk children. But this needs to be followed up by ongoing engagement in quality education and training both in school and after young people enter the workforce."

That is, more reallocation of funding in the early childcare sector away from those who can afford care toward those who need it in order to enter the workforce.

Treasury note the age-old issue regarding linking the skills firms demand now and in the future with the training offered by tertiary institutions. In addition "New Zealand has a reasonably strong academic research base but there remains a low level of commercialisation of innovations." The issue here is how to make research relevant to business demands and continue the research and implementation interaction over longer periods of time than simply the delivery of one-off research findings to a business audience.

Treasury note "…two intermediate macroeconomic variables may be impacting on investment patterns and levels: comparatively high real interest rates and large, real and nominal, exchange rate cycles." Policy changes cannot reasonably affect these two problems in the short or even medium term and changing them will require effort over time directed particularly at changing private sector attitudes toward saving which being low in New Zealand tends to produce high interest rates.

"New Zealand has shallow equity and bond markets and firms have limited access to venture capital." This issue has appeared in other surveys and there is no sign of capital availability improving recently.

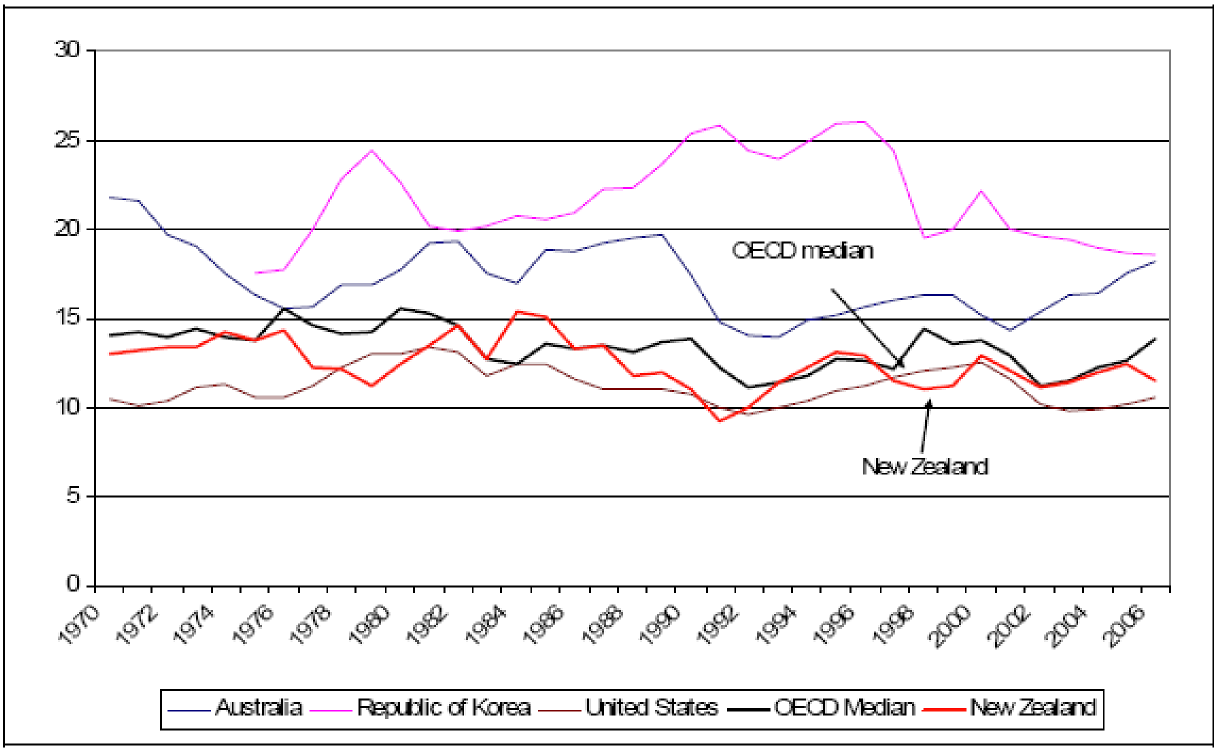
"New Zealand's relatively small domestic market limits the extent to which firms can exploit internal economies of scale, benefit from product market competition and gain from specialisation." This is simply an enunciation of something one cannot change.

Investment, Productivity and the Cost of Capital: Understanding New Zealand's "Capital Shallowness"
New Zealand Treasury Productivity Paper 08/03
April 2008

This third paper in the Treasury Productivity series looks at the role of investment in driving productivity growth in the New Zealand economy.

New Zealand has a low level of business investment compared with the OECD average.

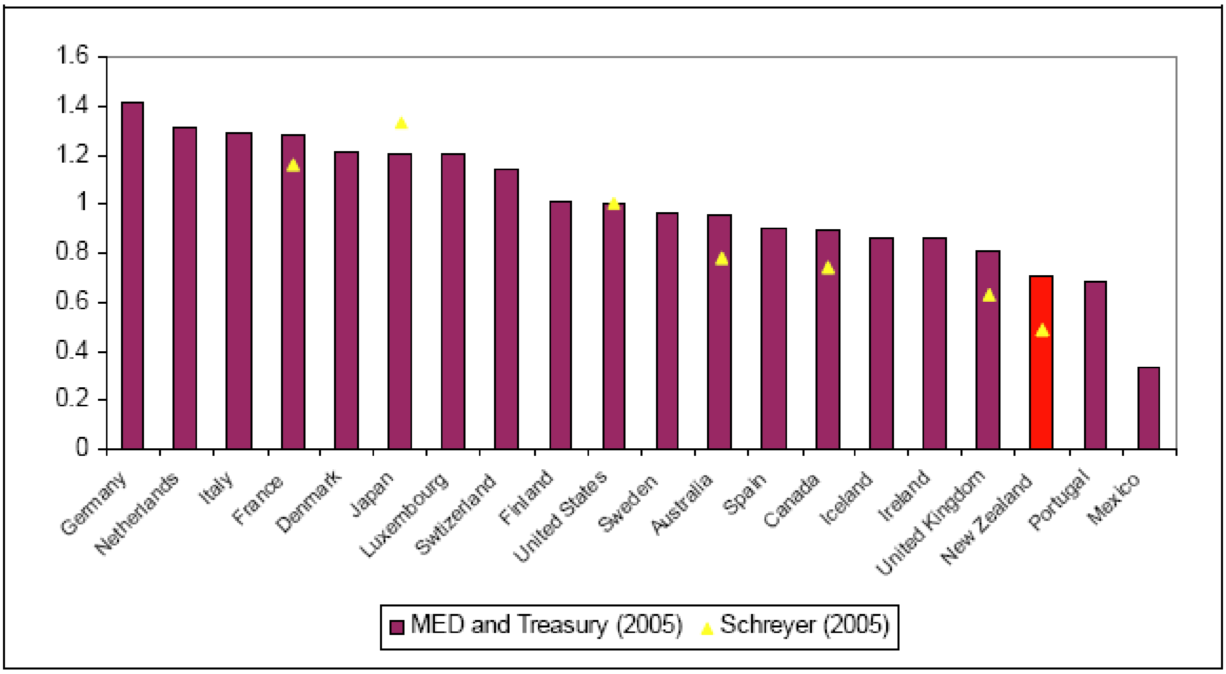
Figure 3: Business investment as a share of GDP 1970 to 2006



Source: OECD, Economic Outlook 82 Database.

As a result NZ has a low level of capital intensity, that is capital stock available per employee.

Figure 4: Capital Intensity — OECD Countries in 2002



The cost of capital appears to be a factor in retarding investment in NZ and expansion of the capital base, with that extra cost best seen by a comparison of real interest rates between NZ and other economies.

Factors contributing to the high cost of capital include

- Low domestic savings perhaps influenced by volatility in the macroeconomy (exchange rate volatility and long length of cycle for example), uncertainty regarding the regulatory environment for investments, and lack of knowledge about market conditions.
- A high risk premium caused by high external debt and perhaps the remoteness of New Zealand.
- The taxation system.

In addition investment may be retarded by the fall in the terms of trade from the early 1970s which has reduced investment in the export sector where evidence suggests the return to investment is greater than to investing in the non-traded part of the economy.

One key theme coming through this Treasury report is that the low capital stock is partly caused by the low level of productivity in New Zealand and therefore raising productivity will spur more investment and combined these two factors will lift economic growth and incomes.

Another less strong but still present theme is that agglomeration of economic activity tends to spur higher levels of investment and New Zealand's only real opportunity for achieving that sort of growth comes from facilitating the development of Auckland as a world class city.

Enterprise and Productivity: Harnessing Competitive Forces
New Zealand Treasury Productivity Paper 08/04
April 2008

This fourth paper in the Treasury productivity series looks at the role of enterprises in driving productivity growth.

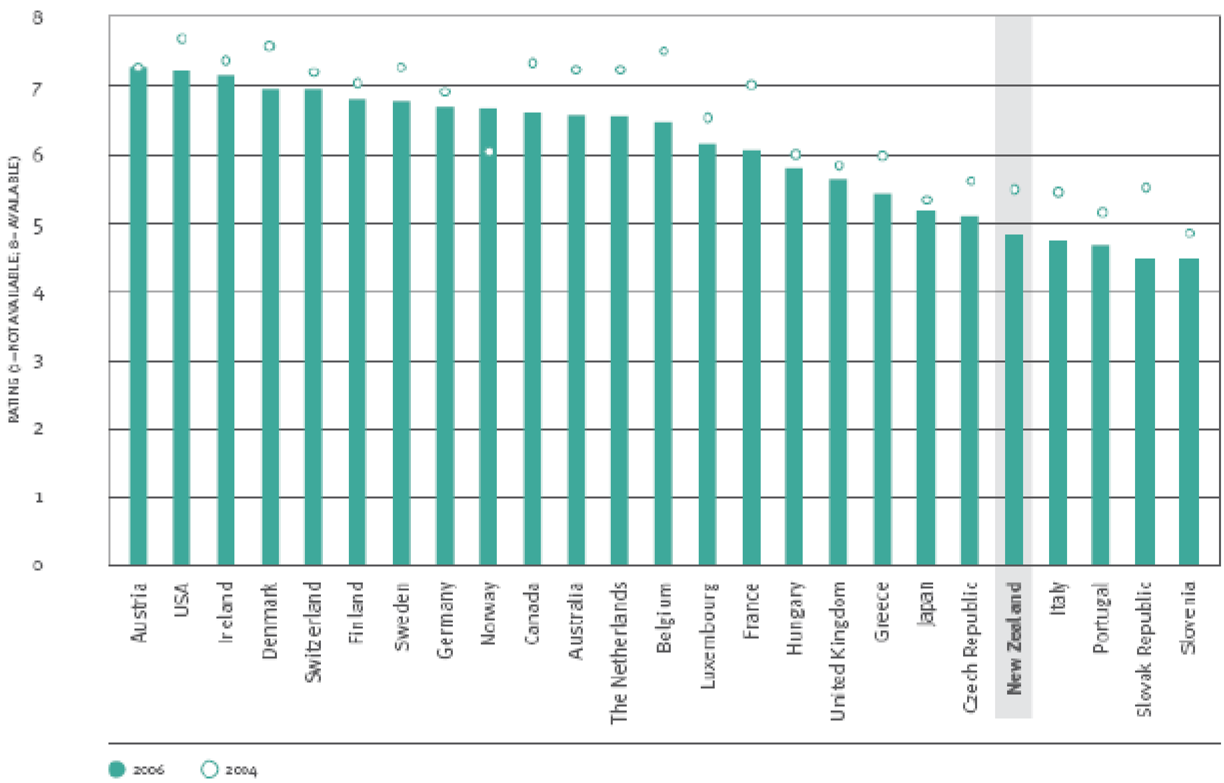
They believe large firms in NZ may be underperforming compared with their peers overseas and that the degree to which they internationalise is low. Because the NZ market is so small as they grow they face the challenges of exporting at a smaller size than similar firms in larger economies. In Treasury's words,

"To access a foreign market, firms need new market information including demand, tastes, local suppliers and distribution networks. They need to overcome language and cultural barriers. They may need to engage in new networks in order to assess shifts in demand patterns or new opportunities."

An OECD report suggests as much as 50% of a country's growth comes from the constant churn of businesses failing and new ones starting up. The evidence is that New Zealand's rate of churn is greater than most other countries possibly because barriers to entry – setting up a business – are practically the lowest in the world.

But there is some evidence suggesting there is a dearth of high quality managers and entrepreneurs in New Zealand. "This lack of managerial talent could be affecting both a firm's ability to internationalise and also the average firm's ability to identify new opportunities and grow."

Figure 4: Perceived availability of competent senior managers, 2004 and 2006



Source: IMD World Competitiveness Yearbook 2006

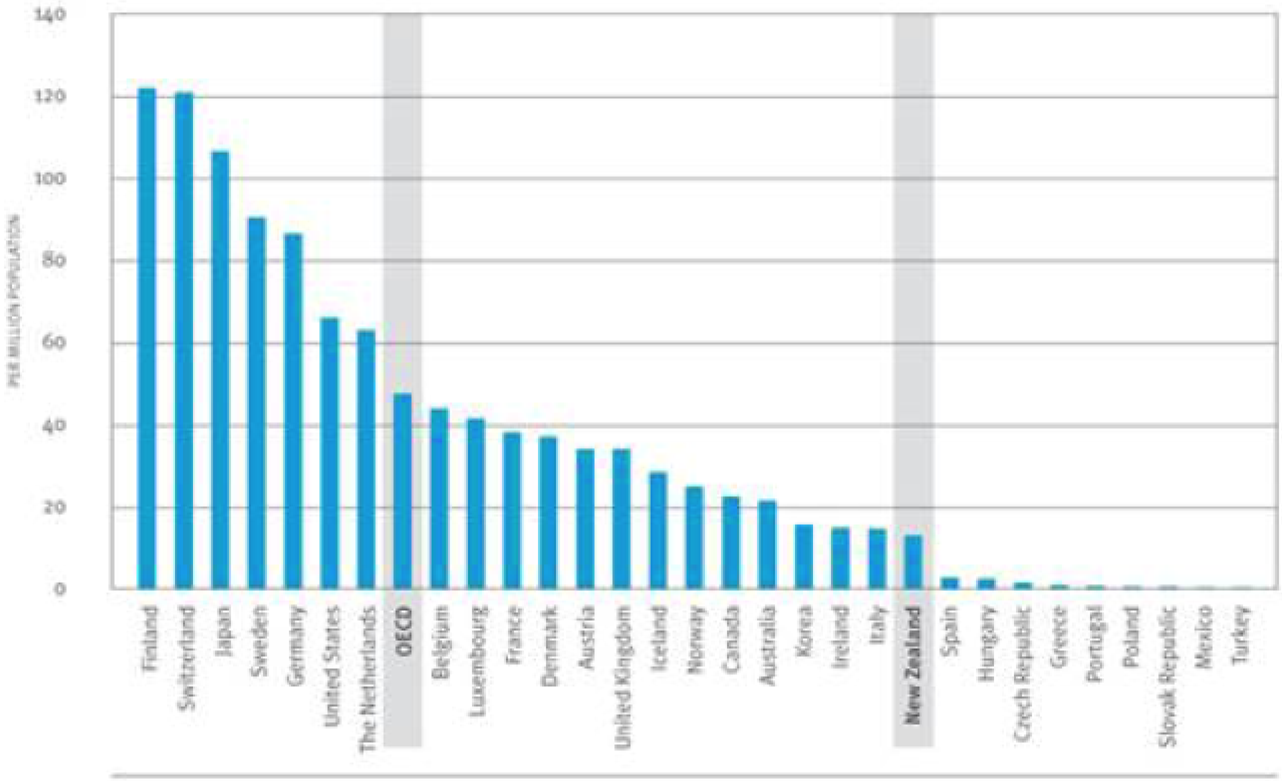
As noted elsewhere Treasury conclude the venture capital market, stock market and corporate bond market in New Zealand are too small and immature. This means companies tend to get their finance from banks and that reduces competitive pressures driving innovation which companies raising capital on sharemarkets tend to face.

Innovation and Productivity: Using Bright Ideas to Work Smarter
New Zealand Treasury Productivity Paper 08/05
April 2008

This fifth paper in Treasury's Productivity series looks at the role of innovation in driving productivity growth.

The key findings in the paper are that New Zealand has both a low ratio of expenditure on research and development to GDP and weak commercial application of new knowledge. The latter can be partly seen in the low ratio of patents to population in New Zealand.

Figure 6 – Patents per million population, 2003



Source OECD Science, Technology and Industry Outlook 2006, Table 30; NZ Treasury database; MED calculation

Working Smarter: Driving Productivity Growth Through Skills
New Zealand Treasury Productivity Paper 08/06
April 2008

This paper spends considerable time on policies and policy proposals while noting that by world standards New Zealand's education system is very good, but with essentially three areas of weakness. There is low participation in education or training for the 15-20 year age group, low skills are concentrated in the growing Maori and Pacific Island communities who will supply most of the projected extra labour force in the next two decades. In addition there is evidence that returns to quality early childcare are strong in terms of setting children a good foundation for further learning, but that children from lower socioeconomic levels are missing out.

International Connections and Productivity: Making Globalisation Work for New Zealand
New Zealand Treasury Productivity Paper 09/01
April 2009

This large paper from Treasury examines the role of international connectivity in promoting economic growth and the ways in which changes could be made in order to improve New Zealand's connections with the rest of the world. In particular there is an emphasis upon the need to make domestic policy settings more comparable with those overseas, improving transfer of foreign knowledge into NZ firms, and the importance of Asia for future economic growth.

For our purposes it suffices to note that the remoteness of New Zealand both physically and through low interpersonal connectivity contributes to low productivity growth.

"Distance from the main producers of new knowledge and low levels of business R&D suggest firms may have difficulty accessing technological developments."

Summary

There is considerable room for discussion, but in essence the Treasury productivity papers largely produce the following factors as helping to explain the New Zealand economy's low productivity growth.

- Some sectors are dominated by a small number of firms – building materials, supermarkets, telecommunications (our suggestions).
- High company use of bank funding limits the incentive to innovate created by funding via listed shares.
- Low R&D.
- Low education and training participation of 15-20 year olds.
- Inadequate early childhood education, especially for low socio-economic groups.
- Low linking of academic research with businesses producing low commercialisation of innovations.
- High real interest rates.
- Large exchange rate cycles.
- Shallow equity and bond markets and limited venture capital availability.
- Small domestic market.
- Low capital stock per employee.
- High cost of capital due to the tax system, low domestic savings, and the risk premium demanded by offshore investor.
- Low agglomeration of economic activity.
- Low management skills
- Weak commercial application of new knowledge
- Low internationalisation of NZ firms (remoteness)

References
NZ Treasury productivity papers
http://www.treasury.govt.nz/publications/research-policy/tprp

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