Cut to the chase

Investigating New Zealand-Australia productivity differences: New comparisons at industry level

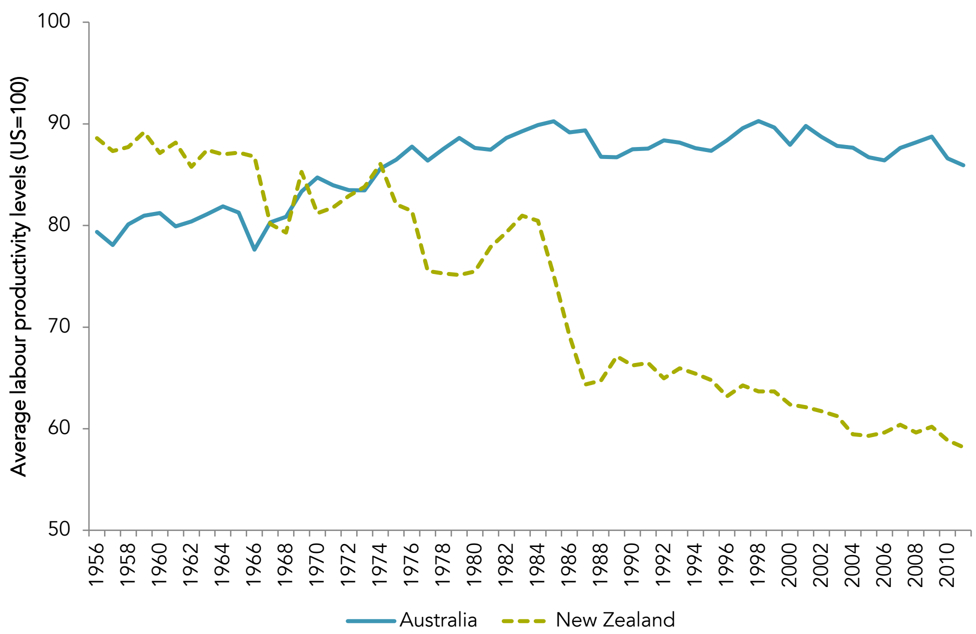
Working Paper, December 2013

This *Cut to the chase* highlights findings from the New Zealand Productivity Commission's working paper, written by UK-based economist Geoff Mason: *Investigating New Zealand-Australia productivity differences: New comparisons at industry level*.

Introduction

Average labour productivity in New Zealand has been losing ground to Australia since the 1970s, and is now almost a third lower than in our trans-Tasman neighbour. This matters because higher labour productivity levels in Australia contribute to higher real wages, attracting New Zealand workers to Australia. At the same time, New Zealand policy-makers are interested in developing policies that will enable New Zealand businesses to compete more effectively against rival firms in Australia and other countries.

Average GDP per hour worked in New Zealand and Australia (compared to the United States), 1956-2011, NZ dollars



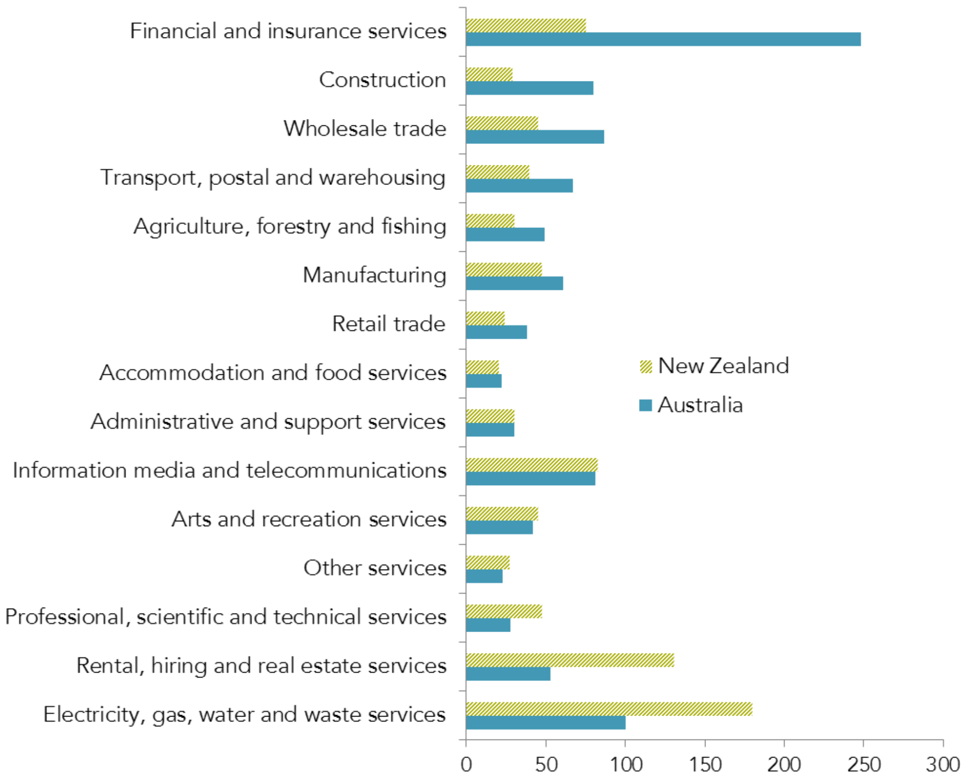
Source: Conference Board Total Economy Database

This report identifies the industries in which the New Zealand disadvantage lies and investigates whether there are any industries in which New Zealand performance compares more favourably with Australia. The analysis is conducted across twenty-four market industries that account for just over three quarters of total hours worked in both New Zealand and Australia.

The majority of New Zealand industries have a lower level of labour productivity compared with the same industries in Australia. This is particularly the case in mining, agriculture, most branches of manufacturing, construction, retail and wholesale trade and financial and insurance services. However, New Zealand has areas of relatively strong performance in food and drink manufacturing, utilities (electricity, gas, water & waste services) and arts and recreation services.

In some service areas such as professional, scientific & technical services and information media & telecommunications, it is hard to identify the productivity leader with any precision due to sensitivity to the choice of 'purchasing power parity' exchange rate and other measurement issues. However, there are at least some signs of New Zealand comparing well in these industries.

Average labour productivity levels in market industries, 2009, NZ dollars



The report breaks down differences in labour productivity across the two economies into differences in:

- the amount of capital – that is, machinery, computers and other assets – available to workers per hour in work;
- skills, and
- multi-factor productivity.

Broadly speaking, multi-factor productivity is a measure of how efficiently labour and capital are used by firms in both economies. Across the twenty-four industries, the levels of multi-factor productivity in New Zealand are about 22% lower on average than in Australia. This lower level of multi-factor productivity accounts for 57% of New Zealand's gap in labour productivity with Australia.

In 2009, the amount of capital available per hour worked across total market industries in New Zealand was almost 40% below the Australian level. The Australian lead on capital per hour worked applies to the great majority of market industries, covering a wide range of agricultural, manufacturing and service activities. New Zealand invests more capital per hour worked than Australia in only 5 of the 24 industries. Among these five, the utilities industry (electricity, gas and water) is the only significant user of capital equipment. New Zealand's shortfall in capital per hour worked accounts for 39% of the trans-Tasman labour productivity gap.

Australia is also found to be ahead in terms of skills – measured here using data on workforce qualifications and relative pay levels – but this gap is much narrower than that found for capital per hour worked. Australian skill levels are about 3% higher than in New Zealand, measured using data on workforce qualifications and relative pay levels. This is largely because Australia has slightly higher employment shares of both university graduates and workers with vocational and other qualifications gained since leaving secondary school.

Some of the productivity gap at the overall economy level is because Australia employs more people in industries with higher value added per hour worked, such as mining, utilities and financial services. New Zealand employs more people in comparatively low-productivity industries such as agriculture and food and drink manufacturing. These differences have grown sharply since the late 1990s, due to changes in the New Zealand industrial base.

However, the majority of the gap is due to productivity differences in the same industry across the two countries. Across most industries, Australian firms have invested more in capital while New Zealand firms do not use capital and labour as effectively as in Australia.

Concern over low productivity in service-based industries has led to the Commission's inquiry into ways to boost the performance of the services sector. The second interim report of the inquiry will be released at the end of January 2014.

Where does this fit?

- This report provides useful information on the specific industry areas in which New Zealand underperforms from a productivity perspective and is an important input into work on the ultimate causes of New Zealand's poor productivity performance. It is relevant for upcoming research and inquiries carried out by the Commission and its Productivity Hub partners.

- The paper is an important input in ongoing research investigating the factors underlying the causes of Australian-New Zealand productivity differences.

- Research at industry and firm level could explore how far New Zealand's apparent inefficiencies in resource utilisation are due to comparative weakness in innovation or the effects of many firms operating with relatively small-scale production facilities or the workings of domestic product markets.

- Research at industry and firm level could investigate the main factors – apart from differences in industrial structure – which have contributed to higher levels of capital investment in Australia than in New Zealand over recent decades.

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The working paper was supported by four agencies of the Productivity Hub - the Productivity Commission, the Treasury, the Ministry of Business, Innovation and Employment and Statistics NZ.

To find out more

"Investigating New Zealand-Australia productivity differences: New comparisons at industry level" - New Zealand Productivity Commission Working Paper 2013/02 – available from www.productivity.govt.nz/research

About the New Zealand Productivity Commission

The Commission – an independent Crown Entity – completes in-depth inquiry reports on topics selected by the Government, carries out productivity-related research, and promotes understanding of productivity issues.

About the Productivity Hub

The Productivity Hub is a cross-agency initiative that combines the productivity research efforts of a number of government agencies including: the Ministry of Business, Innovation and Employment, Statistics New Zealand, the Treasury, the Reserve Bank of New Zealand, the Ministry of Primary Industries, the Ministry of Foreign Affairs and Trade and the Productivity Commission.

For more on the Productivity Hub, see: www.productivity.govt.nz/research/productivity-hub

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