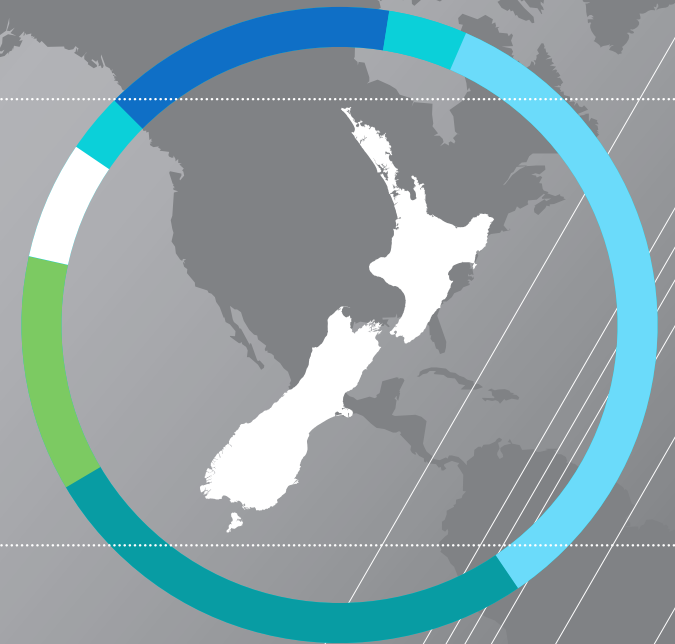


→ MAIN REPORT

THE NEW ZEALAND Sectors Report 2014

AN ANALYSIS OF THE NEW ZEALAND ECONOMY BY SECTOR





**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

MBIE develops and delivers policy, services, advice and regulation to support economic growth and the prosperity and wellbeing of New Zealanders.

MBIE combines the former Ministries of Economic Development, Science + Innovation, and the Departments of Labour and Building and Housing.

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New Zealand Sectors Report 2014

The New Zealand Sectors Report Series comprises the Main Report and six additional, separate, reports providing an in-depth analysis of six individual sectors. The seven reports are:

- 1 The New Zealand Sectors Report 2014: Main Report (this report)**

Featured Sector Reports

- 2 Information and communications technologies (ICT)**
- 3 High technology manufacturing**
- 4 Construction**
- 5 Petroleum and minerals**
- 6 Tourism**
- 7 Knowledge intensive services**

All reports available from www.mbie.govt.nz



Minister's foreword

I am pleased to present this report, which provides the first ever comprehensive overview of the economic performance of all the sectors that make up New Zealand's economy.

The defining theme of this report is change. New Zealand, like many developed countries, is witnessing a transformation in our economy and in employment opportunities.

Our traditional exporting sectors, such as dairy, meat, forestry and tourism, remain important drivers of growth. But increasingly we are seeing strong growth in emerging export sectors such as information technology services, high-technology manufacturing and processed foods.

This report highlights the ever-increasing importance of Asia as a key export region. It also reinforces the importance of our relationship with Australia, which continues to be a vital first market for many of our exporting businesses.

As is the case in other developed economies, some traditional manufacturing and service sectors face a challenging future, driven by low-cost manufacturing overseas and the game changing impact of digital technologies and automation.

The digitisation of the economy also offers huge opportunities to create new value and drive productivity. Traditional exports are increasingly enabled by digital technologies. Manufacturers are developing services around their products, often based around a software component.

The Government's Business Growth Agenda (BGA) sets out an integrated programme of work with around 350 separate initiatives, focusing on the six key inputs businesses need to succeed, grow, and add jobs. The six areas are: export markets, capital markets, innovation, skilled and safe workplaces, natural resources and infrastructure.

Be it rolling out ultra-fast broadband or establishing Callaghan Innovation, the BGA initiatives are about configuring the New Zealand economy to succeed in the increasingly complex and competitive global economy of the 21st century.

This report, and the six other reports in the Sectors Report Series, is not policy. Rather it provides a range of key data on the New Zealand economy from a sector perspective to enable a more informed debate on New Zealand's economic development.

Hon Steven Joyce
MINISTER FOR ECONOMIC DEVELOPMENT
MINISTER OF SCIENCE AND INNOVATION
MINISTER FOR TERTIARY EDUCATION, SKILLS AND EMPLOYMENT
MINISTER FOR SMALL BUSINESS
ASSOCIATE MINISTER OF FINANCE

Key terms and data limitations

Defining sectors

A sector is an area of economic activity in which businesses or other organisations (e.g. government or voluntary organisations) share a similar market or produce a similar product or service. Examples are retailing (businesses that sell products directly to consumers) and telecommunications (provision of communications services using wired or wireless infrastructure).

This report uses data grouped into sectors using the Australian and New Zealand Standard Industrial Classification codes (ANZSIC codes). A business or other type of organisation is classified to an ANZSIC code based on its predominant activity. The term 'sector' is often used interchangeably with the term 'industry'.

Sources

The numbers in this report come from multiple sources. Data sourced from Statistics New Zealand is the latest that was available as at mid-December 2013. Some of this data is provisional and may change.

The data used covers different time periods for different metrics. For example, goods exports is for the year ended June 2013, while labour productivity is for the year ended March 2011.

Customised data

Customised data has been provided by Statistics New Zealand for the manufacturing sectors and for the cross-cutting sectors (high technology manufacturing, information & communications technology, knowledge intensive services, and tourism).

Export data

Some export data for cross-cutting sectors uses international sources

in order to provide a longer time series. These sources may not agree with Statistics New Zealand data due to differences in the group of exported products being allocated to the relevant sector.

Use of the term 'firm'

The term 'firm' is used generically. It includes all relevant entities, some of which are not firms at all, such as those in the charities, government, education and health sectors.

Example firms

This report provides examples of firms which are believed to belong to the different sectors. The example firms provide a partial answer to a key question on the composition of a sector: which firms are in it?

Firms are classified by Statistics New Zealand as being part of an industry sector according to their predominant activity. This is explained fully on the Statistics New Zealand website. The classification of each firm to a sector using the Australian and New Zealand Standard Industrial Classification (ANZSIC) system is **confidential** to Statistics New Zealand.

Because of the confidentiality rules, MBIE has used other publicly available sources to determine which firms are likely to belong to a sector. These sources may be inaccurate or incomplete.

Quotes and interviews

A limited number of interviews with sector leaders were carried out in the preparation of this report. Anonymous quotes from these interviews that illustrate key themes have been included. The opinions expressed are those of the industry participants. Additional quotes from public sources have also been used.

A full explanation of data sources and limitations is provided in the Appendix.

Report objective

The New Zealand Sectors Report series is a set of seven publications that provide a factual source of information in an accessible format on all the sectors that make up the New Zealand economy.

As a set of facts and figures the series provides a platform for discussion. It is intended to inform public debate, and be a resource for business people, exporters, policy makers, media commentators, economists, academics, students and anyone with an interest in New Zealand's economic development.

The report does not draw policy conclusions.

This report provides information on 23 sectors and five additional 'cross-cutting' sectors both comparatively and in individual snapshots.

Some of the data is provided interactively on the www.mbie.govt.nz website



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Executive summary

General

- New Zealand is part of a constantly evolving global economy. Change is ongoing, driven by global markets, for example the rise of China, and by technological advances, particularly in information and communication technologies.
- These forces are driving change in the New Zealand economy at the sector level. Many sectors are benefiting, particularly food and beverage and New Zealand's growing cohort of information technology businesses. Other sectors are needing to adapt to technological change or increased international competition, e.g. some manufacturing sectors, and telecommunications and media.

GDP and productivity

- New Zealand has a complex and varied economy with a wide range of sectors. Like other developed economies, services generate the majority of GDP.
- In the last 10 years all sectors of the economy have shown growth, except wood and paper. Petroleum and minerals grew fastest, followed by the health and utilities sectors.
- Petroleum and minerals, utilities and property, rental and hiring services have the highest labour productivity. The majority of workers are employed in labour intensive, lower labour productivity sectors such as accommodation and restaurants, retail trade, administration and construction.
- There is a wide variation in labour productivity *within* sectors; all sectors have high performing and low performing firms.
- Several sectors generating employment have tended to show low productivity growth, while those sectors with higher productivity growth have tended to show reduced employment.

Firms and employment

- New Zealand has one very large firm – Fonterra – and a long tale of large to mid-sized firms.
- Similar to other developed economies, the majority of jobs – and job growth – are in the services sectors, although in New Zealand agriculture, forestry and fishing is still a significant employer (7% of employment).
- Manufacturing accounts for one in 10 workers, but just 4.3% of all firms. Employment in the manufacturing sectors in aggregate is declining, but this is significantly out-weighted by the growth in employment in services sectors. Food and beverage manufacturing stands out for some employment growth.
- In 2013 New Zealand had in total 2,123 firms and other enterprises (e.g. schools, government departments, hospitals, charities etc.) that employed more than 100 people. These organisations employed 41% of the working population (employed and self-employed).
- The proportion of large firms to small firms in New Zealand is similar to the OECD mean. But New Zealand's large firms are smaller than large firms in other OECD countries.

Exports

- New Zealand exported a total of \$62.4b in 2013, \$46.3b of goods and \$16.1b of services. At 4.5% per annum in the 10 years to 2013, goods exports have grown faster than services exports (1.5% per annum in the same period). Commercial services now make up 29% of total services exports compared to 18% in 2004.
- Despite the dominance of dairy, New Zealand's exports are becoming more diverse, with emerging strengths in processed foods, high technology manufacturing, computer services and commercial services more generally.

Executive summary

- Taking the long view, New Zealand's export mix is considerably more diverse today than it was in 1966. Food and beverage remains the engine of New Zealand's exports, with strengths in dairy and meat increasingly supplemented by a growing range of high-growth potential high-value categories, including for example honey, salmon, wine and infant formula.*
- New Zealand has undergone a fundamental shift in the last 40 years from supplying northern hemisphere markets such as the United Kingdom, to being increasingly the source of high quality temperate climate foods for Asia.
- At the same time, the key markets for New Zealand's IT services and high technology manufactured goods tend to be the developed rather than the emerging economies, particularly Australia, the United States and Europe.
- Exports to Australia include a wide variety of goods and services outside of New Zealand's traditional commodity exports. This points to the critical importance of both proximity and economic integration as drivers of growth for complex goods and services.

Innovation

- In 2011, 9% of all firms reported R&D activities and 46% of all firms reported innovation activities.
- Significantly more firms in manufacturing sectors engage in R&D compared to firms in the services sectors.
- On the other hand, some services sectors have very high rates of innovation, with education, arts and recreation, and finance and insurance being examples.
- Large firms are more likely to engage in R&D and innovation activities than small firms, and firms reporting innovation report improved performance on a range of financial measures.

Financial performance

- In 2012 five sectors generated a return on equity of 19% or more: construction, retail trade, wholesale trade, professional services, and machinery & equipment. The average for all sectors in 2012 was 9%. Return on equity can vary significantly from year to year.

New Zealand and the world

- New Zealand is less well connected to the global economy than other small developed economies on measures of inward and outward direct investment, trade and tourism visits.
- In 2012 New Zealand firms had \$24b in direct investment overseas. Manufacturing sectors account for 41% of this investment, followed by wholesale trade (11%) and finance and insurance (6%).
- A number of firms in construction, logistics, retailing, utilities and professional services are succeeding in building international businesses.
- In 2012** foreign firms had \$97b in direct investment in New Zealand. Of this \$37b (38%) is in the finance and insurance sector, followed by \$6.9b (7%) in food and beverage and \$5b (5%) in retail trade.
- In terms of connectedness, emerging export sectors such as ICT and high technology manufacturing have higher rates of both inward and outward direct investment, reflecting the need for knowledge intensive firms to be close to customers, have access to distribution networks and take advantage of lower manufacturing cost structures to remain competitive.
- Consistent with trans-Tasman economic integration, 53% of New Zealand outward direct investment is in Australia, and 64% of foreign direct investment (FDI) in New Zealand is Australian. At 0.4% of total FDI (\$391m) China is to date a minor investor.

*See the food and beverage information project for detailed analysis of these and other categories, www.foodandbeverage.govt.nz

**Latest data available with breakdown for manufacturing sub-sectors. FDI in New Zealand in 2013 was \$101b



HIGHLIGHTS, KEY THEMES AND INTRODUCTION TO SECTORS

Sector highlights

There is a wide variation in the contribution to economic growth by different sectors

New Zealand overview	
Population (2014)	4.5m
Land area	267,710km ² (similar to Italy)
Coastline	15,134 km (more than China, less than USA)
Population density	16/km ² 200 th highest in the world
GDP nominal (2012)	NZ\$199.1b 0.27% of global GDP
GDP/capita (2012)	US\$28,800
GDP employing sectors (2011)	NZ\$172.4b
Labour productivity (2011)	NZ\$48 per hour worked
Total exports (June 2013)	NZ\$62.4b
Goods exports (2013)	NZ\$46.3b
Commercial services exports (2013)	NZ\$4.7b
Travel and transport services exports	NZ\$11.4b
Top 3 trading partners* (imports & exports)	1. Australia 2. China 3. US

*As at June 2013, Australia accounted for 17.8% of trade in goods (imports and exports) and China 16.8%. See pages 64 and 65.

Metric	Sector ranking		
	1st	2nd	3rd
Largest share of GDP (2011)	Professional services \$13.9b (8.1%)	Property, rental & hiring services \$13.3b (7.1%)	Agriculture, forestry & fishing \$13.25b (7.7%)
Highest growth GDP (CAGR, 2001–2011)	Petroleum & minerals 12.1%	Health 8.1%	Utilities 7.7%
Largest sectors by employment (2012)	Retail trade 215,500 FTEs (9.4%)	Health 210,100 FTEs (9.1%)	Professional services 201,100 FTEs (8.7%)
Sectors adding most jobs (2002–2012; absolute)	Health +55,700	Professional services +51,200	Construction +46,300
Highest productivity (GDP per hour worked, 2011)	Petroleum & minerals \$330 per hour worked	Utilities \$210 per hour worked	Property, rental & hiring services \$192 per hour worked
Top goods exporting sectors 2013	Food & beverage manufacturing \$24b	Agriculture, forestry & fishing \$5b	Machinery & equipment \$3.2b
Sectors with fastest goods export growth (2003–2013 CAGR)	Petroleum & minerals 10.5%	Food and beverage manufacturing 6.1%	Agriculture, forestry & fishing 5.4%
Top services exports (YE Mar 2012)	Personal travel \$6.4b	Transport services \$2.6b	Other business services \$2.1b
Fastest growing services exports 2003–2013 CAGR	Personal, cultural and recreational services 9.4%	Computer and information services 8.4%	Other business services 7.7%

Key themes

New Zealand is part of the constantly evolving global economy

Theme	Description	Details
Changing markets	New Zealand has undergone a fundamental transition from supplying northern hemisphere markets to supplying the Asia-Pacific region.	<ul style="list-style-type: none"> • Goods exports to China have tripled in four years, from \$2.5b in the year ending June 2008 to \$7.7b in the year ending June 2013; by contrast the UK accounted for just 3% of New Zealand's goods exports in the year ending June 2013, compared to around 50% 40 years ago.
Developed vs emerging markets	Rich countries tend to import a higher proportion of 'rich country products' (e.g. consumer products, services); imports into emerging economies are typically weighted more towards commodities, e.g. inputs into manufacturing (iron ore, coal) or protein for a growing middle class (dairy).	<ul style="list-style-type: none"> • New Zealand's key markets for knowledge intensive services, high technology manufacturing and ICT exports are the traditional markets of Australia, the UK and the US. • Dairy typically spearheads New Zealand's exports into emerging economies and/or new markets, e.g. China, India, ASEAN, Middle East, and other sectors follow.
Australia matters	Australia plays a critical role in the development of New Zealand's higher value export industries and in building New Zealand-owned multinationals.	<ul style="list-style-type: none"> • With Australia, our closest neighbour, we share a similar history, culture, language, time zone and proximity to the world. • Australia is our largest market for tourism, manufactured goods (including high technology manufacturing), commercial services (including IT), processed foods, oil, gold and wine. • 54% of New Zealand's outward direct investment is in Australia; 63% of foreign direct investment in New Zealand is from Australia.
Changing export mix	New Zealand's export mix has changed significantly in 40 years. Past major export products have declined (e.g. wool) and new categories have emerged (e.g. wine, processed foods).	<ul style="list-style-type: none"> • Emerging export categories in the last decade include: <ul style="list-style-type: none"> ◦ high technology manufacturing: \$1.4b (2012) ◦ commercial services (particularly computer services): \$4.6b (2013) ◦ processed foods: \$2.5b (2013). • Tourism's 15% share of total exports in 2012 was the lowest since the series began in 1999 (tourism peaked at 20.2% of total exports in 2006).
Internationalisation	Export sectors showing growth potential tend to attract foreign investment and have a higher proportion of New Zealand-owned firms investing off-shore.	<ul style="list-style-type: none"> • High technology manufacturing and ICT sectors have higher rates of foreign ownership and outward investment than other sectors. • High technology manufacturing generates 30% of sales from off-shore. • Multinational firms are increasing investment in New Zealand's processed foods industry, e.g. infant formula. • Significant foreign investment is underpinning historically high expenditure in petroleum exploration.

Key themes

Change is ongoing, driven by technology and global markets

Theme	Description	Details
Scale matters	Large firms (100+ employees) are more likely to engage in innovation and R&D activities, invest off-shore and in forwards or backwards supply chain integration. They generate the vast majority of exports and create more jobs.	<ul style="list-style-type: none"> Firms with 100+ employees generated 63% of job growth in the last decade. Fonterra generates 50% of food and beverage exports and accounts for 70% of all R&D expenditure in the food and beverage sector. F&P Healthcare accounts for circa 22% of all high technology exports. Fulton Hogan has built a large vertically integrated business in Australia. <i>It takes companies of scale to be involved in serious R&D and serious exporting</i> . – CEO, technology company.
Changing labour markets and nature of work	<p>There is a continuation of the long-term shift from manufacturing jobs to services jobs, similar to other developed countries.</p> <p>The pattern in developed countries is job growth generated at the high-skill, high-paid end and the low-skill, low-paid end, with the middle flat to declining.*</p>	<ul style="list-style-type: none"> Service industries (largely domestically and tourism focused) plus education and health generated 90% of job growth from 2002–2012. Routine functions across all industries are being automated (e.g. automated pickers, packers, sorters, check-out counters). Sectors increasing productivity, often also reducing employment. IT services are creating jobs and demand appears to be outstripping supply. <i>There is such a shortage of skills in the ICT sector, and that's only going to grow</i>. – CEO, ICT company.
From wider research and interviews with industry leaders some other key themes emerged		
Sectors in transition	<p>Digital technology is destroying old business models and generating new ones.</p> <p>Low cost manufacturing from emerging economies is affecting the competitiveness of manufacturing in developed countries.</p> <p>The continued high New Zealand exchange rate is driving structural change at the sector level.</p>	<ul style="list-style-type: none"> New Zealand manufacturers are developing digital services around their products to create advantage (e.g. Framacad's architectural design software). Manufacturers are investing in expansion off-shore (F&P Healthcare in Mexico). Traditional media businesses are struggling with digital business models. Online sales are changing retailing. <i>The internet has revolutionised completely everything... retail has got to become a really sophisticated animal</i>. – retired fashion designer Ashley Fogel, Radio NZ interview.
Everything going digital	<p>New technologies are changing the structure and competitiveness of all industries.</p> <p>Automation of manufacturing combined with rising wages in emerging economies is (at least potentially) improving the economics of manufacturing in developed countries.</p>	<ul style="list-style-type: none"> Examples include digital modelling, simulation and visualisation; advances in industrial robotics; additive manufacturing (e.g. 3D printing); and information technology trends such as big data, advanced analytics, social technologies and remote sensing.** <i>3D printing is fantastic for prototyping, and may have broader applications in the longer term. We have three or four 3D printing machines running 24/7. We've been buying a new one every six months or so. The cost has gone down... and it's just astonishing what they can do for you. ...[for prototyping] you're going from months, to days to hours</i>. – CEO, large technology company.

*See International Monetary Fund; World Economic Outlook, Sept 2011

**McKinsey Global Institute 2012: Manufacturing the future: the next era of global growth and innovation

Key themes

New Zealand is a young country, still developing a mix of strengths

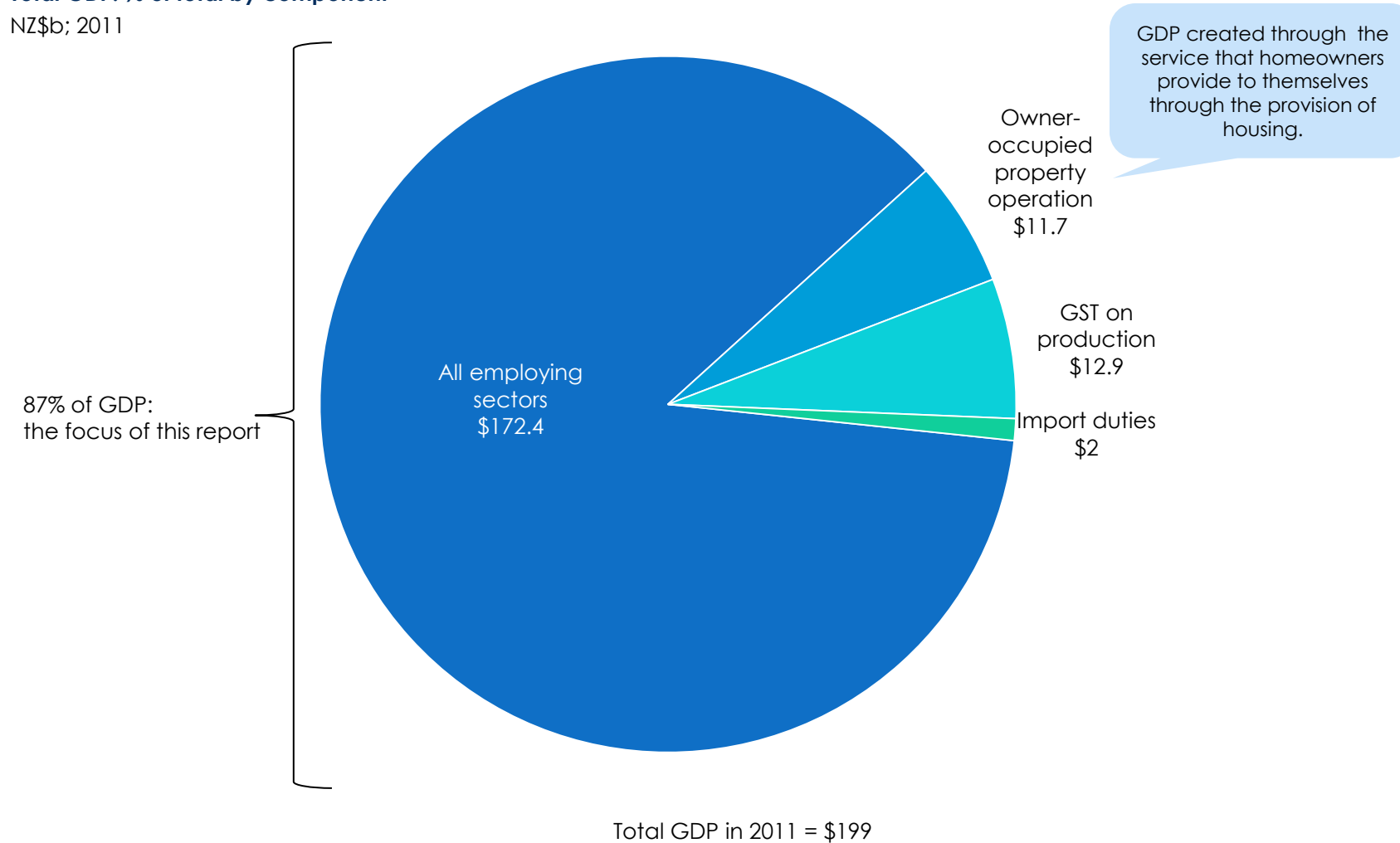
Theme	Description	Details
Research & development advantage	There is a widespread perception that New Zealand has some cost and culture advantages in research and development.	<ul style="list-style-type: none"> Exports of R&D services in year to June 2013: \$162m. These grew at 4.8% per annum 2008–2013. The US takes 34% of the total and Australia 23%. <i>When you compare us to other developed countries, New Zealand is probably half the cost per R&D person. Mainly remuneration is why New Zealand is a pretty good location.</i> – CEO, large technology company. <i>We have a huge advantage to the rest of the world, in that our people often span silos. In the rest of the world you get real silo expertise, but oftentimes the best innovation comes from applying something done in one silo to another.</i> – CEO, small technology company. <i>[The R&D team] punch considerably above their weight when you compare them to other companies, and the culture in New Zealand is very unique.</i> – CEO, Fisher and Paykel Appliances, nzherald.co.nz, April 8, 2013
Serial entrepreneurs	Entrepreneurs in the emerging export sectors (e.g. IT services, high technology manufacturing, processed foods) are developing the capabilities and acquiring the experience needed to succeed internationally.	<ul style="list-style-type: none"> A number of entrepreneurs are on their second or third businesses, recycling both capital and skills. Examples include Rod Drury – Xero; Geoff Ross – Ecoya, Moa Beer; Derek Handley – SnakkMedia, Booktrack; Grant Ryan – SLI systems.
Building strengths in the supporting ecosystem to support emerging export sectors	The supporting network of service providers (e.g. accountants, lawyers, investors, bankers, consultants, government departments, universities, Crown Research Institutes) are also developing in their knowledge of and sophistication in dealing with the emerging export sectors.	<ul style="list-style-type: none"> National and local government, universities and others are investing in the infrastructure, skills and capability development that supports emerging export sectors, including the Food Innovation Network, the Health Hubs, Callaghan Innovation, The Icehouse and the Canterbury Innovation Incubator. <i>People might look at the VIF [Venture Investment Fund] as not a great success story, but there are a lot of lessons learned off the back of money going into ventures and people. We're probably in high-school at the moment in our evolution.</i> – CEO technology company.
Historical precedent	New Zealand's competitive advantage in the production and export of protein is based on 100 years of private and public investment in all parts of the system. The resulting sophistication and complexity of this system is hard for competitors to replicate (unless there are radical game changers, e.g. synthetic milk, vat grown meat).	<ul style="list-style-type: none"> <i>The rise and rapid adaptation of New Zealand protein farming was intertwined with the development of finance, processing, distribution and shipping to form a sophisticated mechanism connecting the farms to their markets.</i> – James Belich, <i>Paradise Reforged</i>.

Sectors' component of GDP

The 'employing sectors' of the economy are 87% of total GDP; the remaining 13% is GST, import duties and owner-occupied property

Total GDP: % of total by component

NZ\$b; 2011

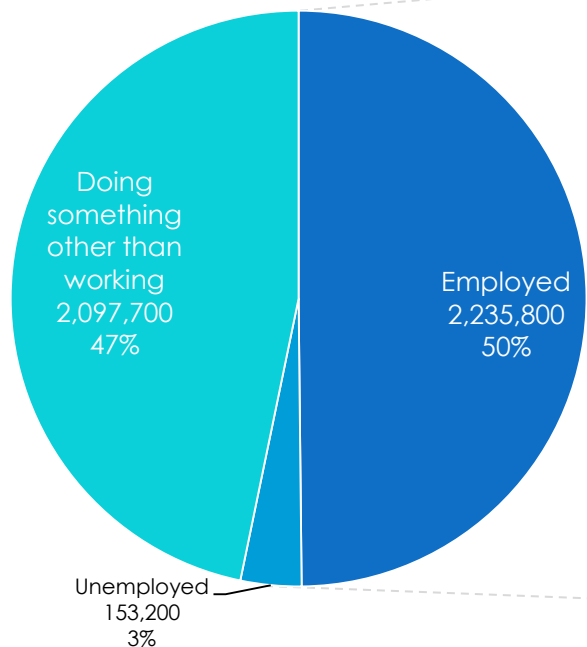


Employing sectors

The employing sectors cover the activities of 50% of the population; 'employed' includes the self-employed

Employment status of New Zealand resident population

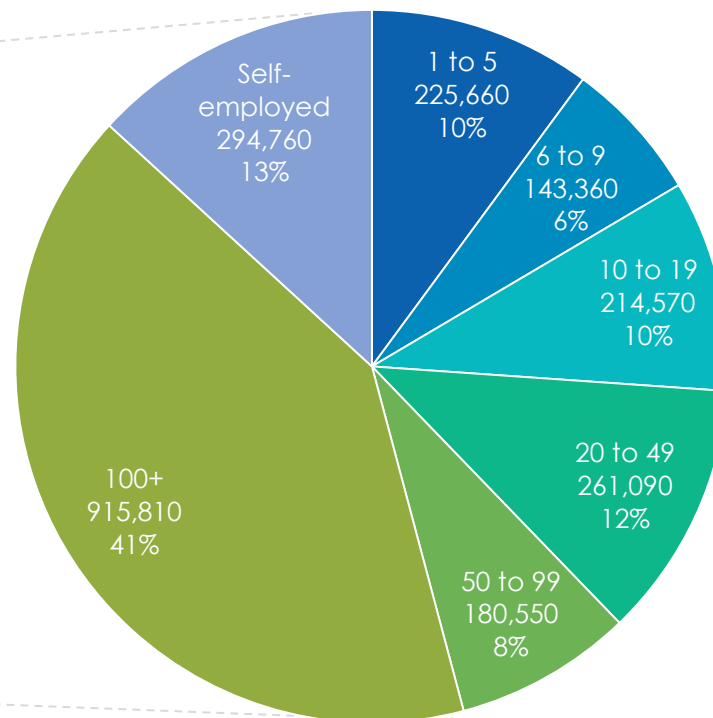
% of NZ residents; 2013



Total = 4,486,700 New Zealand residents

Employment by firm size

% employees and self-employed; 2013



Total = 2,227,000 people employed or self-employed

The New Zealand economy by sector

This report examines 23 sectors using standard sector definitions*; petroleum and minerals and construction are the subject of separate in-depth reports

ANZSIC Code*	Sector	Examples
Primary		
A	Agriculture, forestry & fishing (production and harvesting of primary products on farms, forests, fishing boats, etc)	Landcorp, Sealord, Ernslaw One, farms, orchards
B	Petroleum & minerals (featured sector)	Tag Oil, Todd Energy, OceanaGold, New Zealand Oil & Gas
Manufacturing		
C14, C15	Wood & paper	Carter Holt Harvey, Tenon, Norske Skog Tasman
C11, C12	Food & beverage manufacturing (processing of raw materials into ingredients or finished products, e.g. milk powder or wine) Shortened title: food & beverage	Fonterra, ANZCO, Mudhouse Wines, Whittaker's, Tasti
C23, C24	Machinery & equipment	Fisher & Paykel Appliances, Compac Sorting, Gallagher Security
C17, C18, C19	Chemicals, plastics & refining (including petroleum refining)	Nuplex, Ravensdown Fertiliser, Dulux, Resene
C21, C22	Metal & metal products Shortened title: Metals	New Zealand Steel, New Zealand Aluminium Smelters, Methven
C13, C16, C20, C25	Other manufacturing (textiles, leather, clothing and footwear, printing, non-metallic mineral products, furniture and other manufacturing)	Firth Industries, Cavalier Bremworth, NZ Comfort Group (Sleepyhead)
Services		
D	Utilities (electricity, gas, water, waste)	Contact Energy, Meridian Energy, Vector
E	Construction: featured sector (featured sector)	Fulton Hogan, Fletcher Construction, many small building firms
F	Wholesale trade	Carter Holt Harvey, Placemakers, Combined Rural Traders Society (CRT)

The New Zealand economy by sector

ANZSIC Code*	Sector	Examples
Services		
G	Retail trade	Progressive Enterprises (Countdown), Z Energy, The Warehouse, Hallenstein Glasson Holdings
H	Accommodation & restaurants	SkyCity Entertainment Group, Restaurant Brands NZ, Millennium and Copthorne Hotels
I	Logistics (transport, postal and warehousing) Shortened title: Logistics	Mainfreight, NZ Post, Kiwirail
J	Media & telecommunications	Vodafone, Sky Network, Fairfax Media, Chorus
K	Finance & insurance	ANZ, BNZ, Accident Compensation Corporation, AMP
L	Property, rental & hiring services	Housing NZ, Harcourts, Jucy Rentals, Hirepool
M	Professional, scientific & technical services Shortened title: Professional services	Datacom, BECA, Opus International, PwC
R	Arts & recreation services	New Zealand Lotteries Commission, New Zealand Racing Board (TAB), Te Papa Museum of New Zealand
S, N	Administration & other services	Flight Centre, AWF Group, NZ Rugby Union
Government, education & health		
O	Government, defence & public safety	Auckland Council, New Zealand Defence Force, Ministry of Education, New Zealand Police, Ministry of Business, Innovation & Employment
P	Education	University of Auckland, UNITEC, Wellington Institute of Technology, secondary and primary schools, kindergartens and day care centres
Q	Health & social assistance Shortened title: Health	Canterbury District Health Board, Ryman Healthcare, lab tests, rest homes, medical centres

Cross-cutting sectors

Four non-standard cross-cutting sectors are also the subject of separate in-depth reports

Sector	Description	Examples
Tourism	<p>Significant economic activity in some sectors is due to tourists. Examples include accommodation and restaurants, retail trade and logistics (travel).</p> <p>Tourism data derived from these sectors is a sub-set of the total data for these sectors, and so is double-counted.</p>	SKYCITY Entertainment, Air New Zealand, Auckland International Airport, Intercity, Tourism Holdings
High technology manufacturing and medium high technology manufacturing	<p>The OECD definition for high technology manufacturing is used. The definition is based on the amount an industry spends on research and development. Industries which typically spend 8% or more of their revenue are classified as 'high technology'. Examples are aircraft manufacturing, pharmaceuticals and electronics.</p> <p>The in-depth report on high technology manufacturing also provides data on medium-high technology manufacturing, which includes the manufacture of polymers and chemicals, transport equipment and machinery. Snapshot pages for medium-high technology manufacturing are included in this report.</p>	Pacific Aerospace, Argenta, Rakon, Fisher & Paykel Healthcare, Dynamic Controls, Tait Communications
Knowledge intensive services	<p>The OECD definition for knowledge intensive services is used. Firms operating in post and telecommunications, finance and insurance, and professional services are defined as 'knowledge intensive'. It is a wide definition that captures activities in a large number of sectors. The separate report on knowledge intensive services focuses mainly on professional, scientific and technical services (excluding computer systems design).</p>	Datacom, Orion, SmartPay, Beca, KPMG, Opus International, Chapman Trip.
Information & communications technology (ICT)	<p>The OECD definition for knowledge intensive services is used. This includes components of both services industries (e.g. telecommunications, software development) and manufacturing (e.g. manufacture of telecommunications equipment). There are significant overlaps between high technology manufacturing and knowledge intensive services. The separate report on ICT focuses mainly on the computer systems design sub-sector, which appears to capture the bulk of New Zealand's IT exporting firms.</p>	Datacom, Xero, Diligent Board Member Services, Vista Entertainment.

Double-counting between cross-cutting sectors: treat with caution

Some activities are classified in more than one of the above cross-cutting sectors. For example computer system design (ANZSIC Code M7000) is included in both ICT and knowledge intensive services. Manufacture of telecommunications equipment is included in both ICT and high technology manufacturing. Data is thus double-counted and care should be taken in interpretation.

A more selective approach to the data is taken in the individual reports on knowledge intensive services and ICT, which largely resolves this issue.



THE GOVERNMENT'S BUSINESS GROWTH AGENDA



The Business Growth Agenda

The Government's Business Growth Agenda is a key part of achieving the Government's priority of building a more productive and competitive economy.

There are six key ingredients that businesses need to succeed and grow: innovation, capital markets, skilled and safe workplaces, natural resources, infrastructure and export markets to sell their products.

These six areas are the focus of the Government's Business Growth Agenda.

The Business Growth Agenda Progress Report 2013 outlines the scope and reach of the Agenda and reports on progress in implementing around 350 separate initiatives.

Available from:

www.mbie.govt.nz/what-we-do/business-growth-agenda





The Government's Business Growth Agenda

Focus on export markets and capital markets, excerpt from BGA Progress Report, 2013

Export markets

- Increased exports and stronger international linkages are central to lifting New Zealand's economic growth and productivity. With a small domestic market, the greatest opportunities for growth for New Zealand businesses are in overseas markets. In addition, businesses that export internationally tend to be more productive than businesses that just supply the domestic market because of their greater access to resources, knowledge and ideas, and the increased competition they face against other global firms.
- New Zealand's exports have not kept pace with a range of similar countries over the last 30 years. While exports of goods and services make up around half of GDP for similar-sized countries in the OECD, they represent less than a third of New Zealand's GDP. What is more, growth in the economy has been greatest in those sectors of the economy that don't export goods and services. New Zealand also has relatively low levels of outward direct investment, which constrains our ability to participate in global supply chains.
- The Government is working with businesses to lift the value and volume of our exports, by ensuring the rules, regulations and policies – both here and overseas – promote exports, and by helping ensure that resources are able to flow to the most productive areas. We are also helping New Zealand firms to better leverage the value of the 'New Zealand brand' in overseas markets.

Capital markets

- New Zealand firms need access to capital to take advantage of opportunities and grow their business – and the economy. Investors also need to be able to identify and take advantage of opportunities to generate the best returns from their capital. When all parts of our capital markets are working well, increased investment in New Zealand's economy – particularly in the export sector – will help to drive stronger growth.
- We have set a target to lift exports to 40 per cent of GDP by 2025. This will require an extra \$160 billion to \$200 billion of new productive capital to achieve this goal.
- New Zealand's capital markets generally work well, but there is scope for reductions in the cost of capital faced by New Zealand businesses, compared to their offshore competitors. Improving access to capital for growth will also be critical.
- The Government is supporting effective capital markets by providing stable and competitive macroeconomic settings; creating the right incentives to save and invest; and ensuring New Zealand is open to international investment flows.



The Government's Business Growth Agenda

Focus on innovation and skilled and safe workplaces, excerpt from BGA Progress Report, 2013

Innovation

- Innovation – the introduction of new or improved products, processes or methods into our economy – can increase the amount we produce, add value, lift productivity, and increase our competitiveness. Innovation can open new markets or develop existing ones, and is essential to improving environmental, social and health outcomes.
- There is significant opportunity for New Zealand firms to increase their investment in innovation and get greater value from it and for the Government to improve the impact of public investment in science and innovation.
- The Government is working to increase the benefits to New Zealand from science and innovation by creating a high-performing and responsive innovation system. This includes working to improve the alignment, co-ordination and collaboration within the system – from the generation of new ideas, to the conversion of these ideas into value. Callaghan Innovation has been established to work across the whole innovation system to accelerate the growth, scale, intensity and success of innovation in New Zealand firms.
- We are focusing future investments in science and innovation on addressing issues and opportunities New Zealanders have identified as important for improving environmental, health and economic outcomes. We are also focused on creating the environment that businesses need to invest more in science, to access and use relevant research and development, and have the confidence to innovate.

Skilled and safe workplaces

- Successful businesses operating in a competitive global economy need skilled people who can help them create and deliver high-value products and services, cultivate new markets, and sell to the world. Workers and jobseekers need access to education and training to help them lift their skills, and opportunities to use those skills in safe workplaces – leading to increased productivity and higher wages.
- While New Zealand has one of the most highly-qualified workforces in the OECD, there is scope to better align our education and training with the needs of business. New Zealand's rates of employment are also relatively high, but long-term welfare dependency is still experienced by too many New Zealanders.
- The Government is helping by working to lift New Zealanders' skills and qualifications, reduce long-term unemployment and improve workplace health and safety.



The Government's Business Growth Agenda

Focus on natural resources and infrastructure, excerpt from BGA Progress Report, 2013

Natural resources

- New Zealand businesses are dependent on our natural resources which underpin much of our economic activity and support thousands of jobs. Our resource base offers major opportunities for future economic growth.
- New Zealand has abundant natural resources, and these provide us with a clear economic advantage. However, the challenge is how to make best use of these resources, while maintaining and enhancing the quality of our environment.
- The Government is helping by encouraging business to use our natural resources more effectively, and ensuring they use them responsibly. This includes improvements to the resource management systems to enable faster economic growth while maintaining strong environmental standards.

Infrastructure

- Resilient, efficient and coordinated infrastructure networks are vital to a well-running economy. Transport, energy and telecommunications networks enable the movement of people, goods and information around our country and around the world. They are vital to linking business with their customers, suppliers and employees, and for increasing the flows of information, trade and finance that businesses need to grow.
- Historically, New Zealand has had inconsistent investment in our infrastructure. Population growth and distribution, and the changing make-up of New Zealand's economy over the years, have also placed pressure on key infrastructure networks and changed the mix of services required from infrastructure. The devastating Canterbury earthquakes have had a major impact on New Zealand's second largest city, and restoring confidence in Christchurch's physical environment will be critical.
- The Government is focused on ensuring we better use our existing infrastructure, as well as making smart, transparent decisions about investment in future infrastructure, to make sure we get maximum benefit from our total infrastructure investment.



PART ONE

OVERVIEW OF THE ECONOMY BY SECTOR

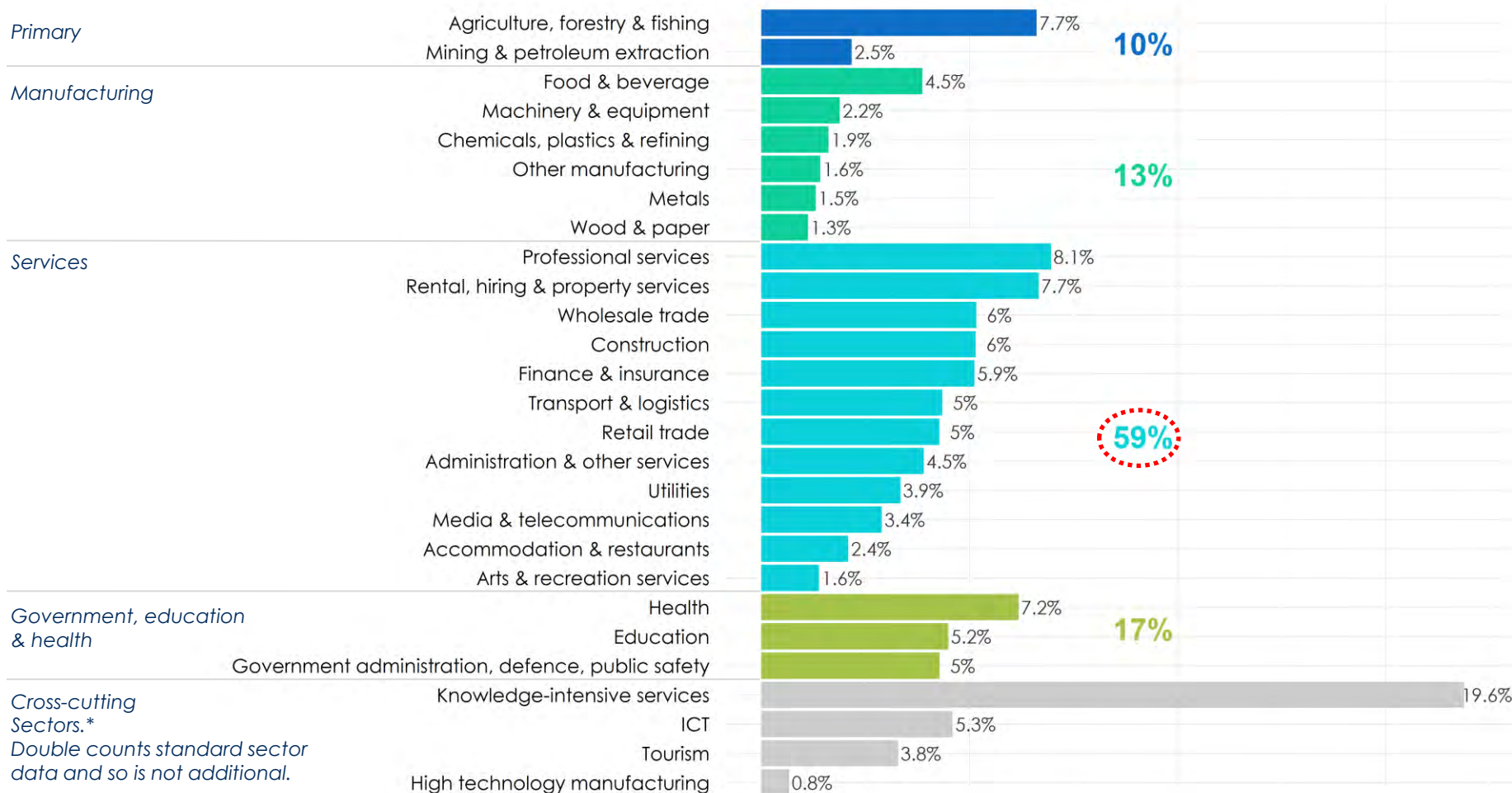
GDP AND PRODUCTIVITY

Share of GDP (value added) by sector

New Zealand has a complex and varied economy with a wide range of sectors; like other developed economies, services generate most GDP

Share of nominal GDP (total employing sectors)

% GDP; 2011



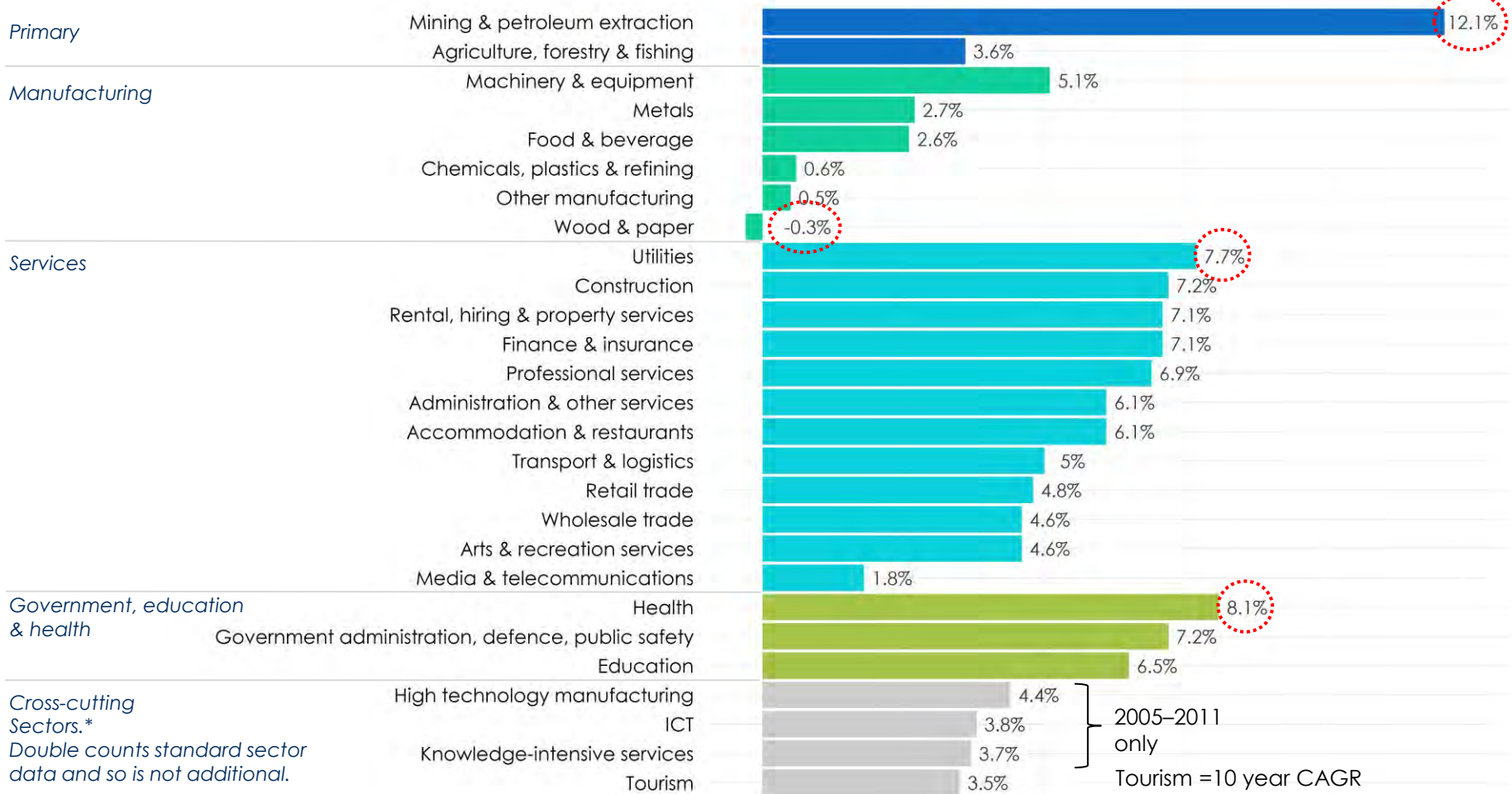
*Cross-cutting sectors have been double-counted and, tourism aside, have not been through the system of National Accounts so should be considered indicative only. Nominal GDP for 2011 used rather than 2013 real GDP because real GDP includes volume changes between 2010 and 2013, not only price changes. Source: Statistics New Zealand, National Accounts (2013)

GDP growth by sector

All sectors of the economy have grown, other than wood and paper manufacturing; petroleum and minerals grew fastest, followed by health and utilities

Nominal GDP 10 yr growth rate

% GDP CAGR, 2001–2011



*ICT, high technology manufacturing and knowledge intensive services data is only available since 2005; treat as indicative only.

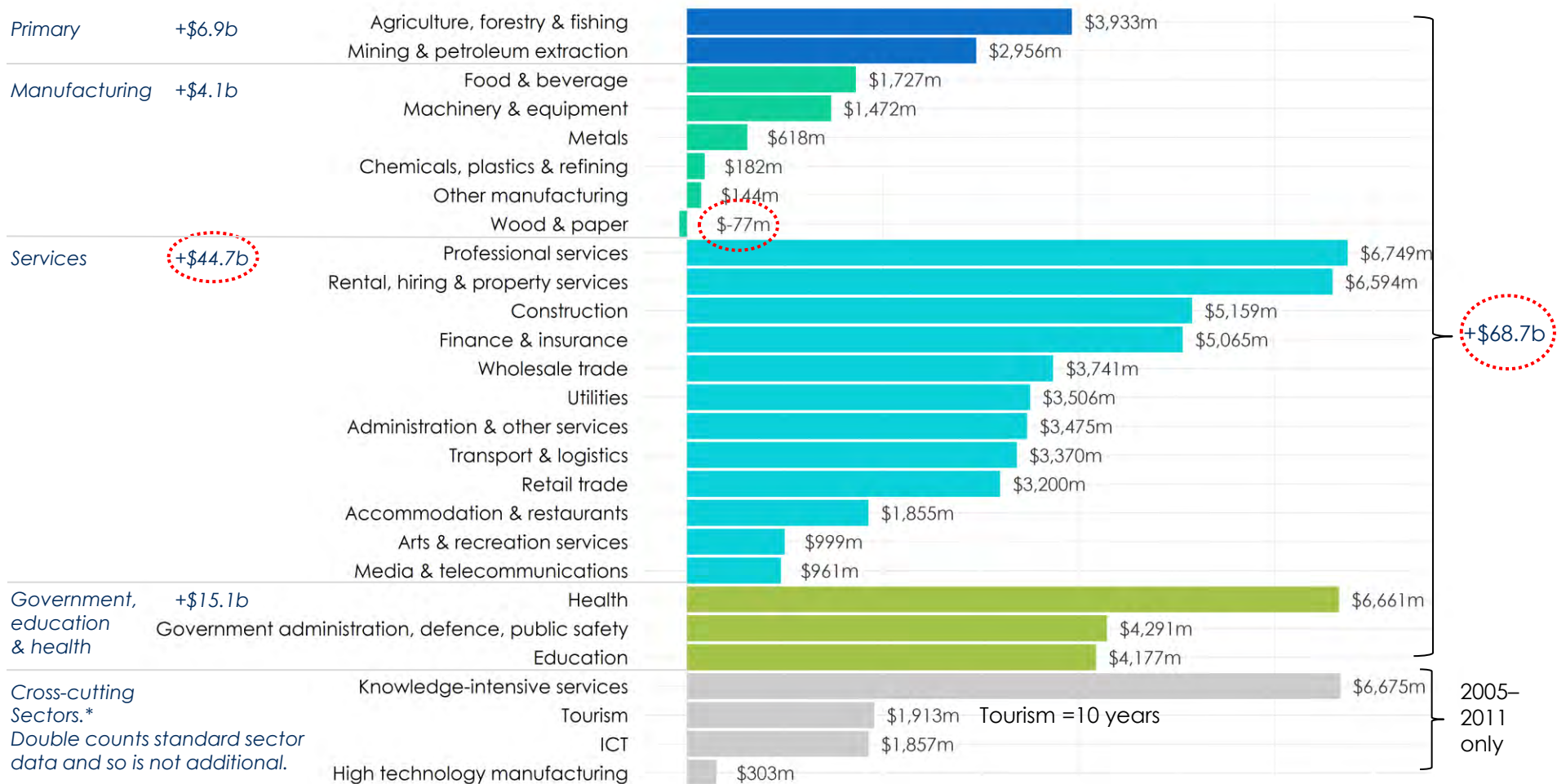
Source: Statistics New Zealand, National Accounts (2013).

Absolute growth (dollar value) in GDP by sector

In nominal dollar terms, the employing sectors expanded by \$68.7b in 2001–2011; of this services contributed \$44.7b

Absolute change in GDP (employing sectors)

NZ\$m; 2001–2011



*ICT, high technology manufacturing and knowledge intensive services data is only available since 2005; treat as indicative only.

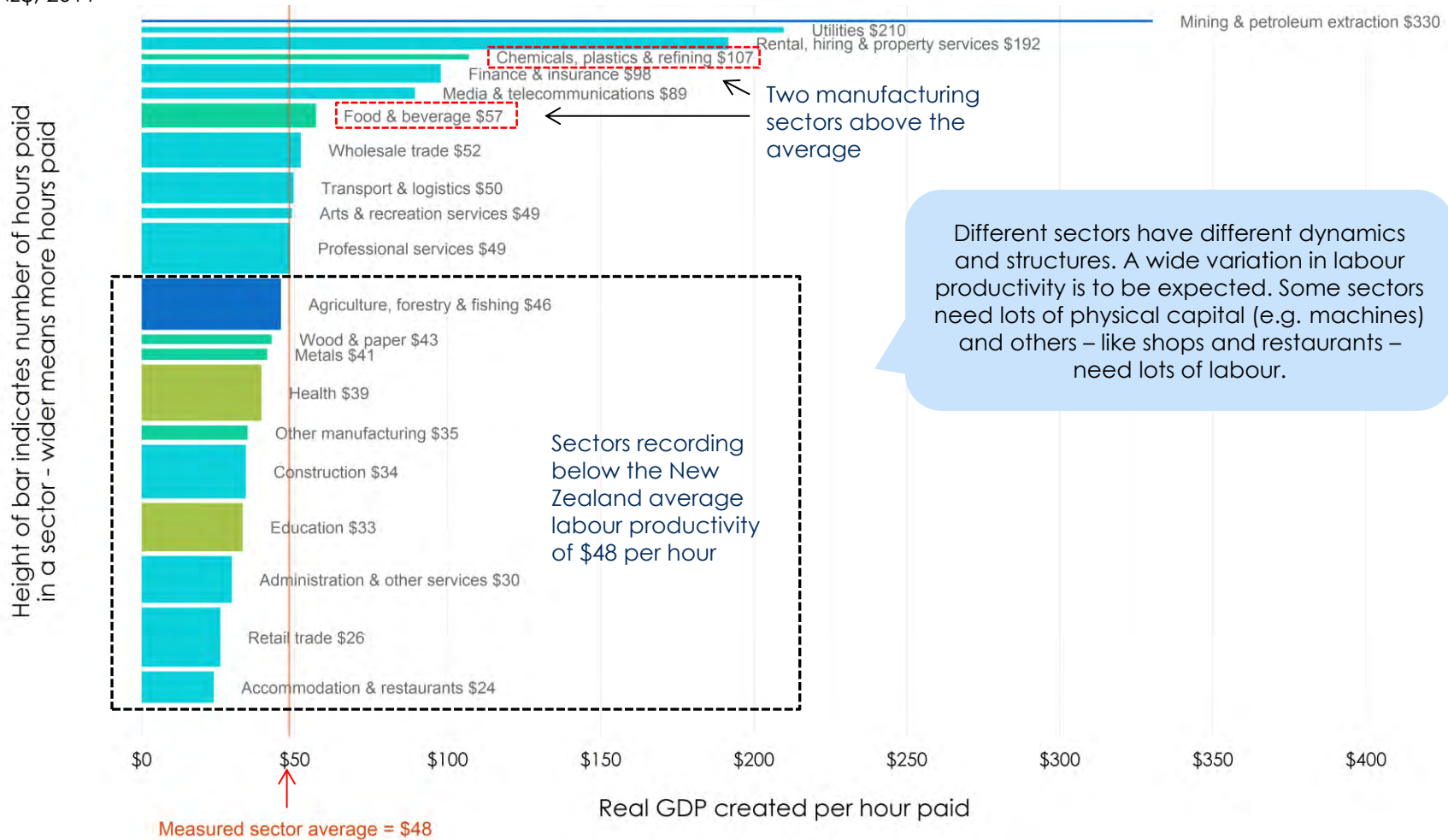
Source: Statistics New Zealand, National Accounts (2013).

Labour productivity by sector

There is a wide variation in labour productivity between sectors; most workers are employed in lower labour productivity sectors

Sector employment (total hours paid) vs sector GDP (real) per hour paid

NZ\$, 2011



Note: data for government administration, education, health, ICT, high technology manufacturing and knowledge intensive services is not measured.

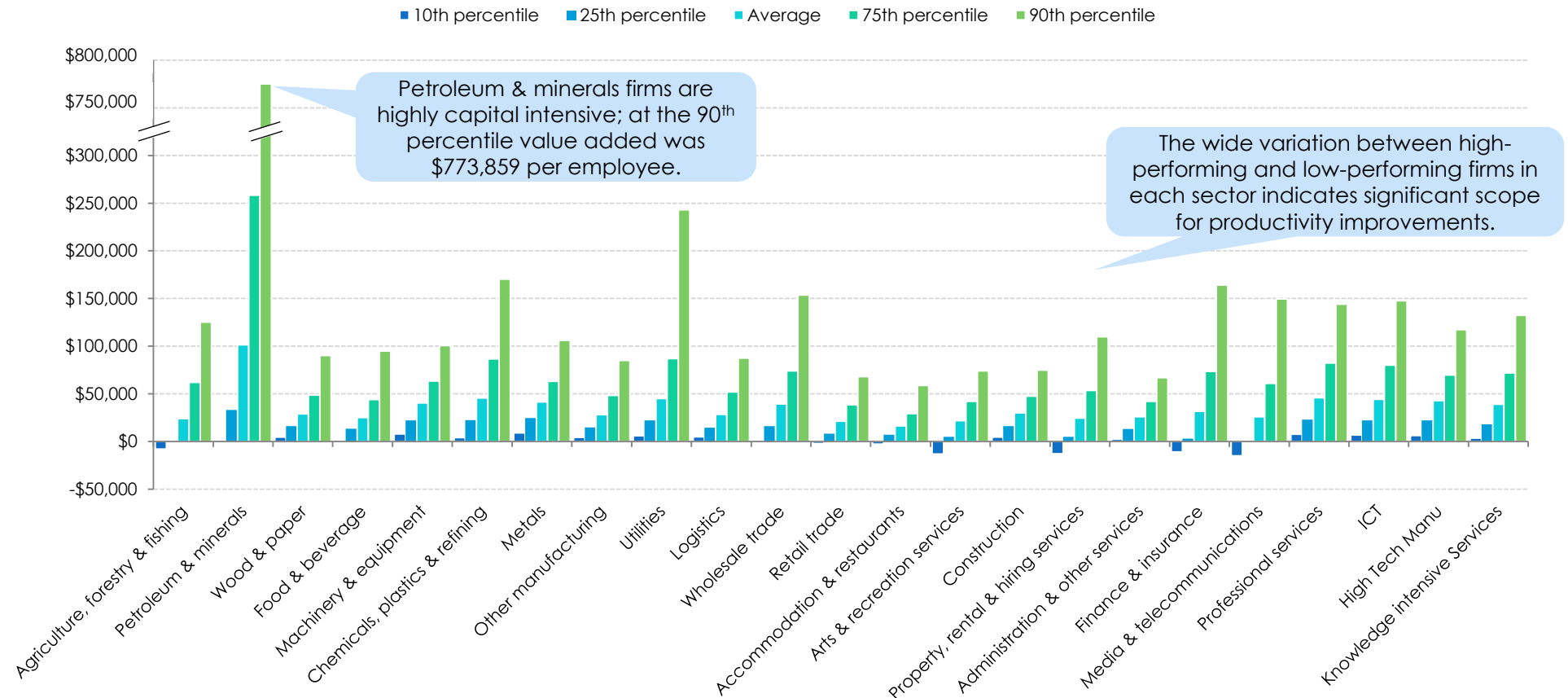
Source: Statistics New Zealand, National Accounts – Productivity Input Series year ended March 2012 (2013).

Labour productivity within sectors

Labour productivity also varies within sectors; every sector has high-performing and low-performing firms

Value added per employee, measured at selected percentile of the labour productivity distribution

Value added per employee; 2010



Note: government, education and health sectors are not included owing to the difficulty in measuring sectors whose primary objectives are social rather than financial.

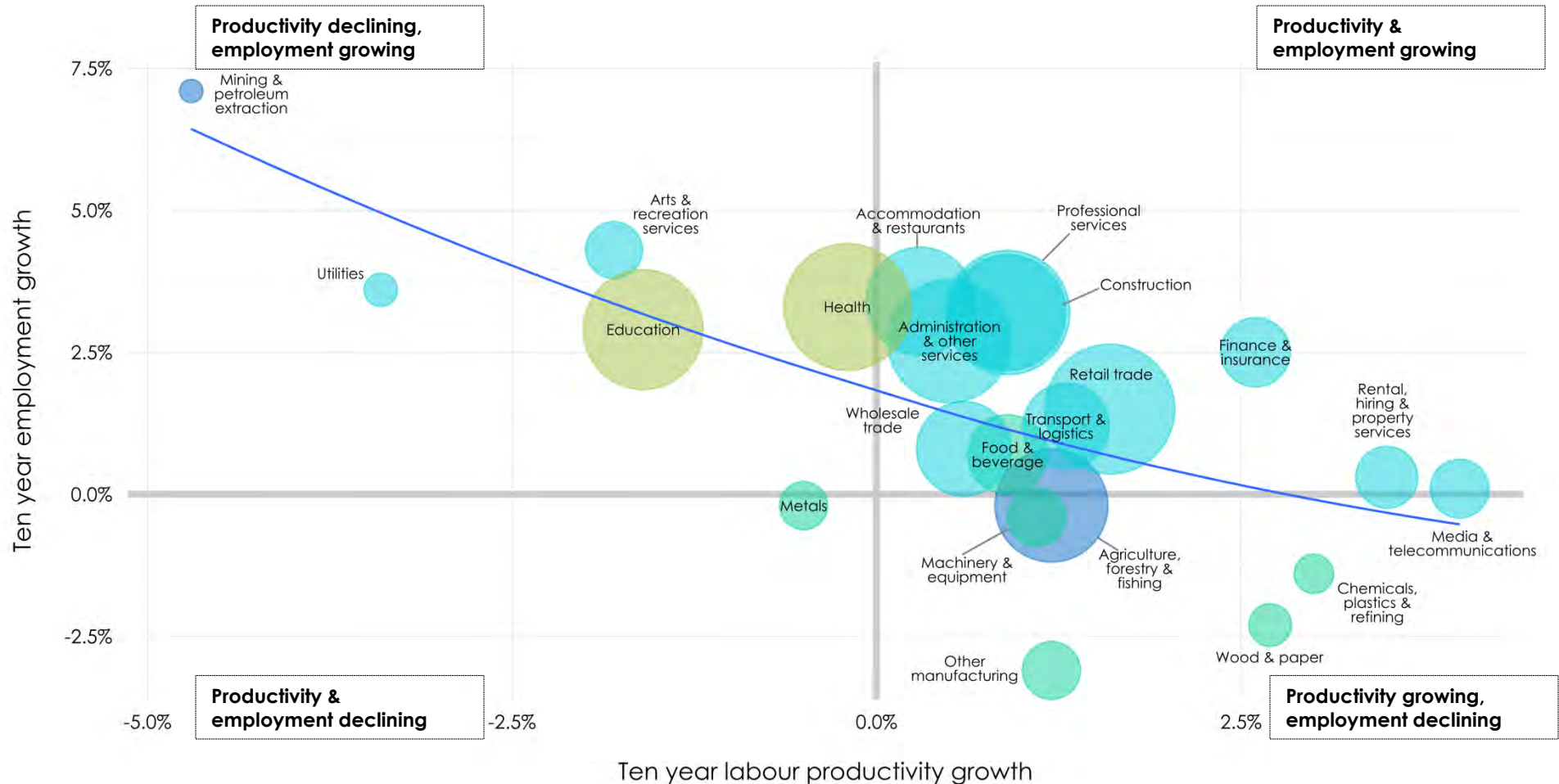
Source: Statistics New Zealand, customised data drawn from the Longitudinal Business Database (2012), customised data drawn from the Annual Enterprise Survey(2010), Ministry of Business, Innovation & Employment calculations.

Labour productivity growth

Labour productivity growth varies by sector; while some sectors are increasing productivity, others are becoming less productive

10 year labour productivity growth (x axis) vs 10 year employment growth (y axis); size of bubble indicates number employed

Labour productivity CAGR; 2001–2011



Note: productivity data is unavailable for the cross-cutting, government, education and health sectors

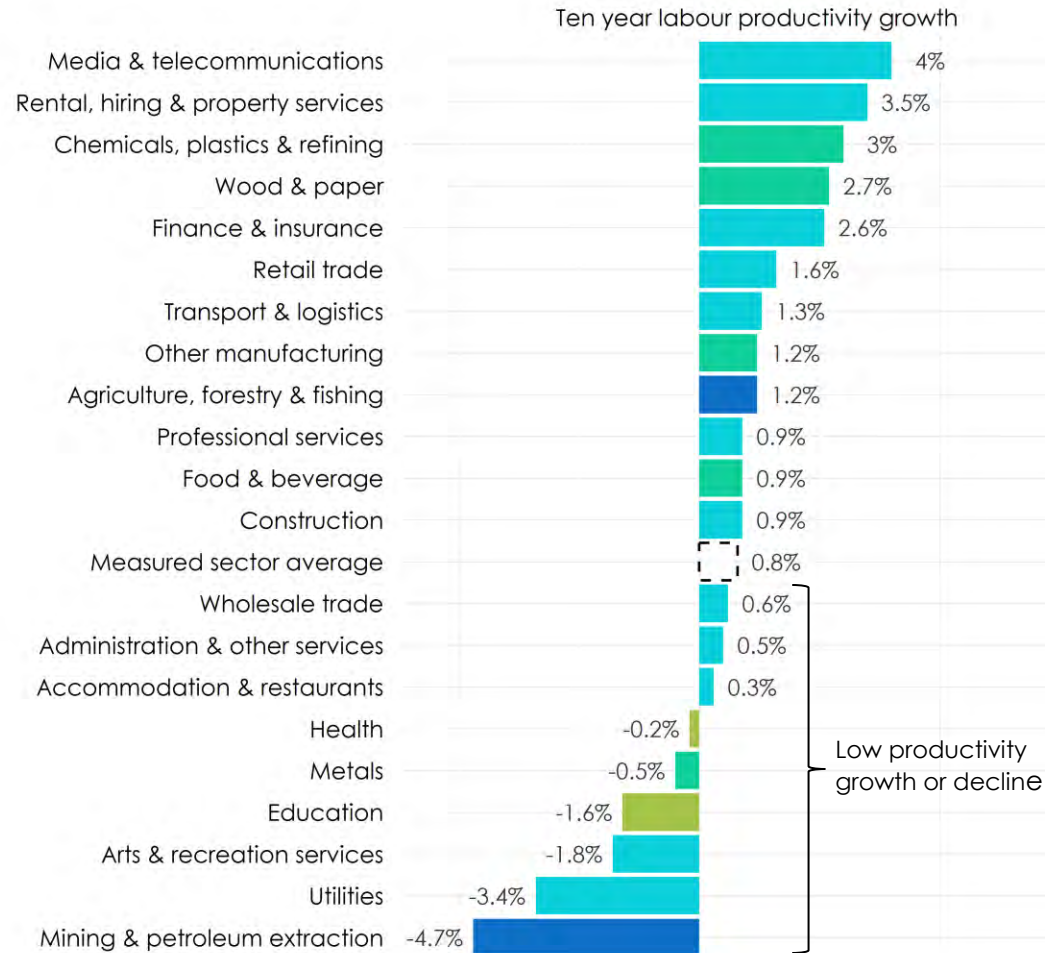
Source: Statistics New Zealand (2013), National Accounts, Linked Employer-Employee Database, and customised data drawn from the Quarterly Employment Survey

Sector labour productivity growth versus employment growth

Sectors increasing productivity are often reducing employment; sectors creating employment often show low/negative productivity growth

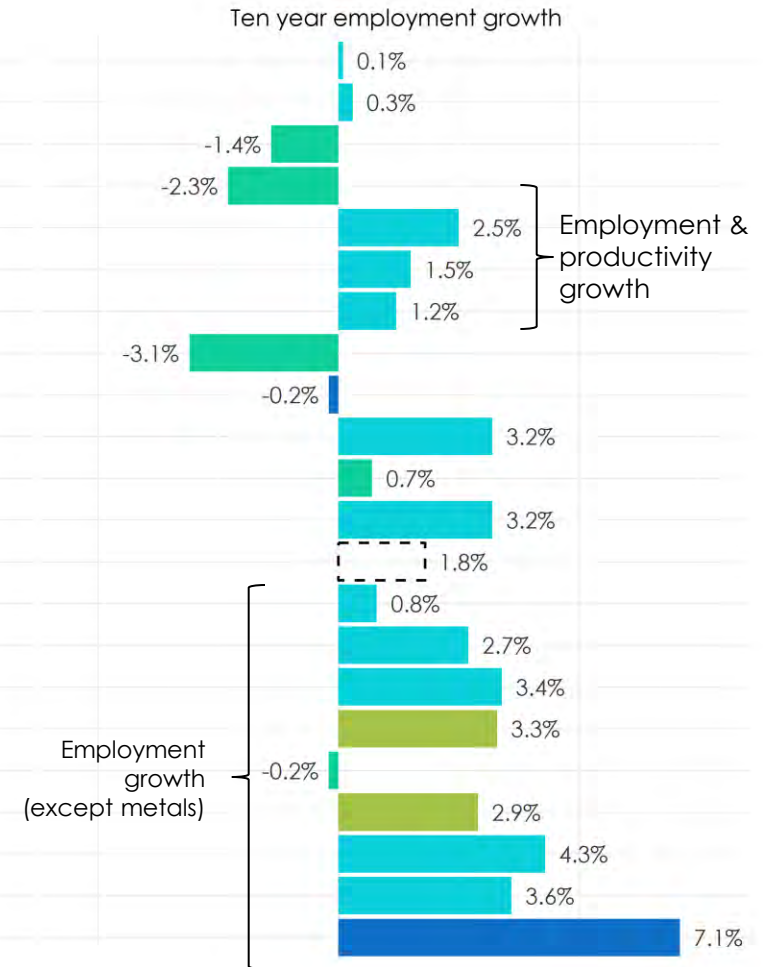
10 year labour productivity growth

Labour productivity CAGR; 2001–2011



10 year employment growth by employing sector

Employment CAGR; 2001–2011



Note: data is unavailable for cross-cutting sectors and government, education and health.

Source: Statistics New Zealand (National Accounts, Annual Enterprise Survey and Linked Employer-Employee Database)



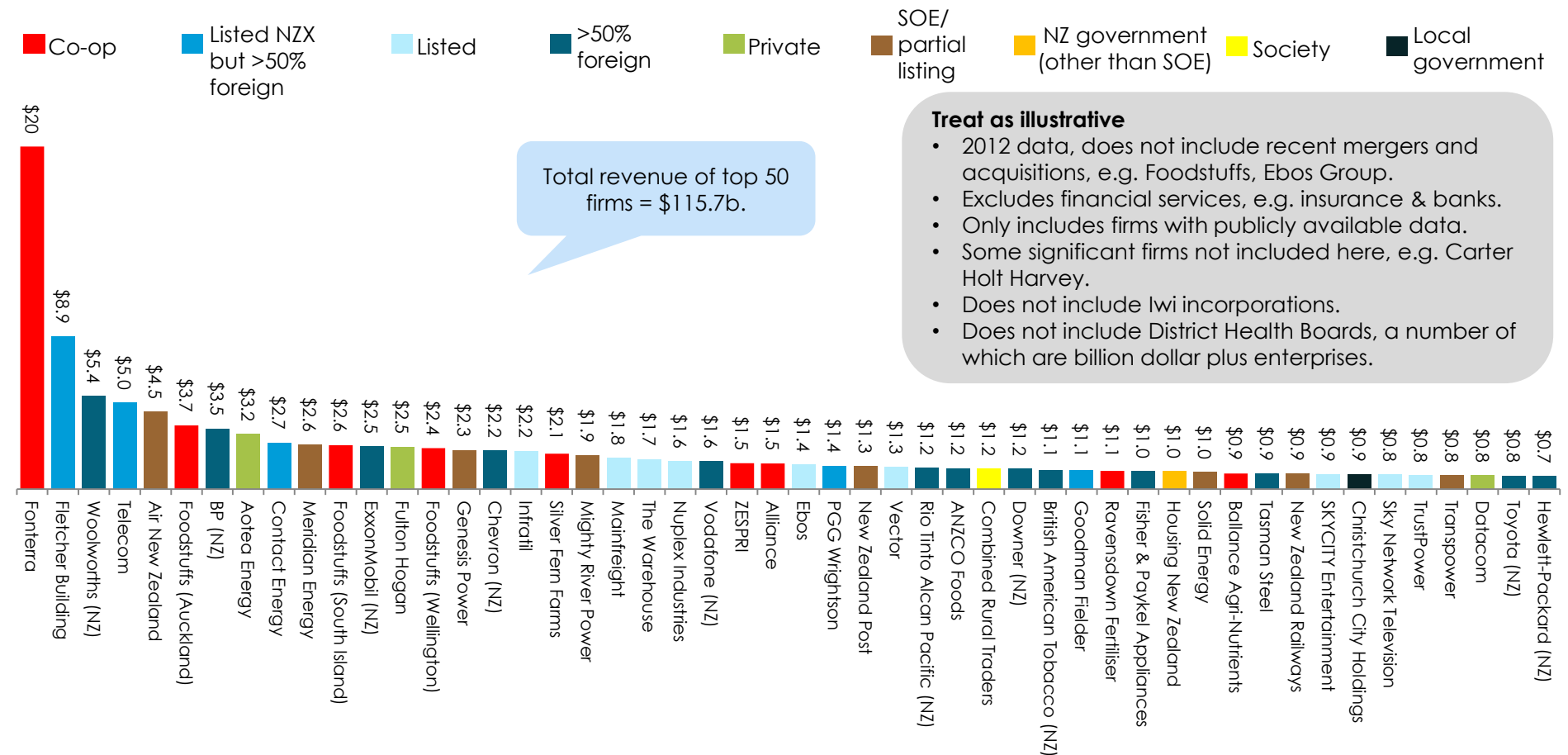
FIRMS AND EMPLOYMENT

Largest New Zealand resident firms by total global revenue

New Zealand has one very large firm, Fonterra, and a long tail of large to mid-sized firms

50 largest NZ firms by total global revenue

NZ\$b; 2012

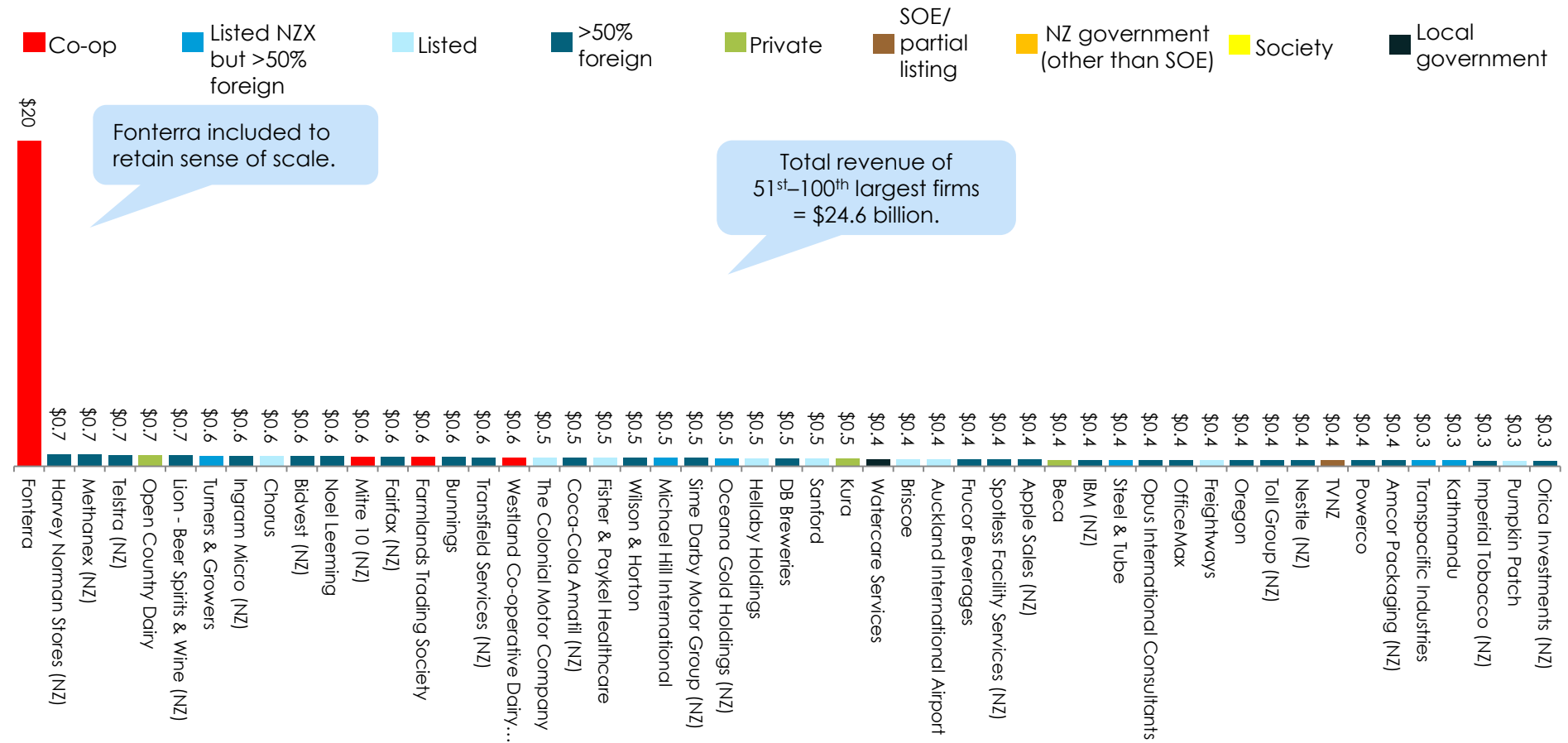


Source: New Zealand Management Magazine (2012); various financial years, includes some estimates, excludes firms for which data not available. Used with permission

Largest New Zealand resident firms by total global revenue

51st–100th largest NZ firms by total global revenue

NZ\$b; 2012



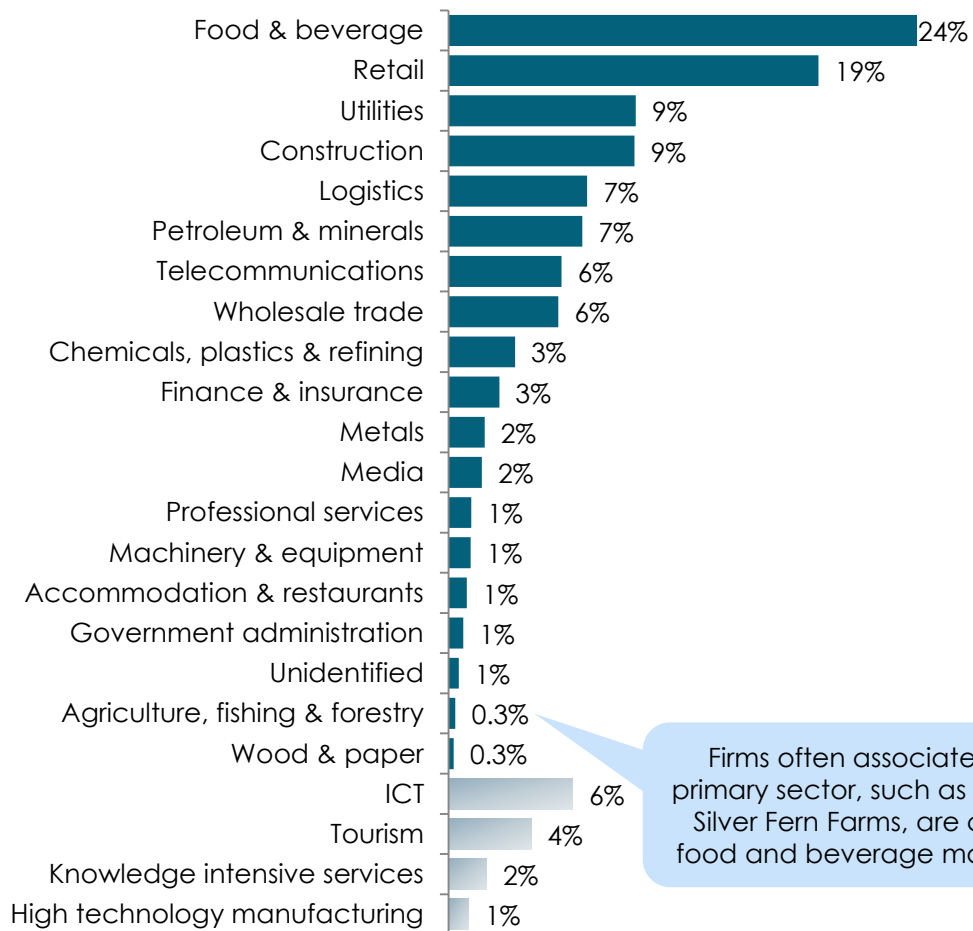
Source: New Zealand Management Magazine (2012); various financial years; includes some estimates and excludes firms for which data not available. Used with permission

Largest firms by sector and ownership

Food and beverage generates a quarter of total revenues; revenues for cooperatively owned firms are 27% of the total

Share of global revenue of largest 100 NZ firms by sector

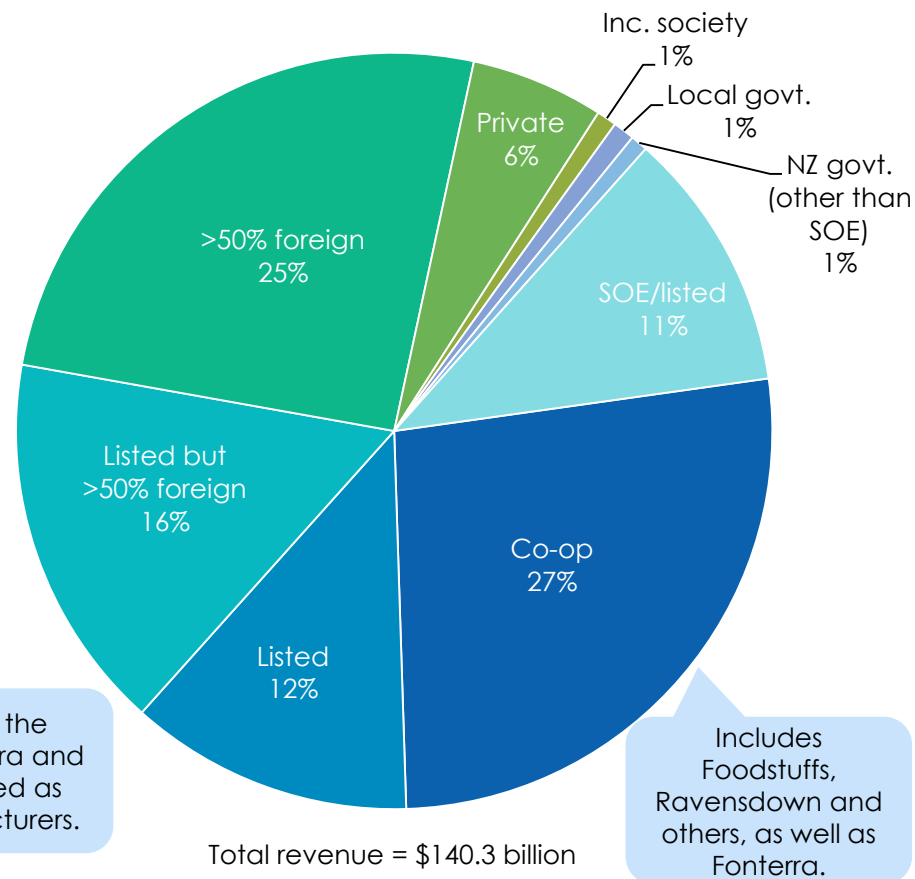
% of top 100 revenue; 2012



Firms often associated with the primary sector, such as Fonterra and Silver Fern Farms, are classified as food and beverage manufacturers.

Share of global revenue of largest 100 NZ firms by ownership

% of top 100 revenue; 2012



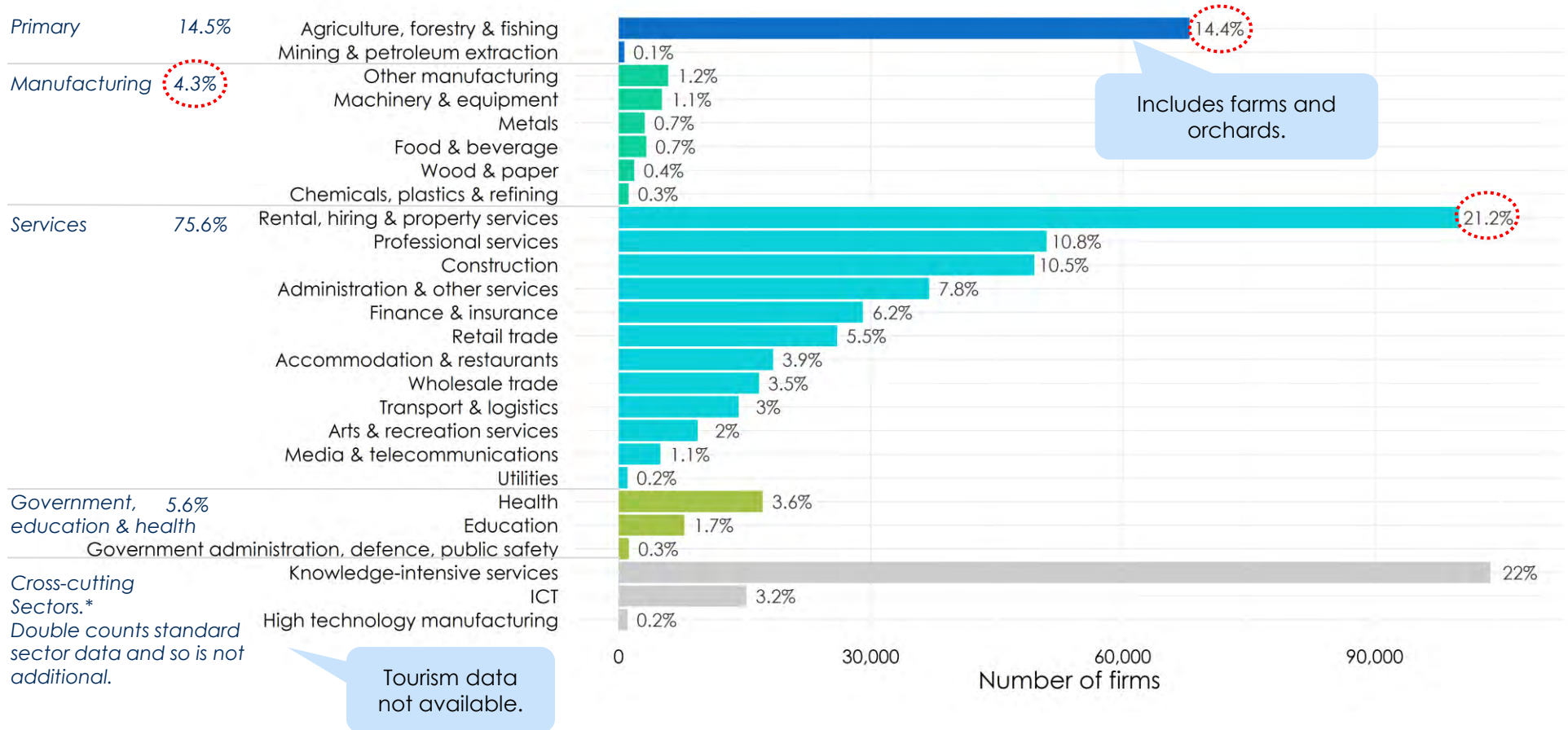
Note: telecommunications refers to retailers such as Telecom and Vodafone; Media refers to firms such as TVNZ or Fairfax; ICT, knowledge intensive services and high technology manufacturing have been double-counted. Source: New Zealand Management Magazine (2012); used with permission. MBIE analysis; contains estimates and assumptions

Total firms by sector

There is a wide variation in the number of firms in each sector

Share of firms by sector, classified by principal activity of firm

% of firms; 2013



*Cross-cutting sectors have been double-counted; data unavailable for tourism sector.

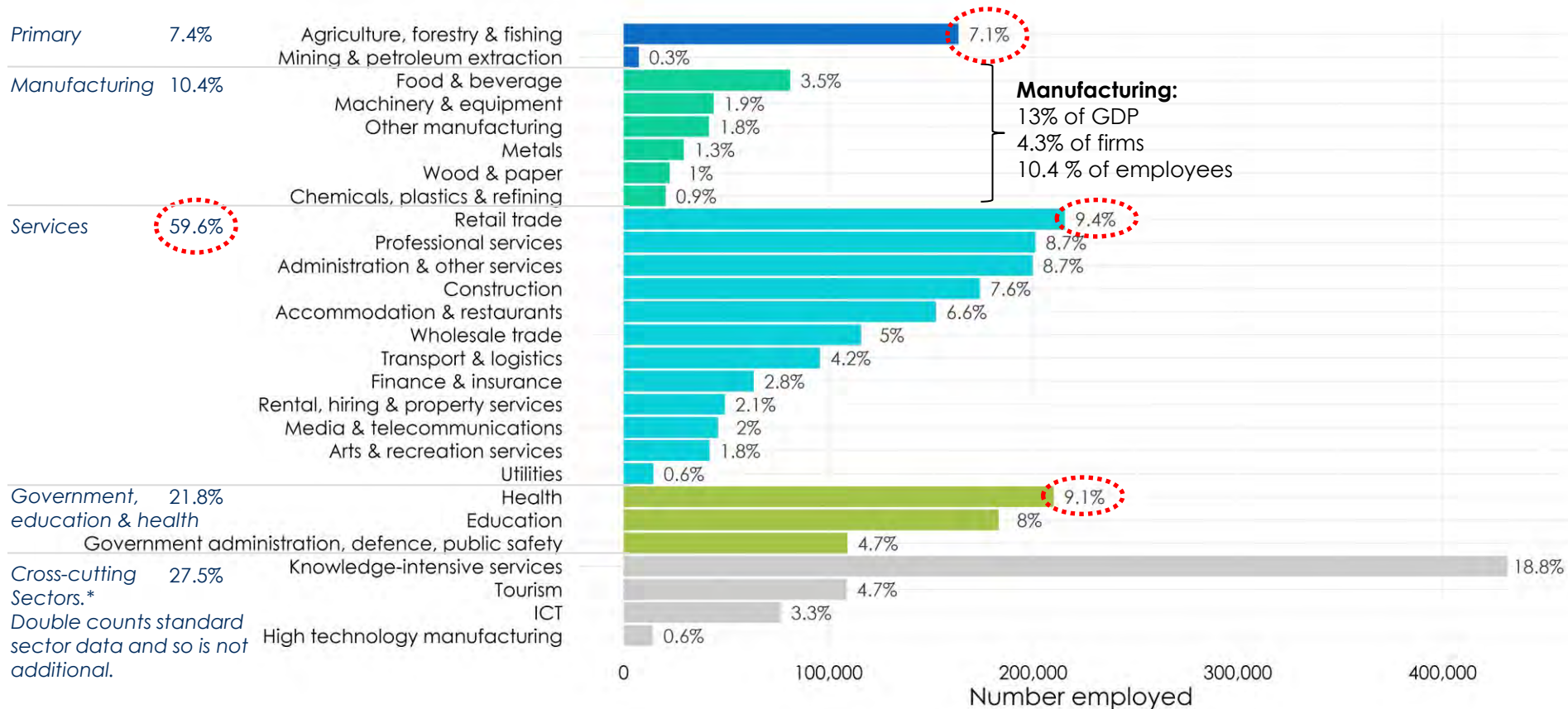
Source: Statistics New Zealand, Business Demography Statistics (2013)

Total employment by sector

Similar to other developed economies, the majority of jobs are in the services sectors; agriculture, forestry and fishing is still a significant employer

Share of employment by sector

% employed (including self-employed); 2012



Note: total employment does not equal 100% as 0.8% of employment cannot be allocated to sectors.

*Employment in cross-cutting sectors has been double-counted

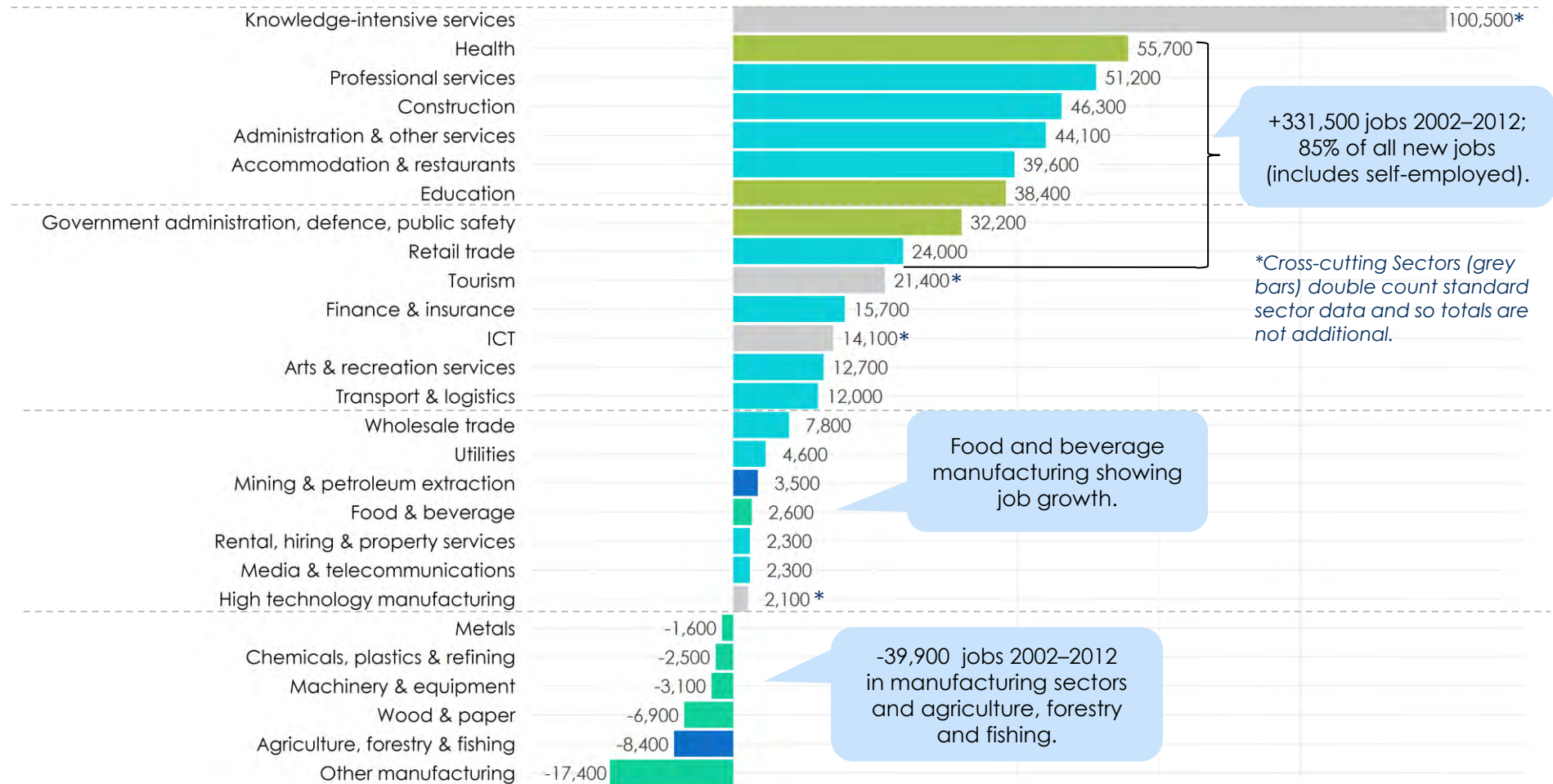
Source: Statistics New Zealand (2012), Linked Employer-Employee Database and Tourism Satellite Account

Change in employment by sector

Jobs added in service sectors and in government, education and health have significantly outweighed jobs lost in manufacturing

Absolute change in sector employment

Employed (including self-employed); 2002–2012

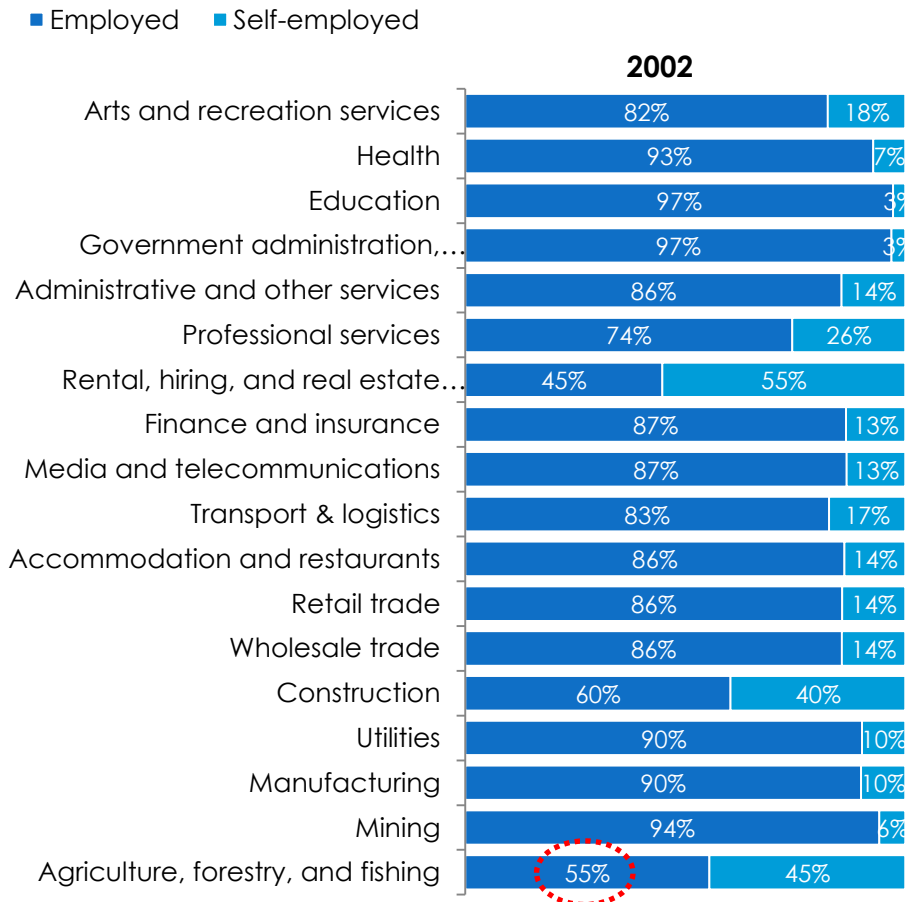


Composition of workforce: employed versus self-employed

The rental, hiring and real estate and construction sectors have the highest percentage of self-employed workers

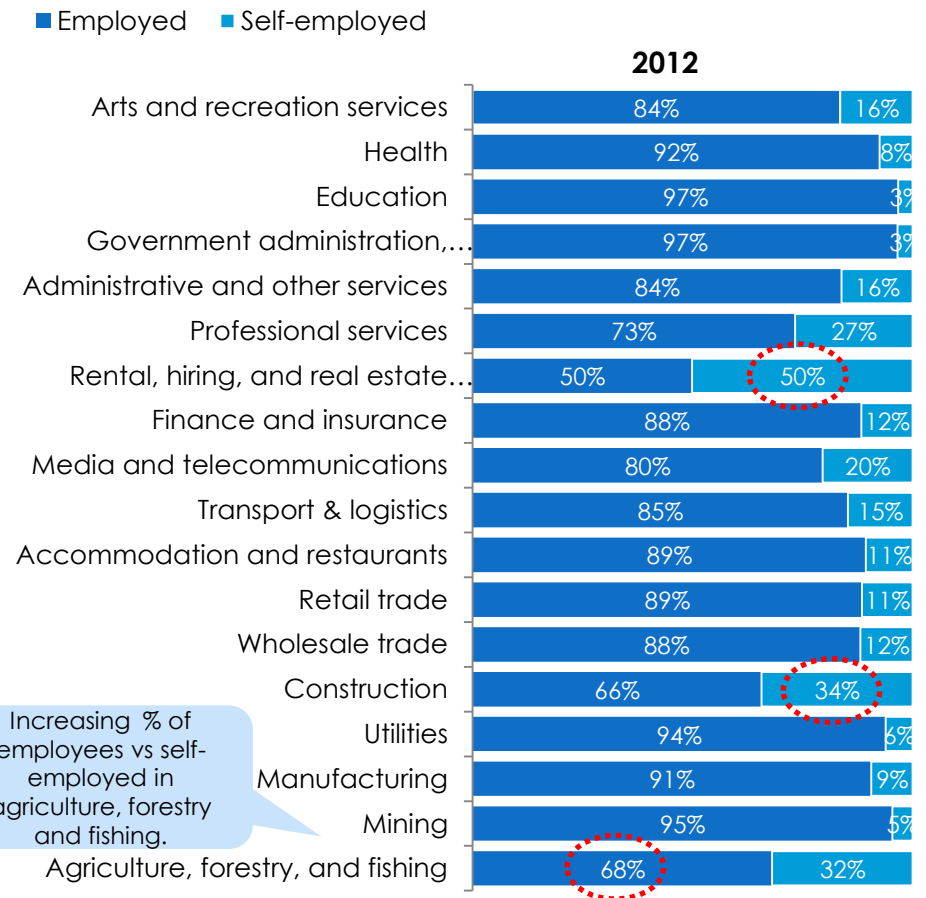
Employed and self-employed by sector

% workers, 2002



Employed and self-employed by sector

% workers, 2012



Employees by firm* size

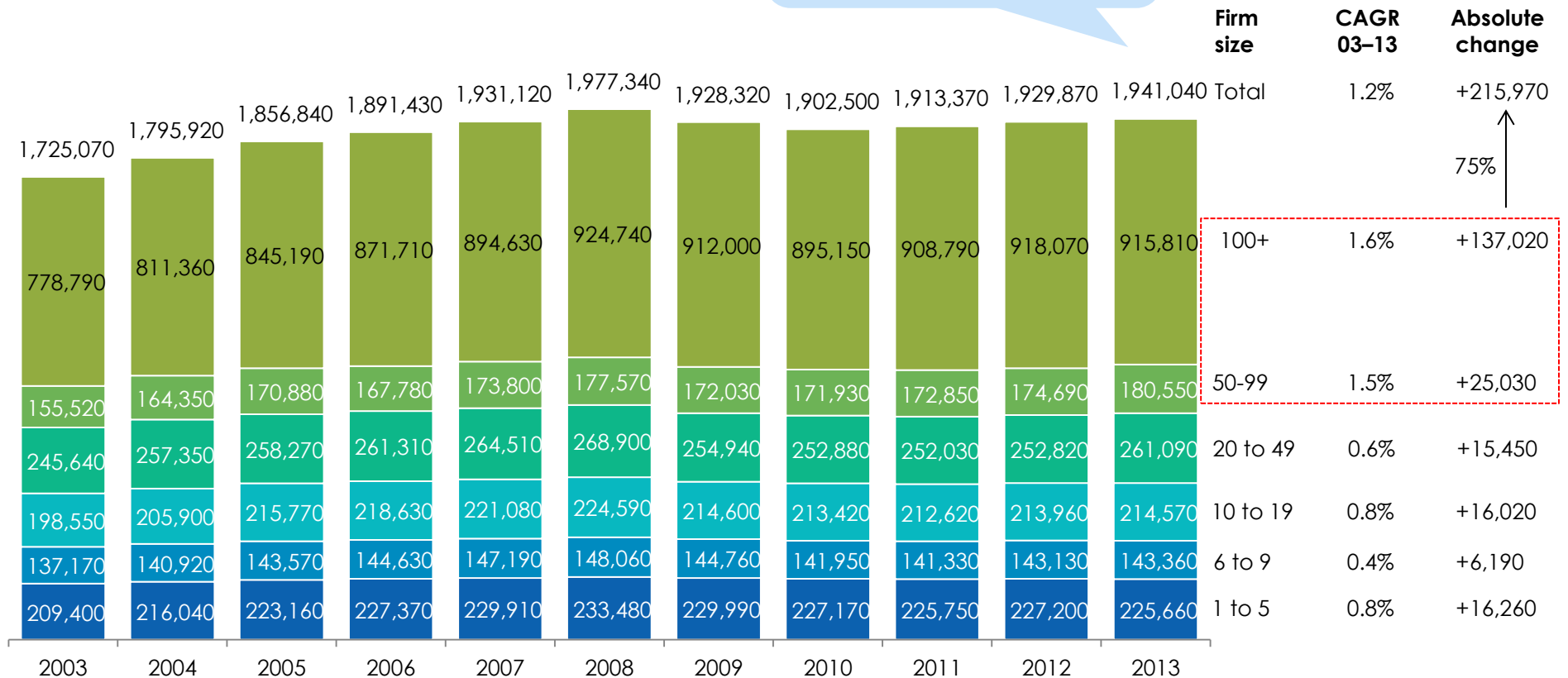
Larger firms (50+ and 100+ employees) generating employment at a faster rate than smaller firms

Employment (head count) distribution by firm size

Employees; 2003–2013

Note: excludes self-employed and other non-employing businesses.

Firms with 50 or more employees generated 162,000 jobs or 75% of job growth since 2003. They employ 56% of all workers (excluding self-employed)



Note: employment as at February 2013

*Includes all entities, some of which are not firms such as those in charities, government, education and health

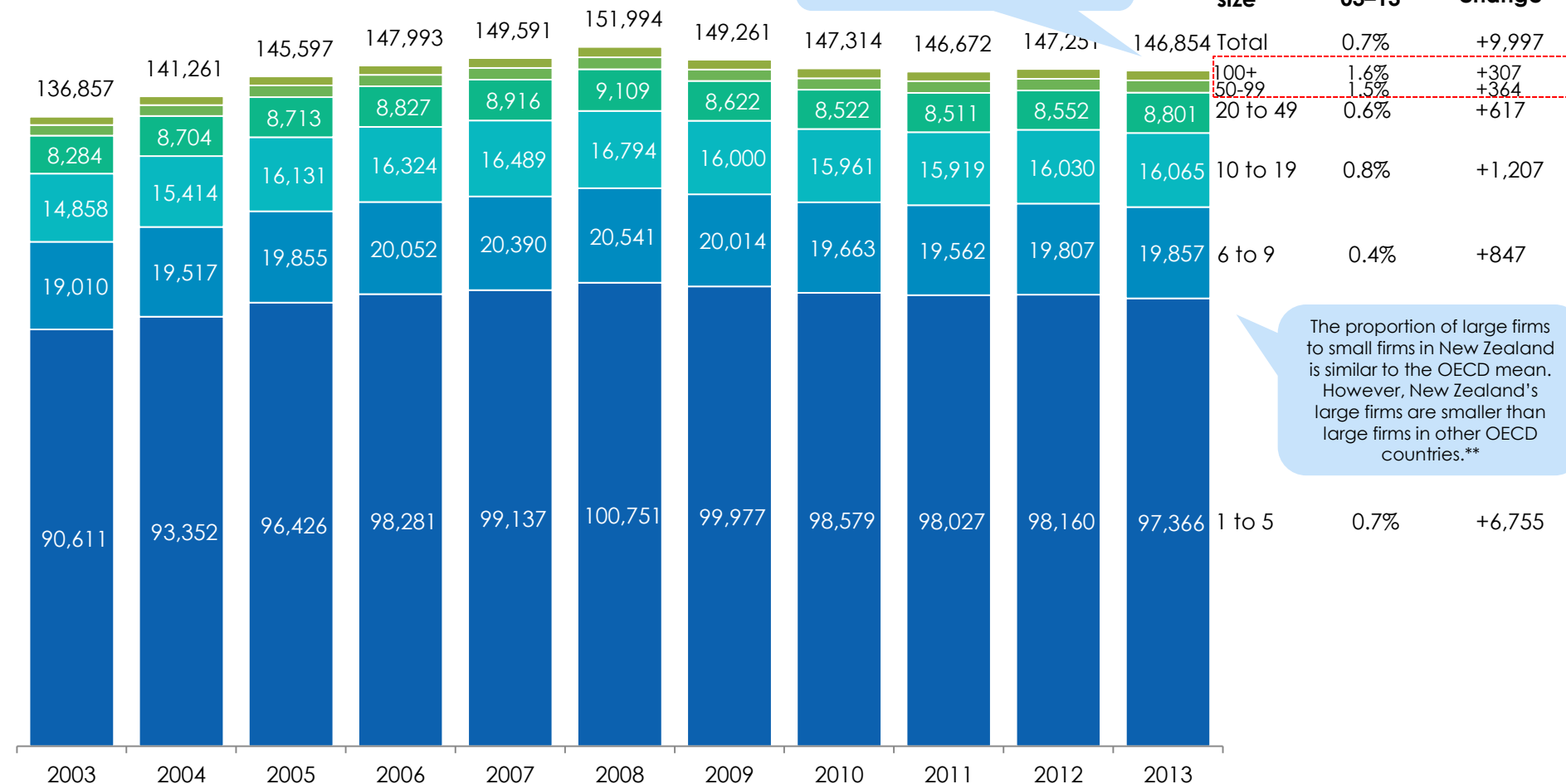
Source: Statistics New Zealand, New Zealand Business Demography Statistics (2013)

Firms* by employment size

Firm numbers peaked in 2008; in percentage terms the economy added larger firms (50+ and 100+ employees) at a faster rate than smaller firms

Number of firms by employee numbers

Firms; 2003–2013



Includes all entities, some of which are not firms such as those in charities, government, education and health

Source: Statistics New Zealand, Business Demography Statistics (2013). Employment as at February 2013

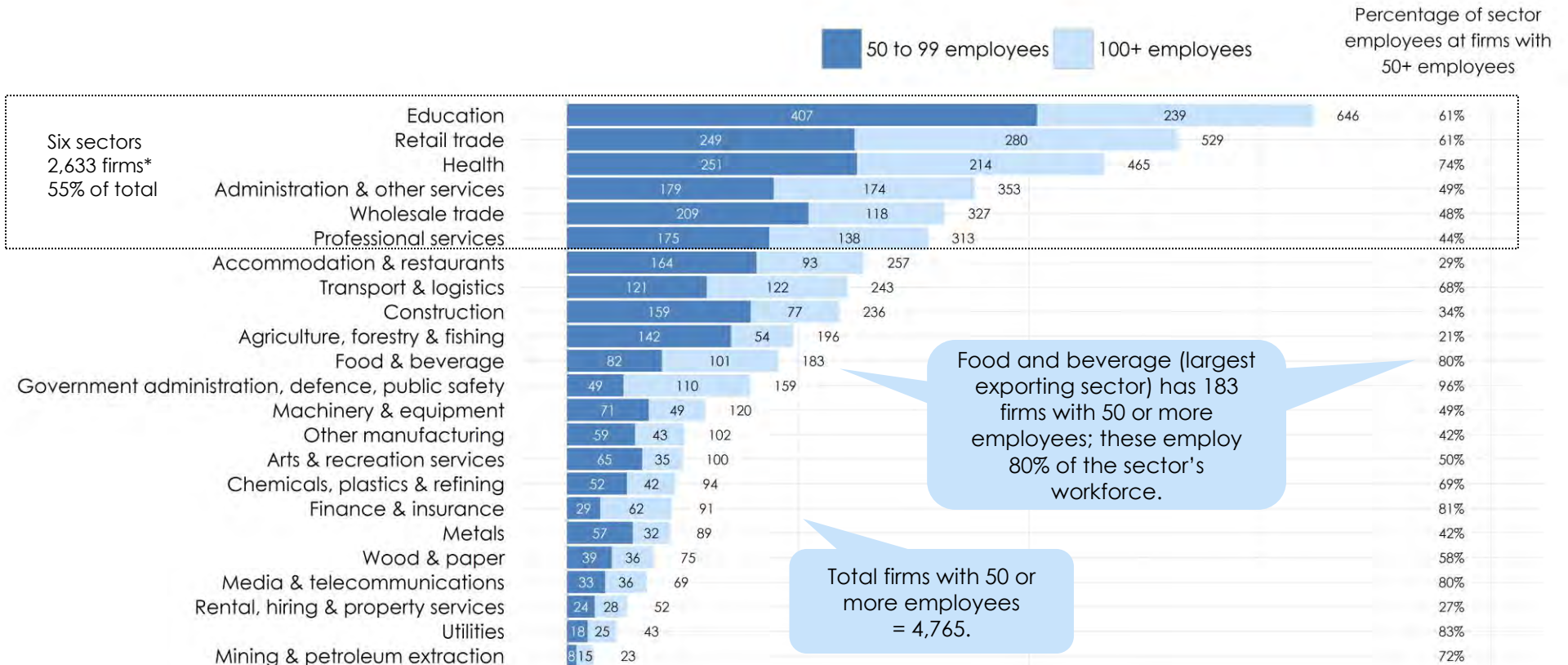
**Economic Development Indicators, 2011. Available from <http://www.med.govt.nz/about-us/publications/publications-by-topic/economic-indicators>

Large firms* by sector

Large firms are largely concentrated in the domestically focused economy

Firms with 50–99 and 100+ employees

Firms; % total sector employment; 2013



*Includes all entities, some of which are not firms such as those in charities, government, education and health.

Source: Statistics New Zealand, Business Demography Statistics (2013)



EXPORTS

Exports by sector: data limitations

This report attributes exports to sectors by mapping products and services to the sector most likely to produce them

Classifying exports by sector

Statistics on exports are collected according to product or service type and not according to the sector that produced them.

To obtain insight into the export performance of sectors for this report, Statistics New Zealand prepared a concordance that maps HS codes (how goods exports are classified) to ANZSIC codes (how sectors are classified).

This concordance allocates exports to sectors based on the type of product the sector is most likely to produce. Thus logs and fruit are attributed to the agriculture, forestry and fishing sector, while sawn wood products are attributed to the wood and paper sector, and milk powder and frozen beef are attributed to the food and beverage manufacturing sector.

Tourism exports

International tourism expenditure data was sourced from the Tourism Satellite Account published by Statistics New Zealand. A breakdown by main product allowed spending on transport, retail trade, restaurants and hotels and education to be attributed to sectors.

Export education

The term 'export education' is usually used to refer to spending by international students in New Zealand. Spending by international students in New Zealand for more than a year is included in the travel exports data but not in the contribution of international visitor expenditure to total tourism exports.

The 2012/13 value of international education is measured at \$2.6 billion. See report by Infometrics available from the Education New Zealand website: www.enz.govt.nz

The education sector also provides education services overseas. This is a sub-set of commercial services exports.

Treat with caution

The export data for sectors provided in this report is believed to be broadly correct, but should be treated with caution. The method used means that some sectors are shown as having no exports, which in some cases is not factually true.

The clearest example is the wholesaling sector. Many wholesalers operating in New Zealand export products on behalf of the producers of those products, or purchase and on-sell them overseas. These exports are attributed to the sector that manufactured, grew, harvested or mined them, rather than to the wholesaling sector.

Experimental data from Statistics New Zealand indicates that the value of goods exports by wholesale trade firms was around \$8b in 2011.

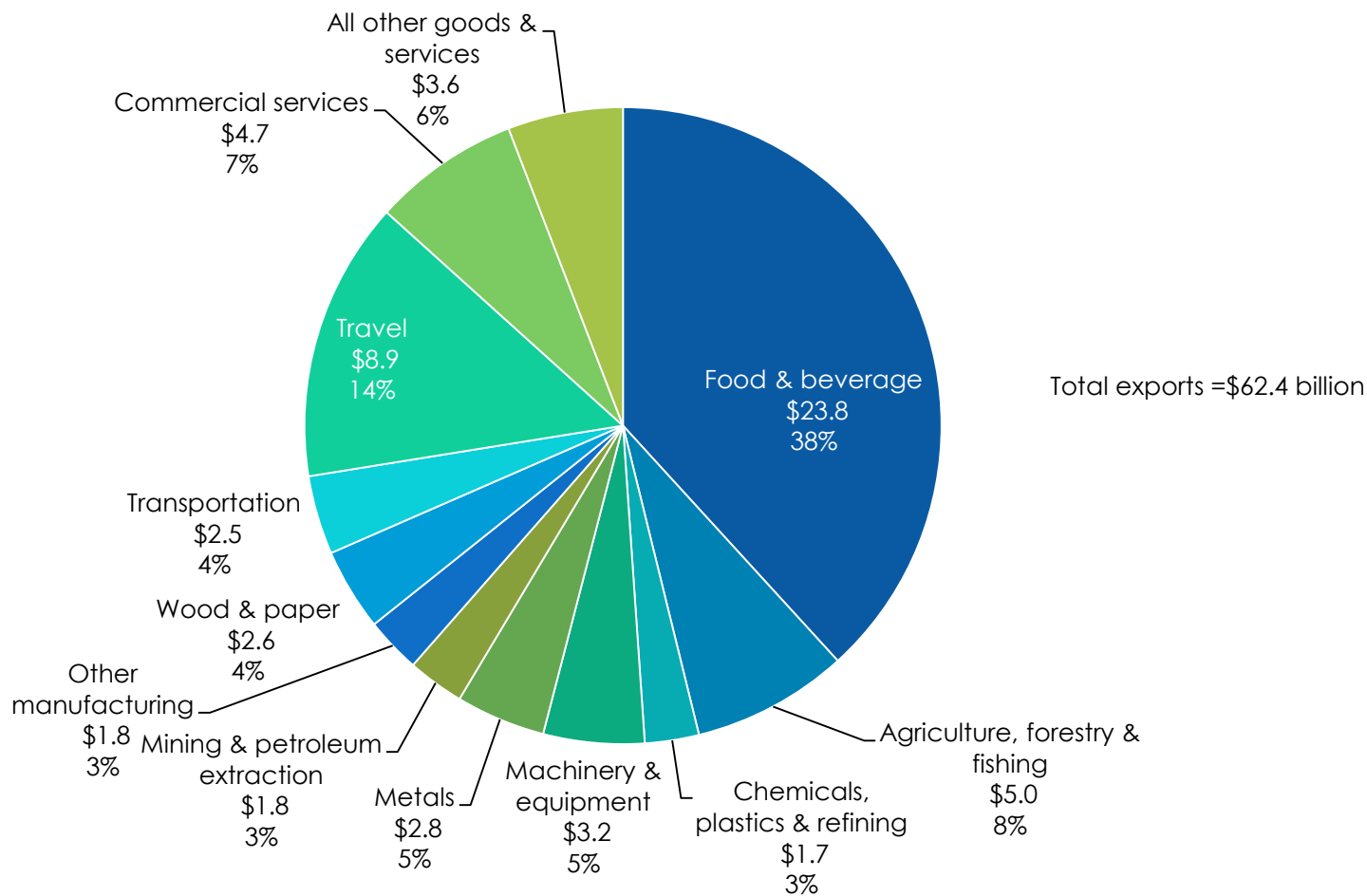
See Appendix for further details.

New Zealand exports

New Zealand exported \$62.4b worth of goods and services in 2013; exports occurred across a wide range of categories; food and beverage stands out for absolute size

Total exports

NZ\$b; goods exports by sector (ANZSIC); services exports by type; year to June 2013

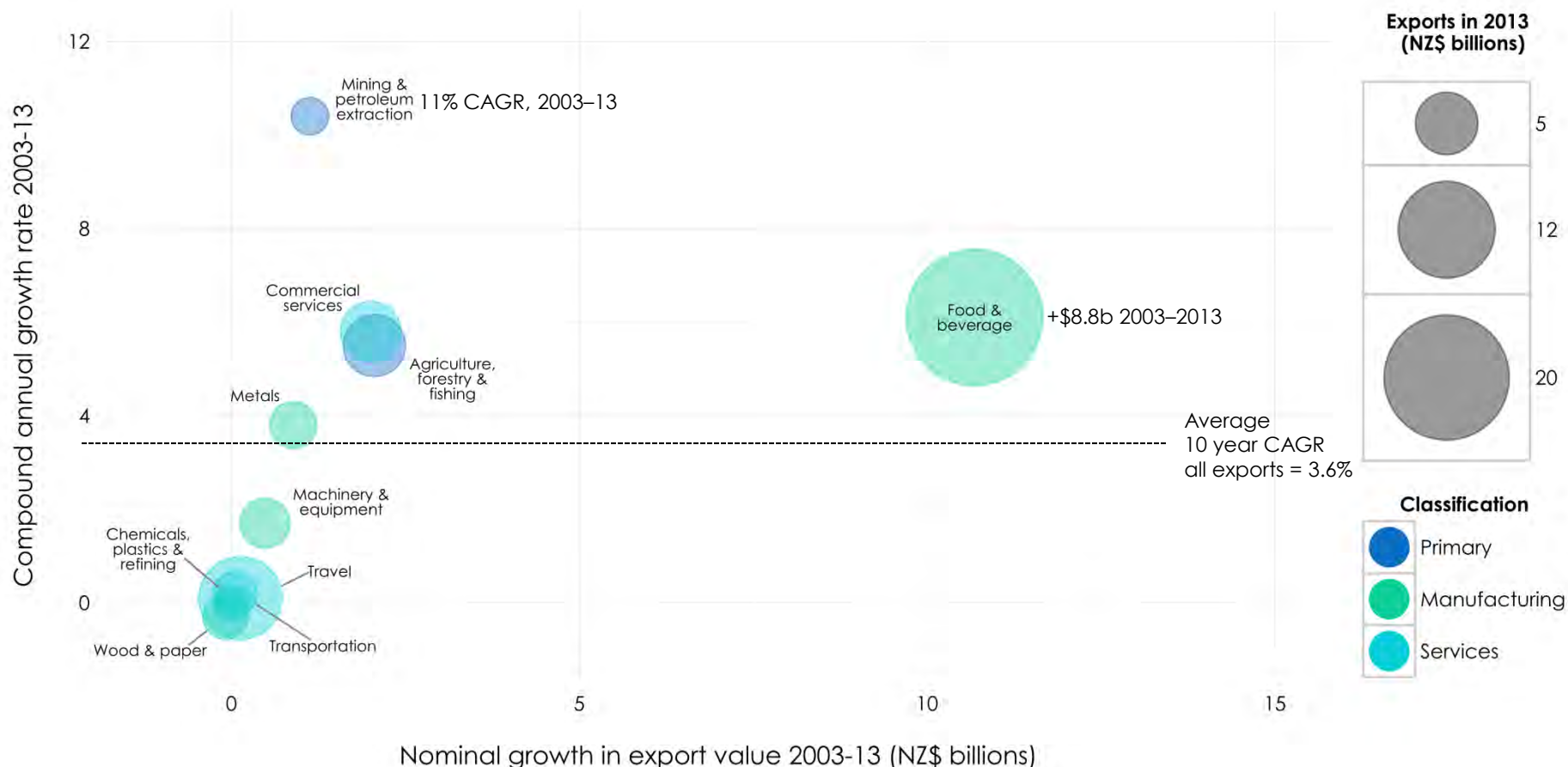


Export growth

The food and beverage sector has added the most export value in the last decade (\$8.8b), but the fastest growth has been in petroleum and minerals (11% p.a.)

Export growth matrix: absolute value growth vs rate of growth vs export value in 2013

NZ\$b; nominal values; 2013

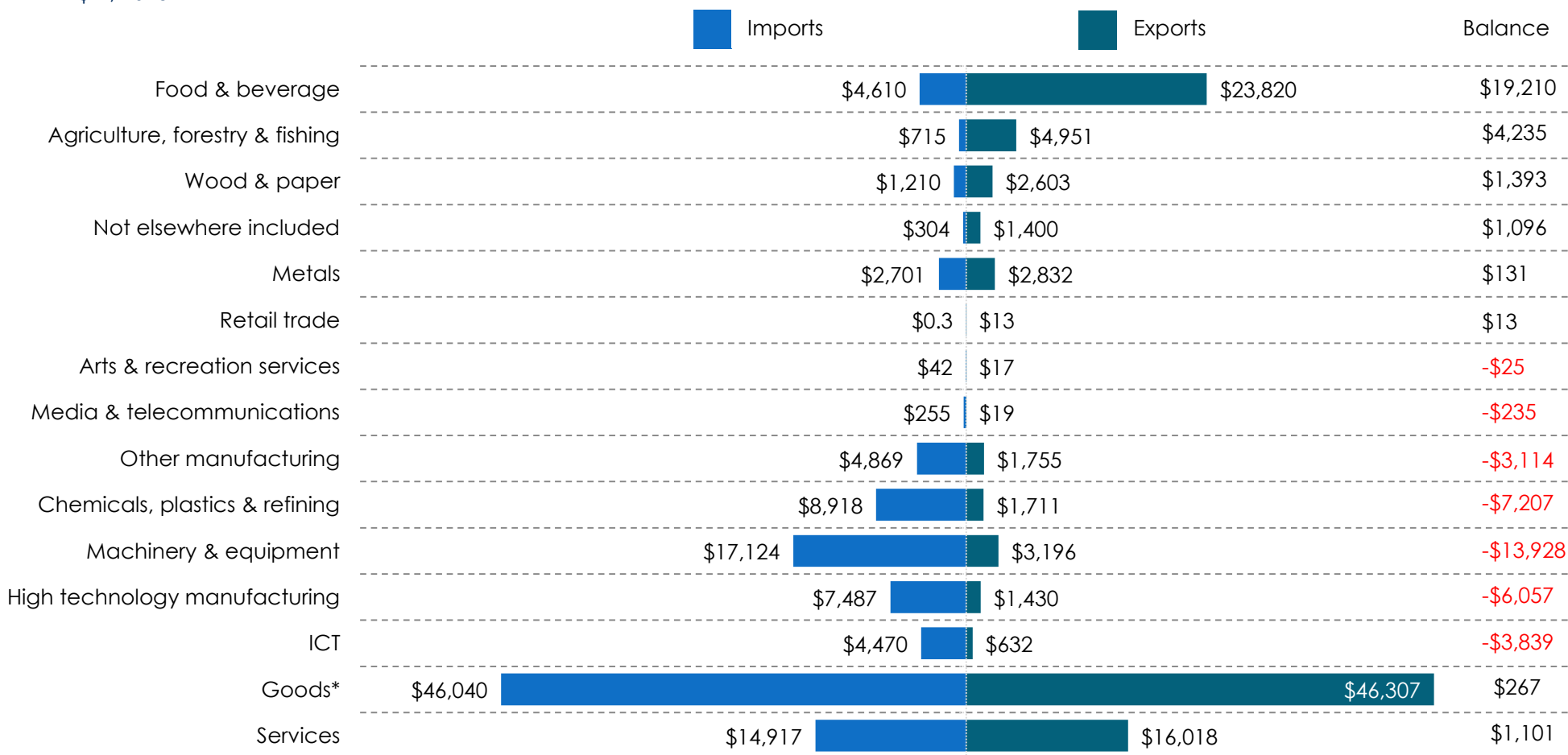


Trade balance by sector: 2013

New Zealand has a trade surplus in food and beverage, primary products and services and a trade deficit in 'other' manufactured goods and petroleum

Import and export data by sector

NZ\$m; 2013

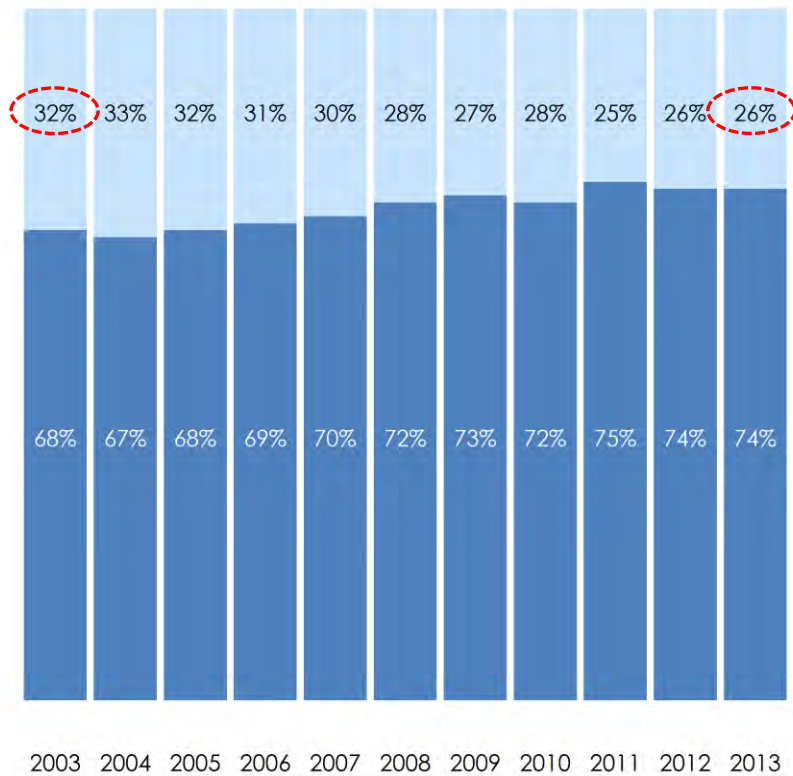


Change in export mix; goods versus services

Services export growth is lagging behind that of goods; services share of total exports is declining

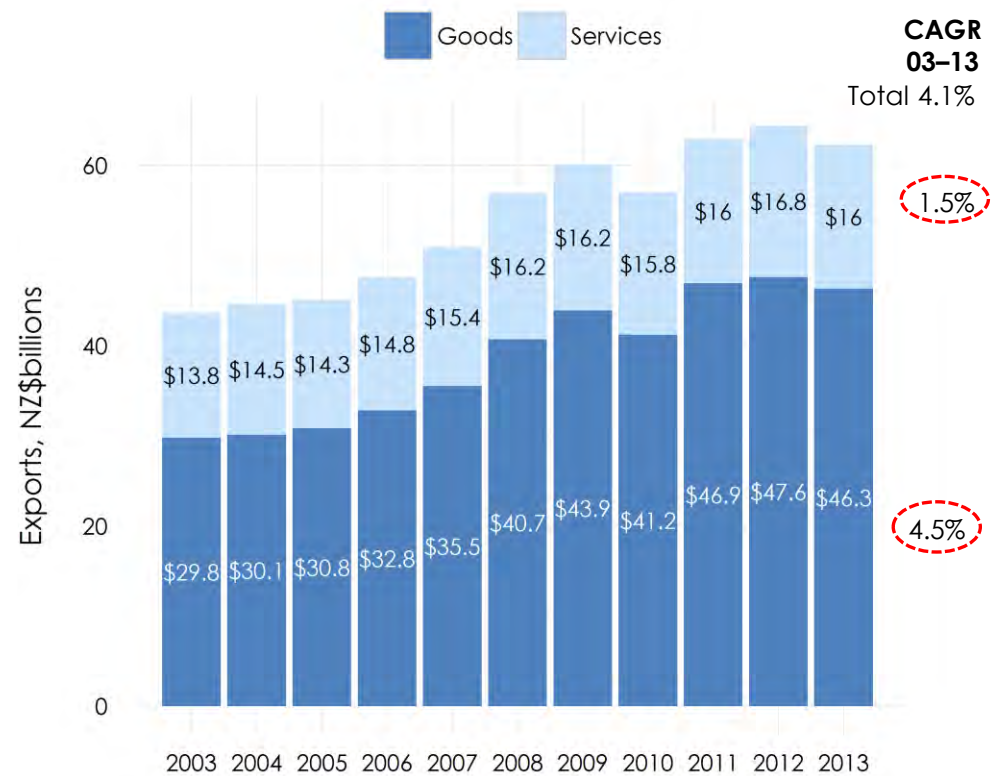
Share of exports, goods vs services

%; 2003–2013



10 year export growth, goods and services

NZ\$b; 2003–2013

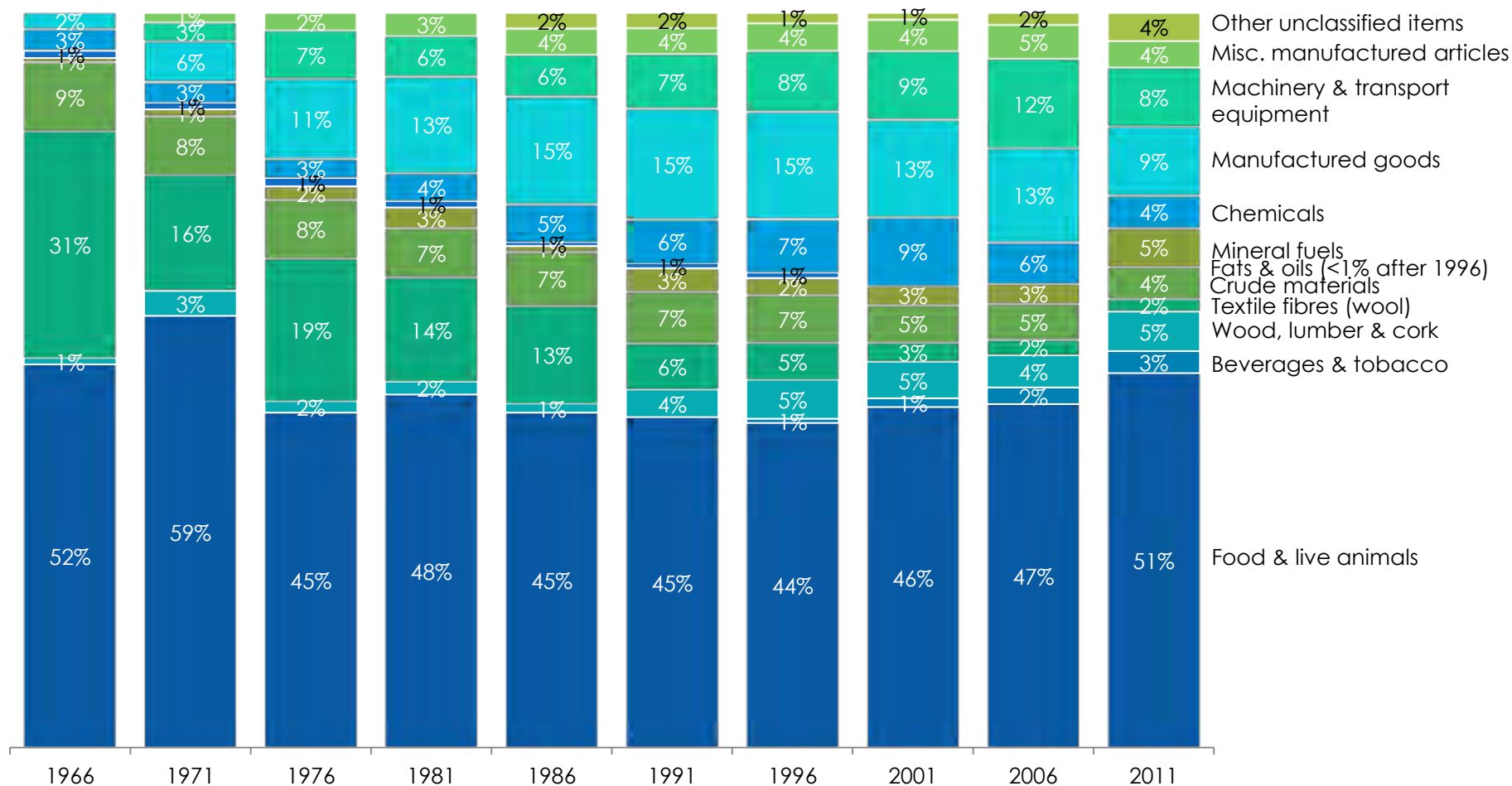


Change in export mix; goods exports

The composition of goods exports has changed over time; food remains the mainstay and is becoming relatively more important

Share of New Zealand's merchandise trade exports by type

Export goods; 1966–2011

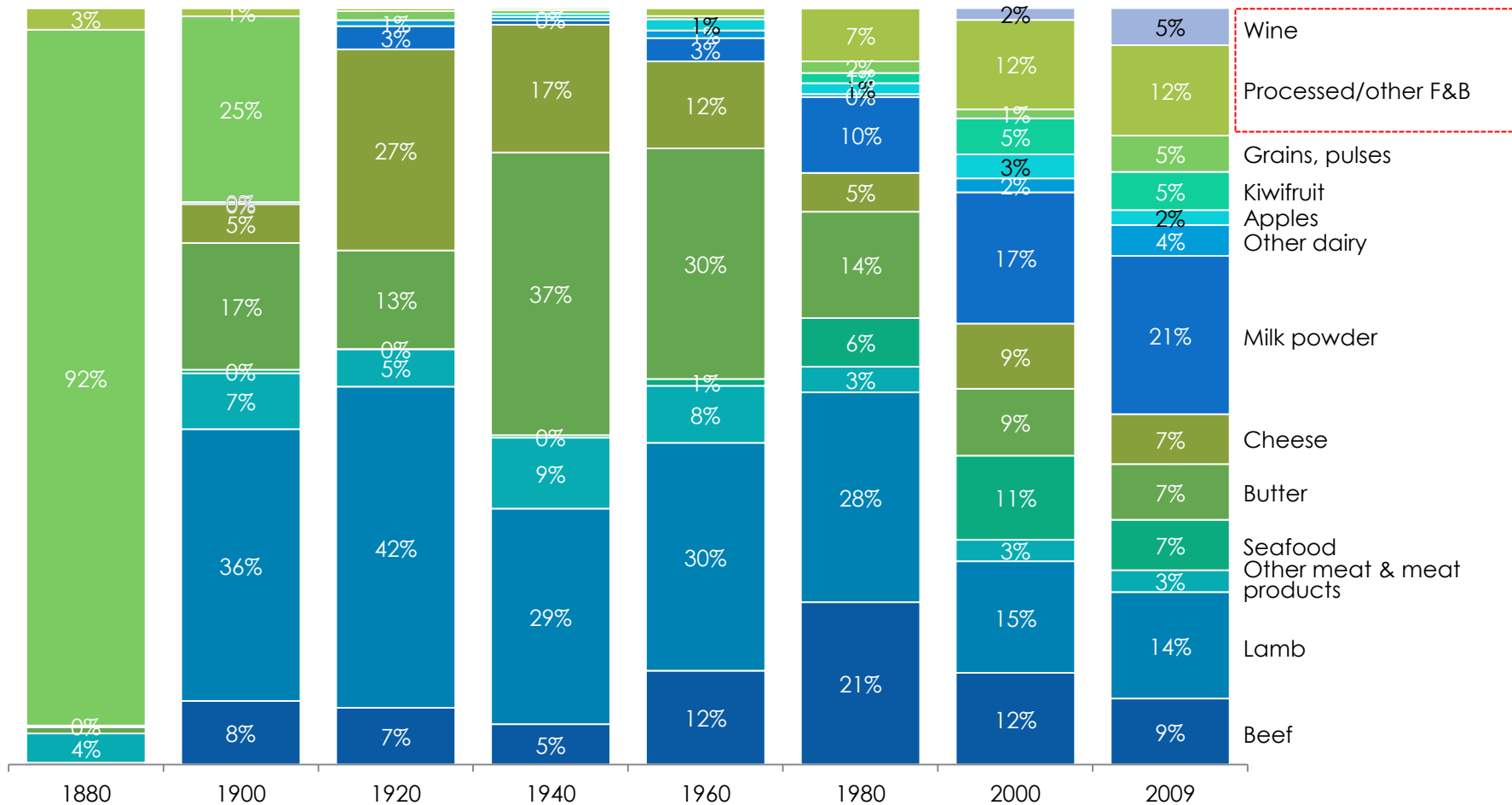


Change in export mix; food and beverage exports

Food and beverage exports exhibit similar significant changes; the shift is currently towards beverages and processed/other foods

NZ food & beverage export value mix by product

% of export food and beverage sales; given years



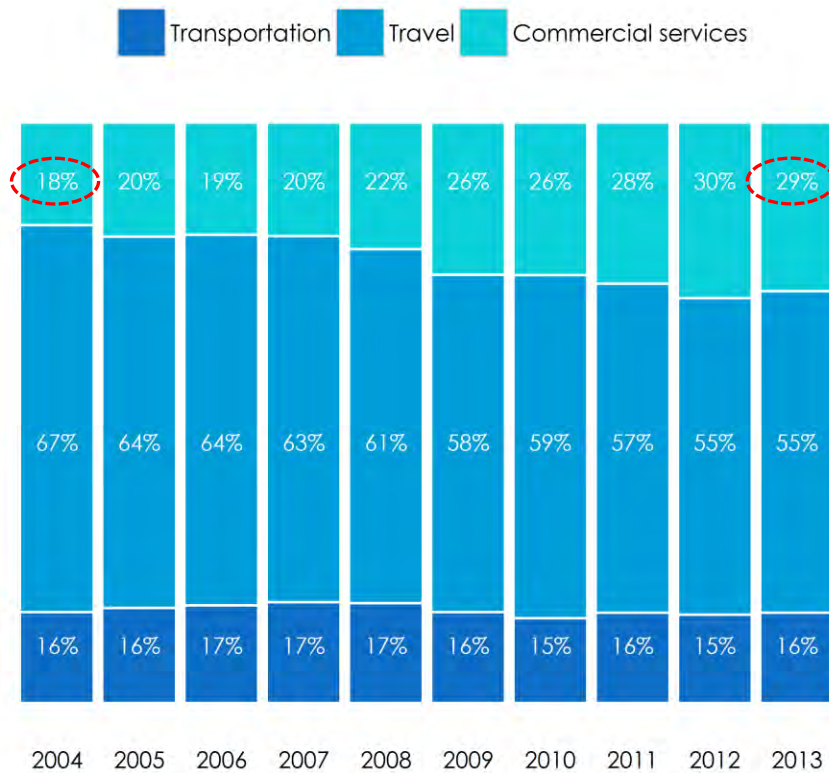
Source: Coriolis Research, Food and Beverage Information Project Industry Snapshot (2011); further information available from www.foodandbeverage.govt.nz

Change in export mix; services exports

Change is also occurring in services exports; commercial services now make up 29% of the total services exports, up from 18% in 2004

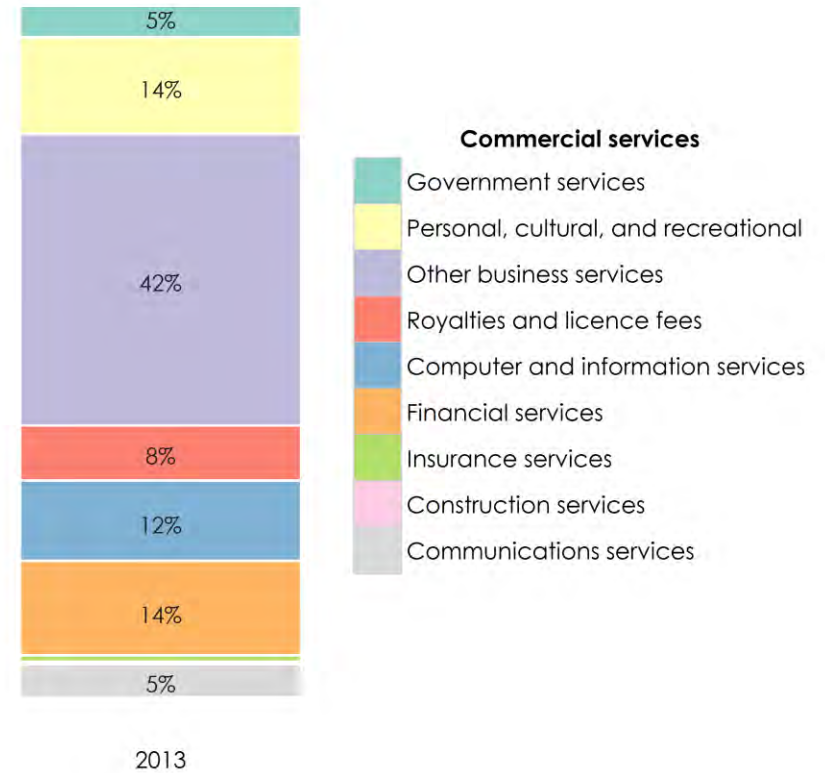
Exports of services

%; 2003–2013



Composition of commercial services exports

% commercial services, 2013

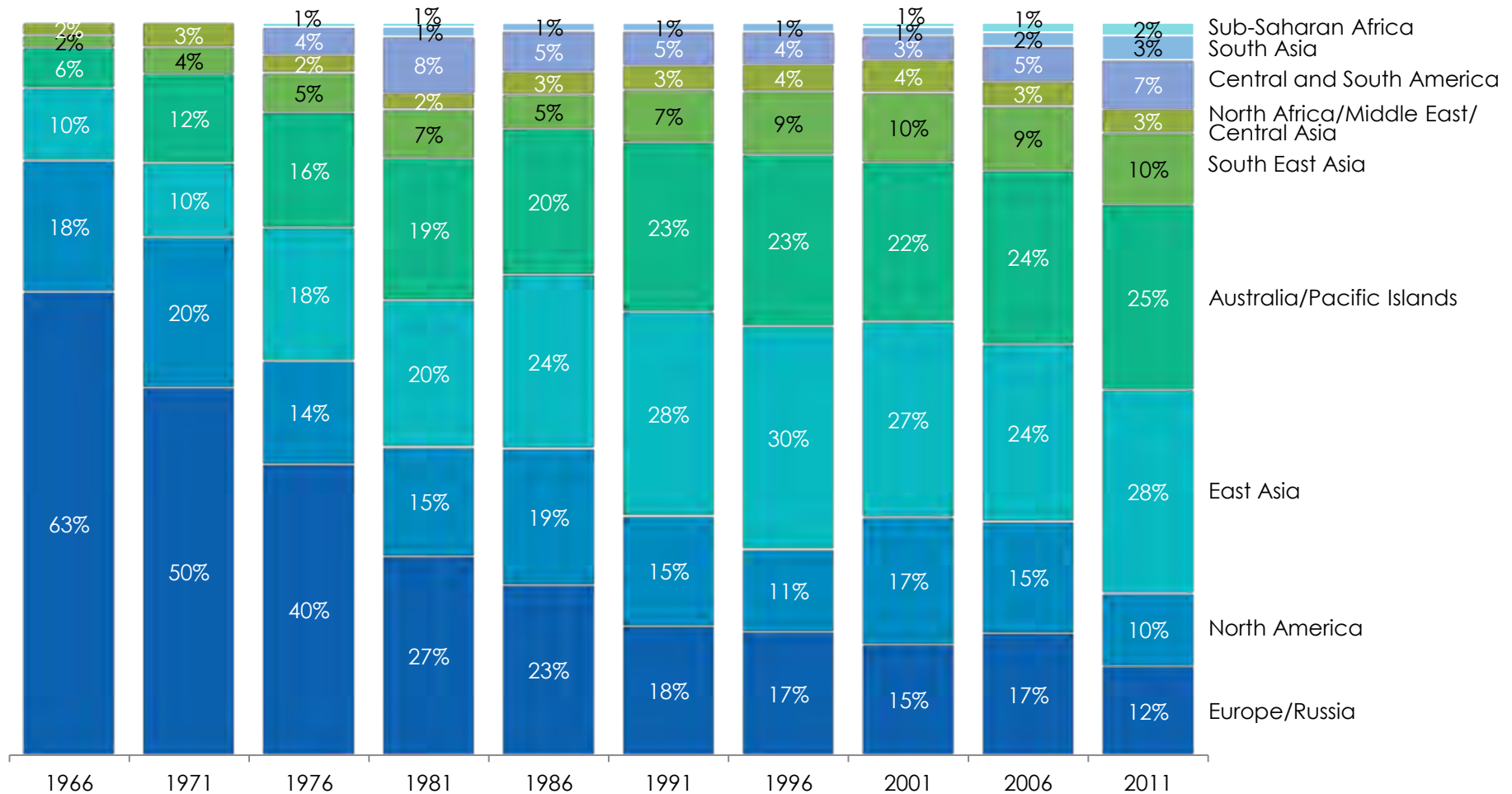


Changing markets

New Zealand has undergone a fundamental transition from supplying northern hemisphere markets to supplying the Asia-Pacific region

Share of New Zealand's export goods by destination region

Export goods; 1966–2011

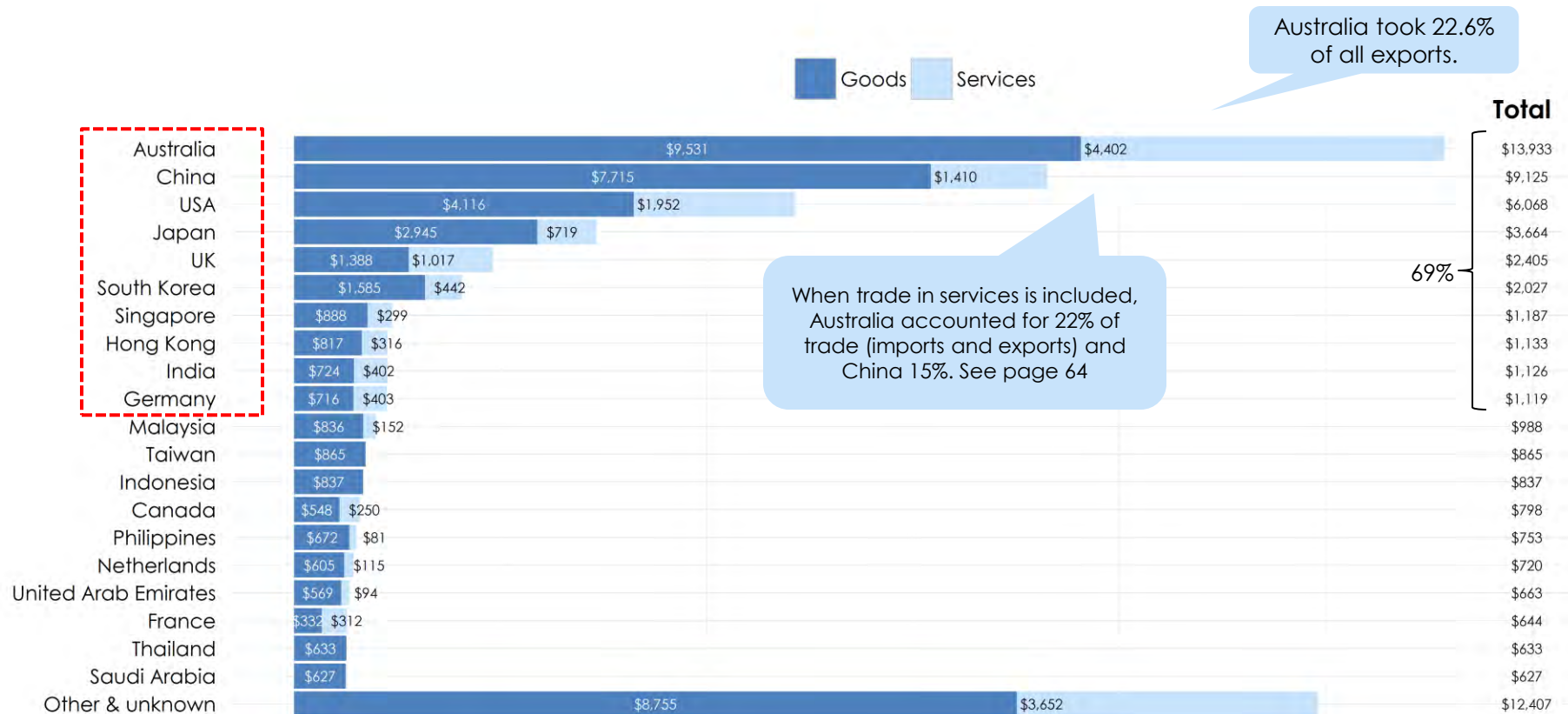


Top 20 markets: goods and services

In 2013 there were 10 countries which imported \$1b or more in goods and services from New Zealand; these 10 accounted for 69% of the total value of New Zealand's exports

Top 20 markets for exports of goods and services

NZ\$m; goods and services exports value, year ended June 2013



Total exports (good and services) = \$62.4b, year ended June 2013
Numbers may not total due to rounding

Note: services data for Indonesia, Taiwan, Thailand and Saudi Arabia is not available.

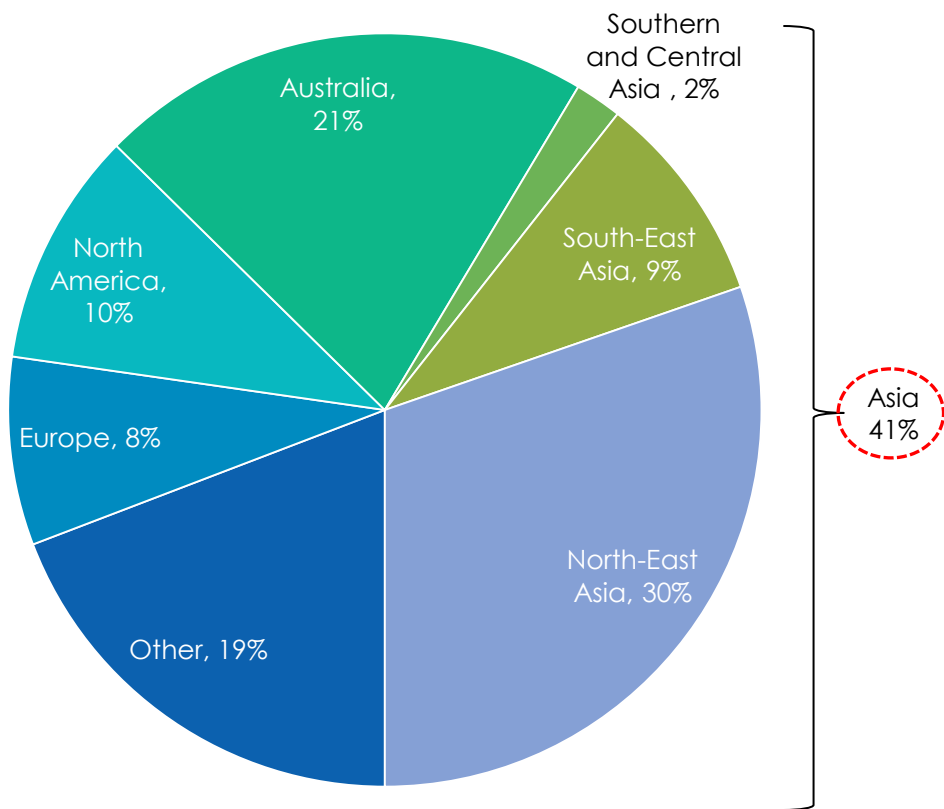
Source: Statistics New Zealand, Global New Zealand and Balance of Payments – International trade in services by country (2013)

Export destinations: goods versus services

Asia now takes 41% of goods exports; but 54% of all service exports are to our traditional western trading partners; Australia alone accounts for 27%

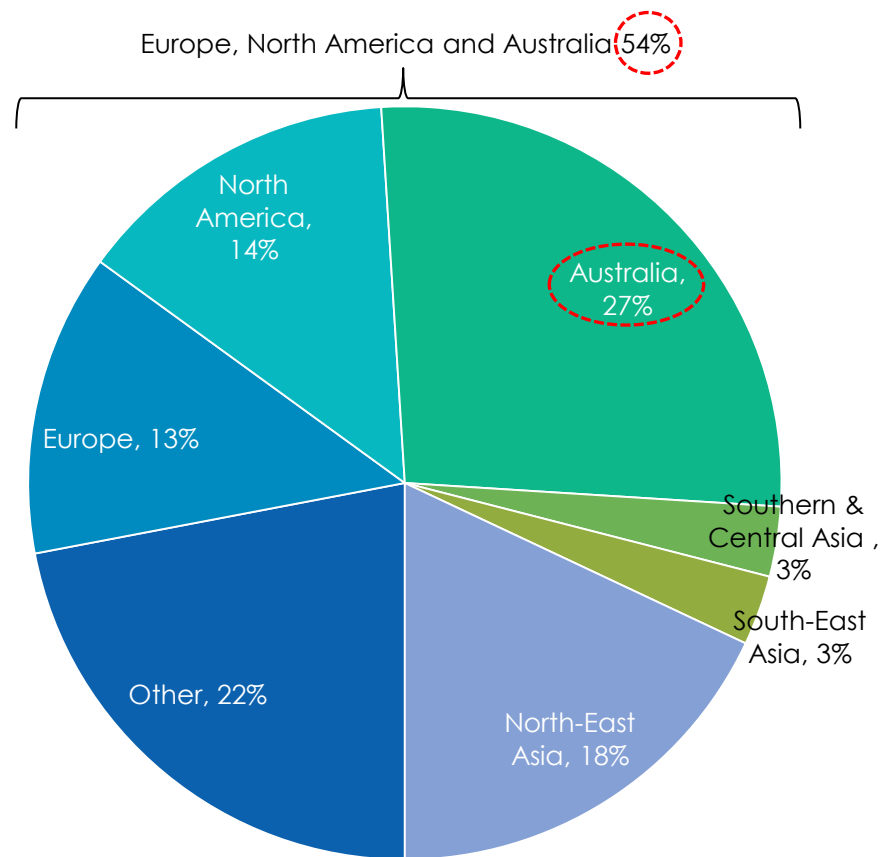
Share of export goods by destination region

Export goods; year ended June 2013



Share of services exports by selected country

Export services; year ended June 2013



Note: services exports are reported only for the first 20 countries which means that services exports for the regions may be slightly larger than shown in the graph.

Source: Statistics New Zealand (2013), Global New Zealand and Balance of payments - International Trade in Services by Country

Top three export markets by sector

Australia is the leading importer of goods and services for New Zealand's emerging export sectors and for most manufactured products

Sector	Total exports 2013	All markets CAGR 2003–13	Market 1	% of total	Market 2	% of total	Market 3	% of total
Traditional exporting sectors								
Agriculture, forestry & fishing	\$4,951m	5.5%	China	40%	Japan	10.5%	Korea	7.3%
Petroleum & minerals	\$1,795m	10.4%	Australia	91.2%	China	3.9%	Japan	2.8%
Wood & paper	\$2,603m	-0.3%	Australia	26.6%	China	15.9%	Japan	15.7%
Food & beverage	\$23,820m	6.1%	China	18.6%	US	11.3%	Australia	10.6%
Tourism (international visitor spend)*	\$6,431m	-0.6%	Australia	34.1%	China	11.2%	UK	9.3%
Machinery & equipment	\$3,196m	1.7%	Australia	34.6%	US	17.9%	India	4.9%
Chemicals, plastics & refining	\$1,711m	0%	Australia	48.2%	US	8%	Singapore	5.4%
Metals & metals products	\$2,832m	3.8%	Australia	42.7%	Japan	17.4%	Korea	6.8%
Other manufacturing	\$1,755m	-2.2%	Australia	25.4%	China	22.6%	Italy	12.6%
Emerging exporting sectors								
High technology manufacturing (cross-cutting sector)	\$1,430m	3.6%	US	21%	Australia	19.6%	India	10%
ICT	\$632m	0.1%	Australia	34.5%	US	16.9%	Hong Kong	6.7%
Processed Foods (subset of food and beverage)	\$2,469m	4.7%	Australia	43%	China	12%	Japan	9%
Commercial services	\$4,652m	5.8%	Australia	29.0%	US	22.6%	UK	5.2%

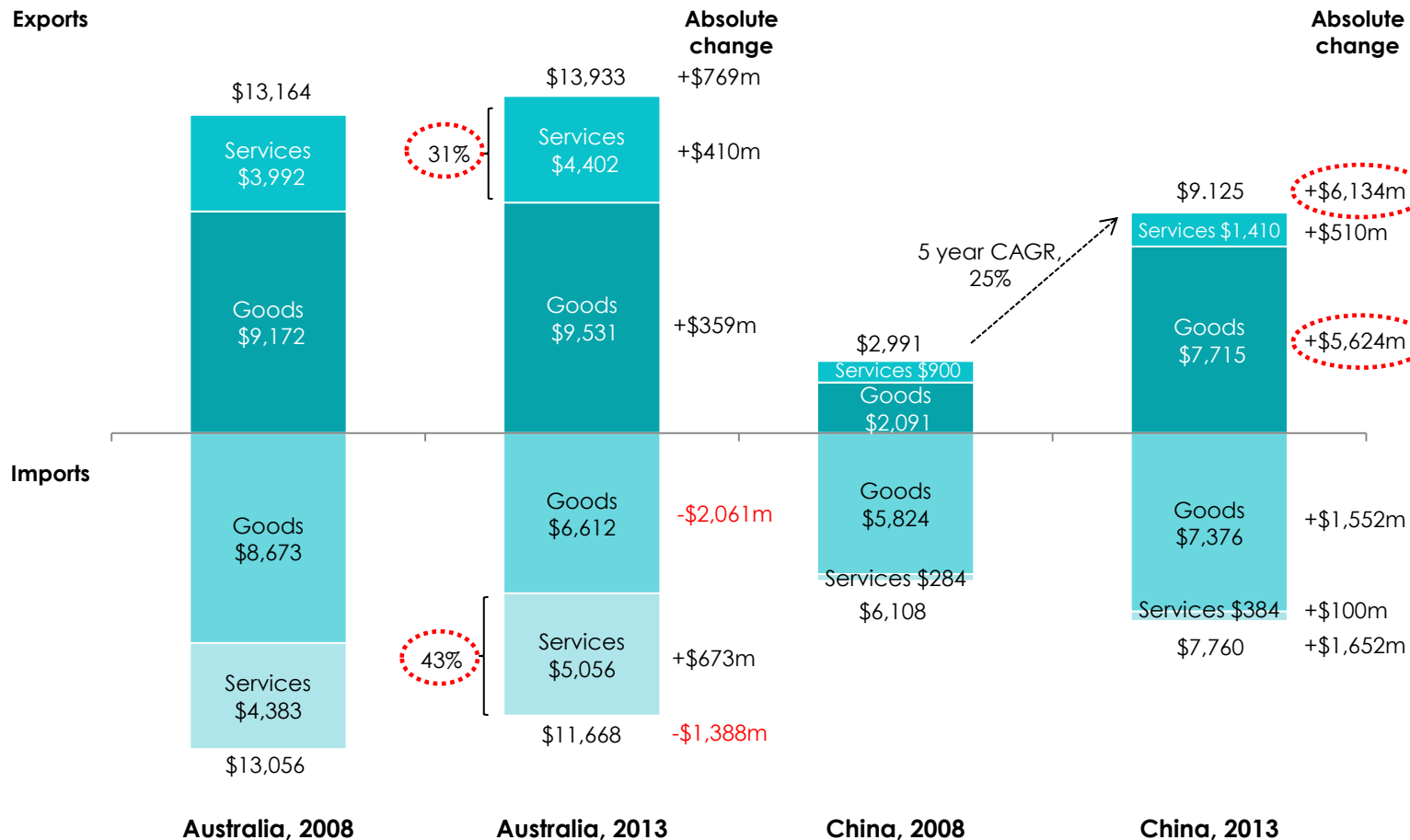
* International visitor spend is the only tourism export measure that can be broken down by market. It differs from the 2013 Tourism Satellite Account estimate of \$9,778m for the year ending March 2013. This difference is because the International Visitor Survey excludes airfares and education spending, and was significantly revised in 2013

Total trade growth (goods and services): Australia versus China

Merchandise goods driving growth in trade with China; Australia remains our major trading partner when trade in both goods and services is included

Goods and services exports to Australia and China; 2013 versus 2008

Exports and Imports: NZ\$m (nominal); year ended June 2008 & June 2013



As at June 2013, Australia accounted for 17.8% of all trade in goods (imports and exports) and China 16.8%.

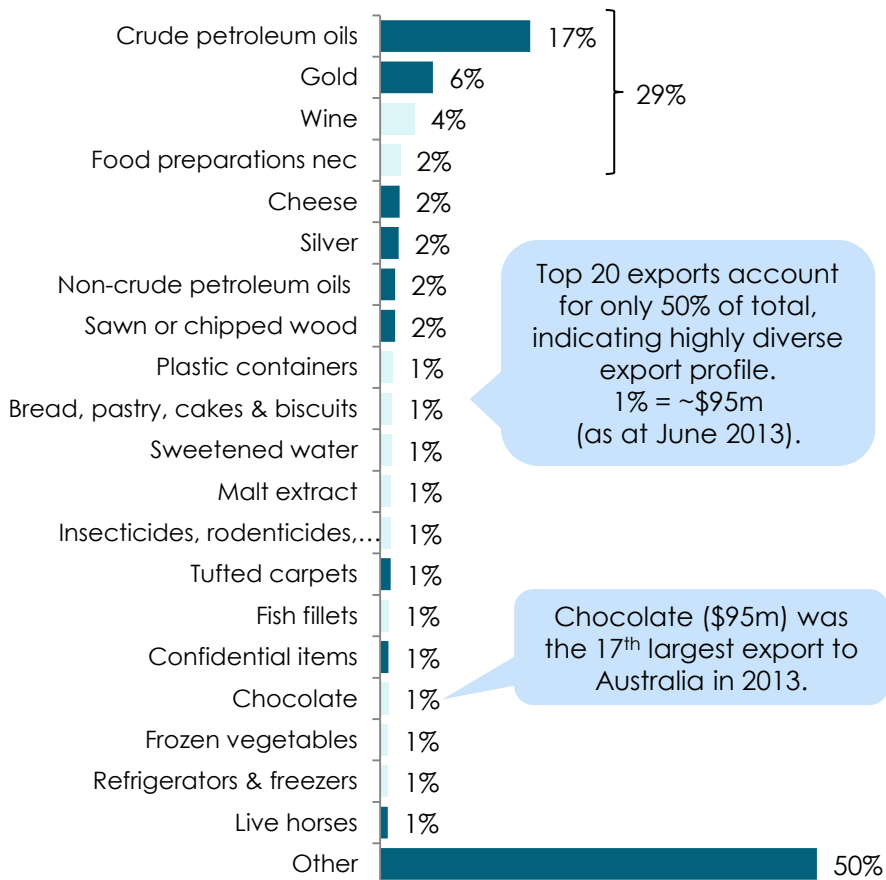
When trade in services is included, Australia accounted for 22% of total trade (imports and exports) and China 15%.

Composition of goods exports: Australia versus China

Australia imports a wide variety of goods from New Zealand, many high/added value; exports to China dominated by New Zealand's traditional commodities

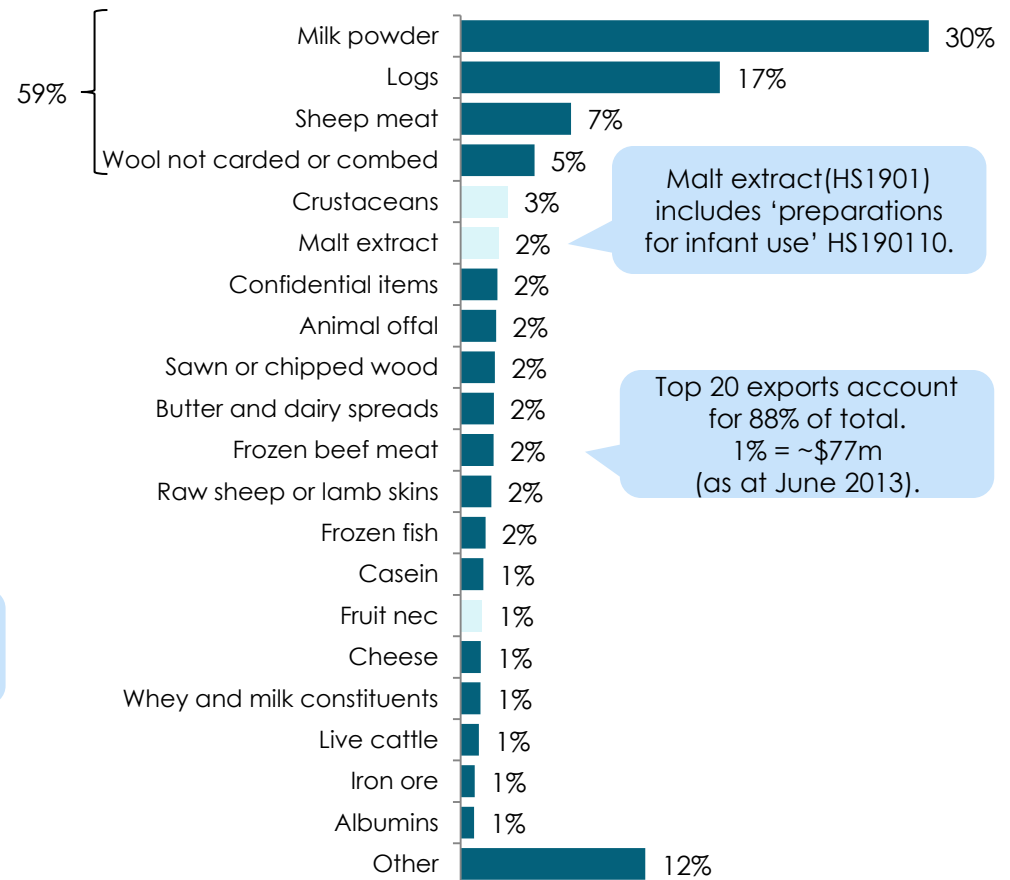
Top 20 goods exports to Australia (HS4)

% exports, year ended June 2013



Top 20 goods exports to China (HS4)

% exports, year ended June 2013



Share of exports by firm

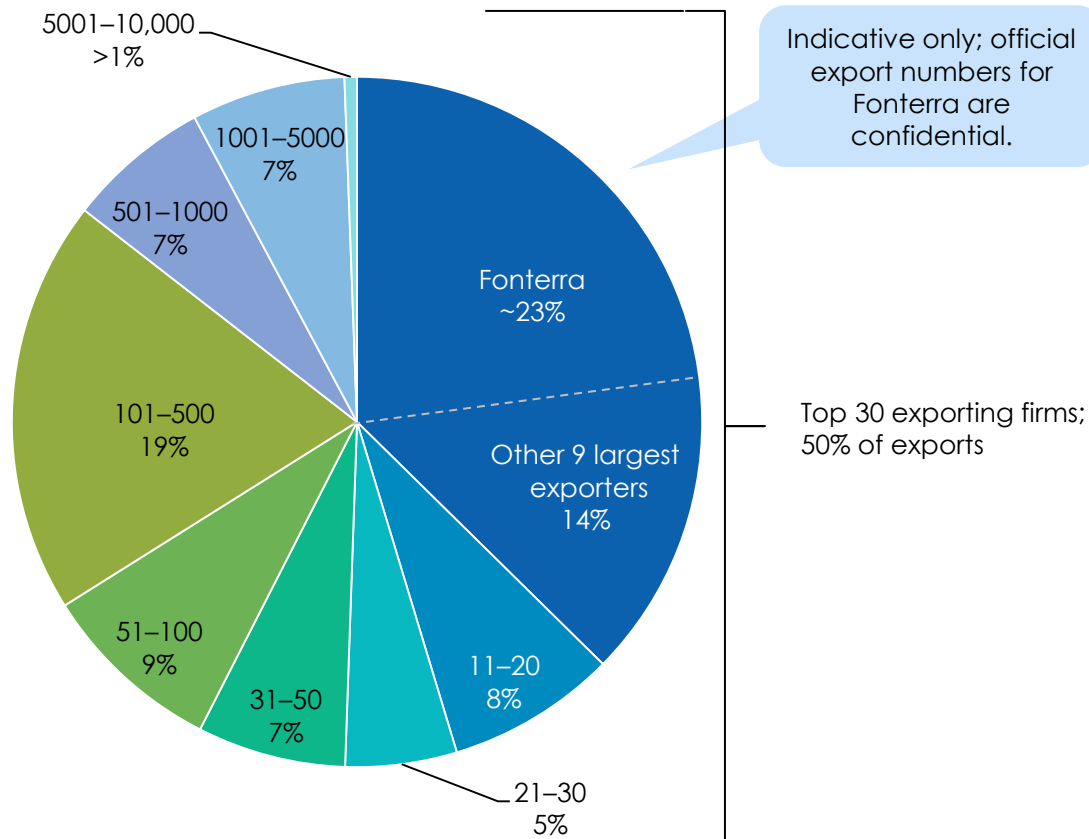
50% of New Zealand's total exports are generated by 30 firms; Fonterra alone generates around 23%

Share of New Zealand's total exports by top 10,000 exporting firms

% of exports; 2011

Treat as illustrative

Includes goods exports and commercial services exports. Excludes transport, travel, insurance and government services exports.



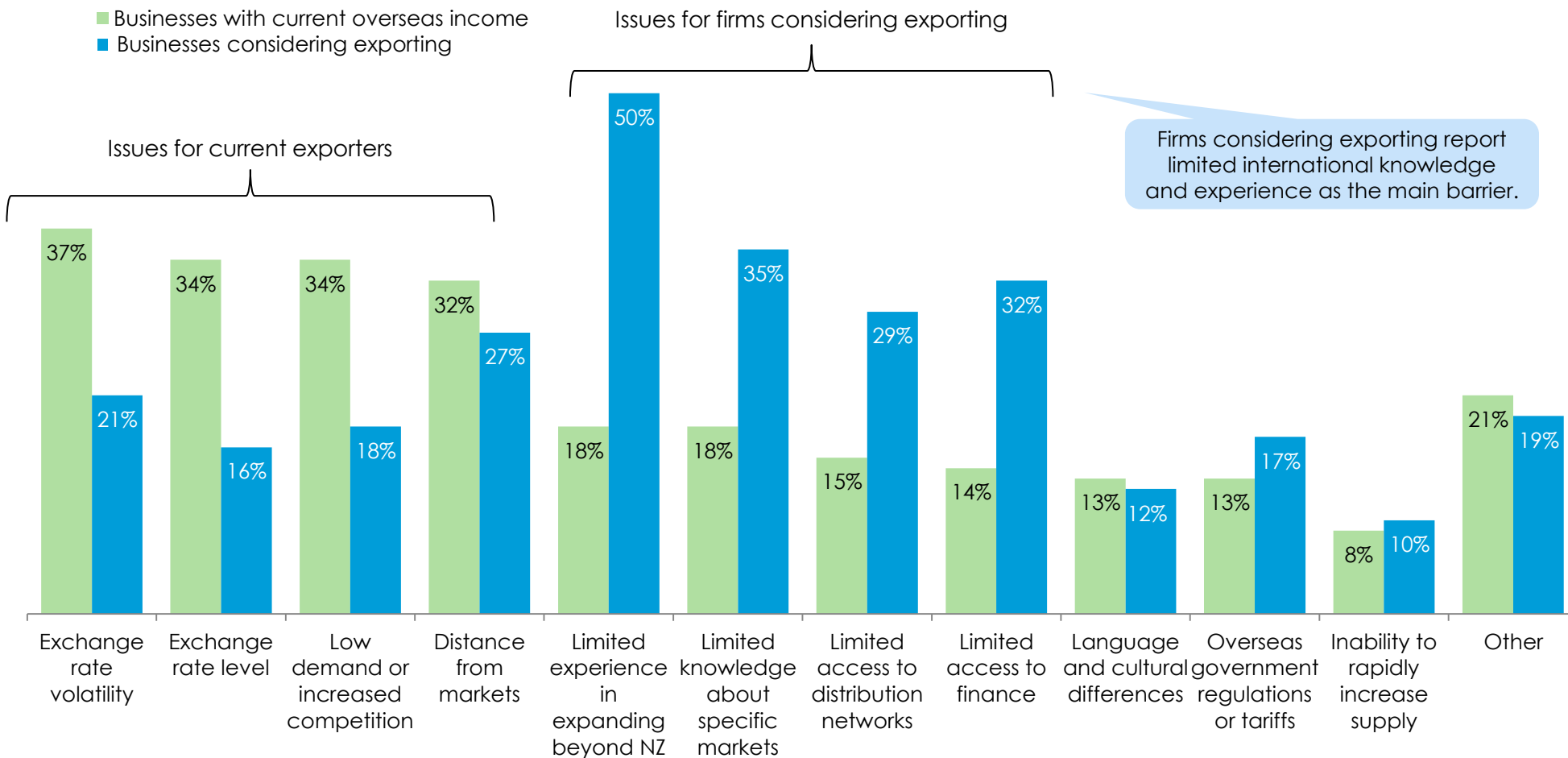
Total (2011): \$49.9 b
Total differs from 2013 numbers

Export barriers

Around a third of exporting firms report the exchange rate, low demand, increased competition and/or distance from markets as barriers

Firm reported barriers to exporting

% of total current exporting firms; % of total firms considering exporting; 2011





INNOVATION

Definitions

This report uses the following definition for ‘innovation’

Innovation

The **innovation rate** is the percentage of firms in a sector that undertook any activity during the last two financial years that resulted in the development or introduction of something new or significantly improved. **This is a different measure from expenditure on innovation.**

The following are the measured activities.

Activity	Definition	Examples
Goods or services	Significant changes in or introduction of new goods or services – this does not include selling new goods or services wholly produced and developed by other firms.	Xero: online accounting services. Fonterra: new light-resistant plastic milk bottle.
Operational processes	Methods of producing or distributing goods or services.	E-books, Spotify, iTunes, Xero. New machines used in manufacturing.
Organisational or managerial	Significant changes in the firm's strategies, structures or routines.	Fonterra: trading among farmers. Manufacturers developing services or software around their products.
Marketing method	Includes sales and marketing methods intended to increase the appeal of goods or services for specific market segments, or to gain entry to new markets.	Hellers' redesigned packaging for shaved ham.

Definitions

This report uses the following definition for 'research and development' (R&D)

Research & development

The **R&D rate** is the percentage of firms in a sector that have undertaken R&D activity in the last two years.

R&D covers any activity characterised by originality. It should have investigation as its primary objective, and has an outcome of gaining new knowledge and/or new or improved materials, products, services or processes. Buying technical knowledge or information from abroad is included.

Market research, efficiency studies, and style changes to existing products are not included.

The R&D rate is a different measure from business or government expenditure on R&D.

R&D is divided into the following activities.

Activity	Definition	Examples
Experimental development	Systematic work, drawing on knowledge gained from research and practical experience that is directed at producing new materials, products and devices; installing new processes, systems and services; or improving substantially those already produced or installed.	Development and commercialisation of products for wound and tissue repair by Wellington firm Mesynthes.
Applied research	Undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective and determines possible uses of basic research.	AgResearch's work on new grass types to reduce environmental impacts from farming.
Basic research	Carried out to pursue a planned search for new knowledge with either a broad underpinning reference, or no reference to a likely application.	Investigating natural 'superhydrophobic' surfaces (highly repellent to liquids); may have application to condensation management, ice-prevention or as self-cleaning surfaces.

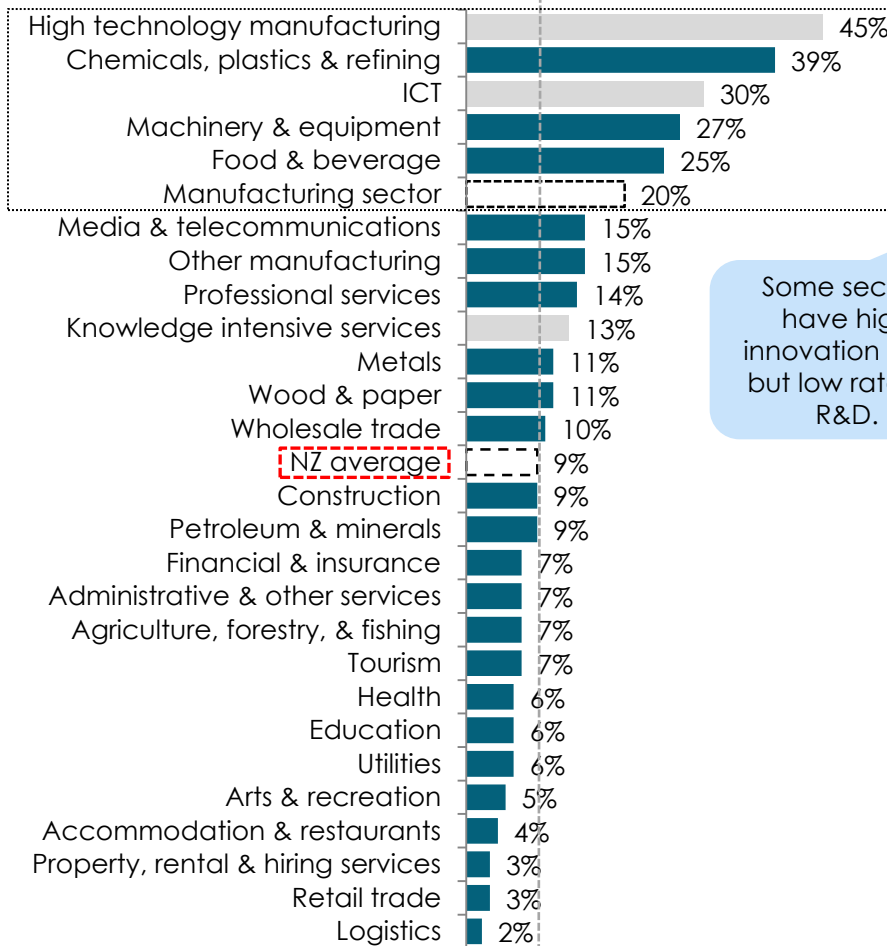
R&D and innovation rate by sector

Significantly more firms in the manufacturing sectors engage in both R&D and innovation activities than firms in most other sectors

Firms reporting R&D activity

% of total firms in sector; 2011

Avg = 9%

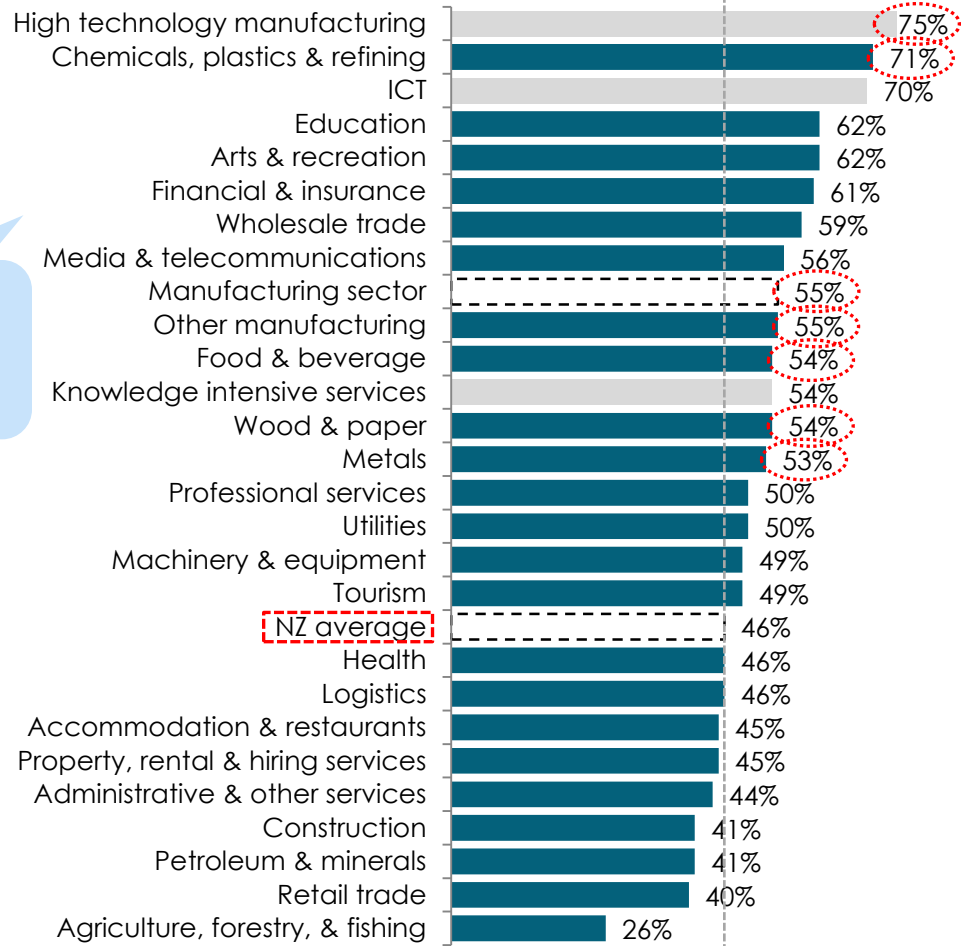


Some sectors have high innovation rates but low rates of R&D.

Firms reporting innovative activity

% of total firms in sector; 2011

Avg = 46%



Note: only firms with six or more employees are surveyed

Sources: Statistics New Zealand, customised data drawn from the Business Operations Survey (2011)

Innovation across sectors

Innovation is pervasive across all sectors, as this excerpt from a paper on New Zealand's innovation system shows

All OECD economies rest on a combination of large medium-technology and low-technology manufacturing industries (such as food and beverages, or fabricated metal products), and large-scale service activities (of which the largest are education, and health and social services).

Innovation surveys carried out in many countries show that these industries contain significant proportions of innovating firms, that develop new products, and generate significant amounts of sales from new and technologically changed products.

The expanding data and evidence on innovation in these low and medium-technology industries and services suggests that we should take a wide view of innovation and its effects, recognising that growth is generated across many sectors of the economy.

Of course we should not deny the existence and importance of radical technological breakthroughs. But it is important to challenge the oversimplified idea that high-tech industries are 'leading' sectors, and that growth rests on their technologies in some simple way. Rather, we should recognise that innovation and hence growth impulses are pervasive across the economic system, which would explain why many so-called low-tech sectors and low-tech economies have been growing rapidly.

In other words, growth impulses are dispersed across the system because innovation also is widely dispersed - it is not the case that innovation is confined to a small group of high-tech sectors.

Growing sectors innovate in different ways, with a great deal of variety in methods, approaches and results. This diversity among industries is particularly important with respect to knowledge creation.

So the specific engagement with innovation that faces New Zealand is the problem of innovation across the low-tech sectors.

Low tech sectors have a specific characteristic in terms of knowledge creation, which is that they draw heavily on knowledge created outside the industry. They do not innovate on the basis of internal R&D, but rather on the basis of a flow of knowledge from external sources.

Such knowledge can flow in a number of ways: via contract R&D, via joint ventures, via labour mobility, via consulting, via informal know-how, and above all, via the purchase of capital and intermediate inputs. Many of these background flows of knowledge emanate from the publicly-supported knowledge infrastructure, and it is this that connects public policy with the need to focus on the sectoral structure of innovation.

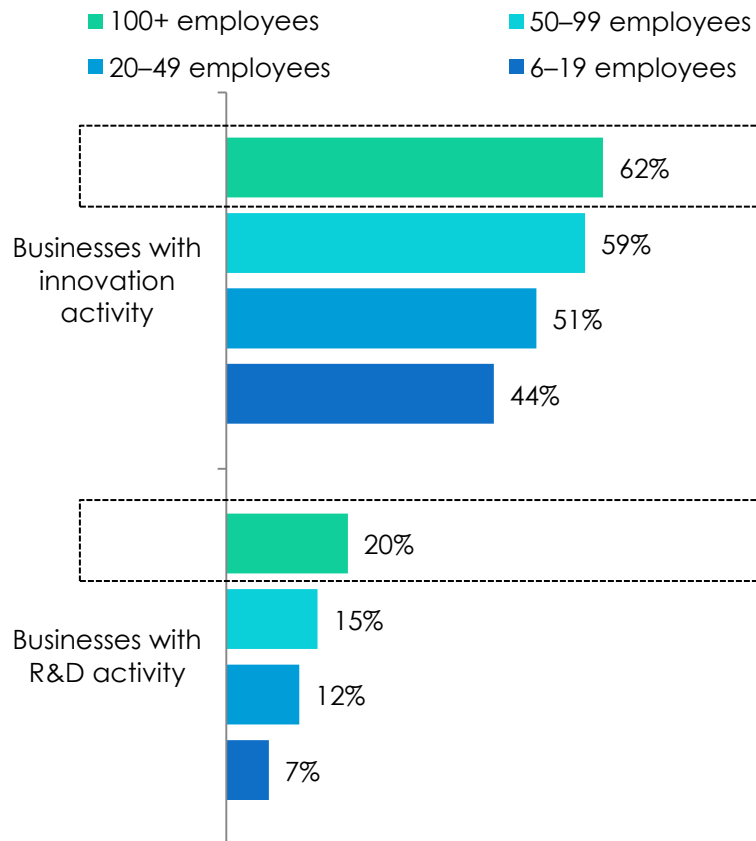
Source: Keith Smith, Public Policy Framework for the New Zealand Innovation System, Ministry of Economic Development Occasional Paper 06/06 May 2006

R&D and innovation

Large firms are more likely to engage in R&D and/or innovation activities; innovating firms out-perform non-innovating firms

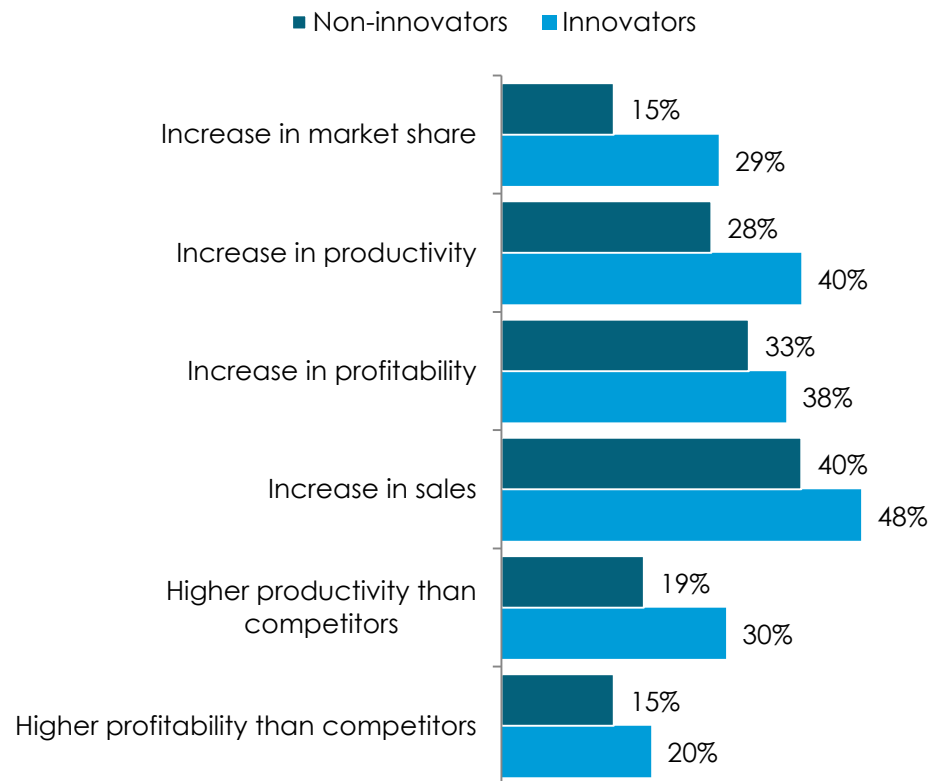
Firms with innovation and R&D activity by firm size

% of total respondents; 2011



Improved firm performance, various financial metrics

% of total respondents; 2011



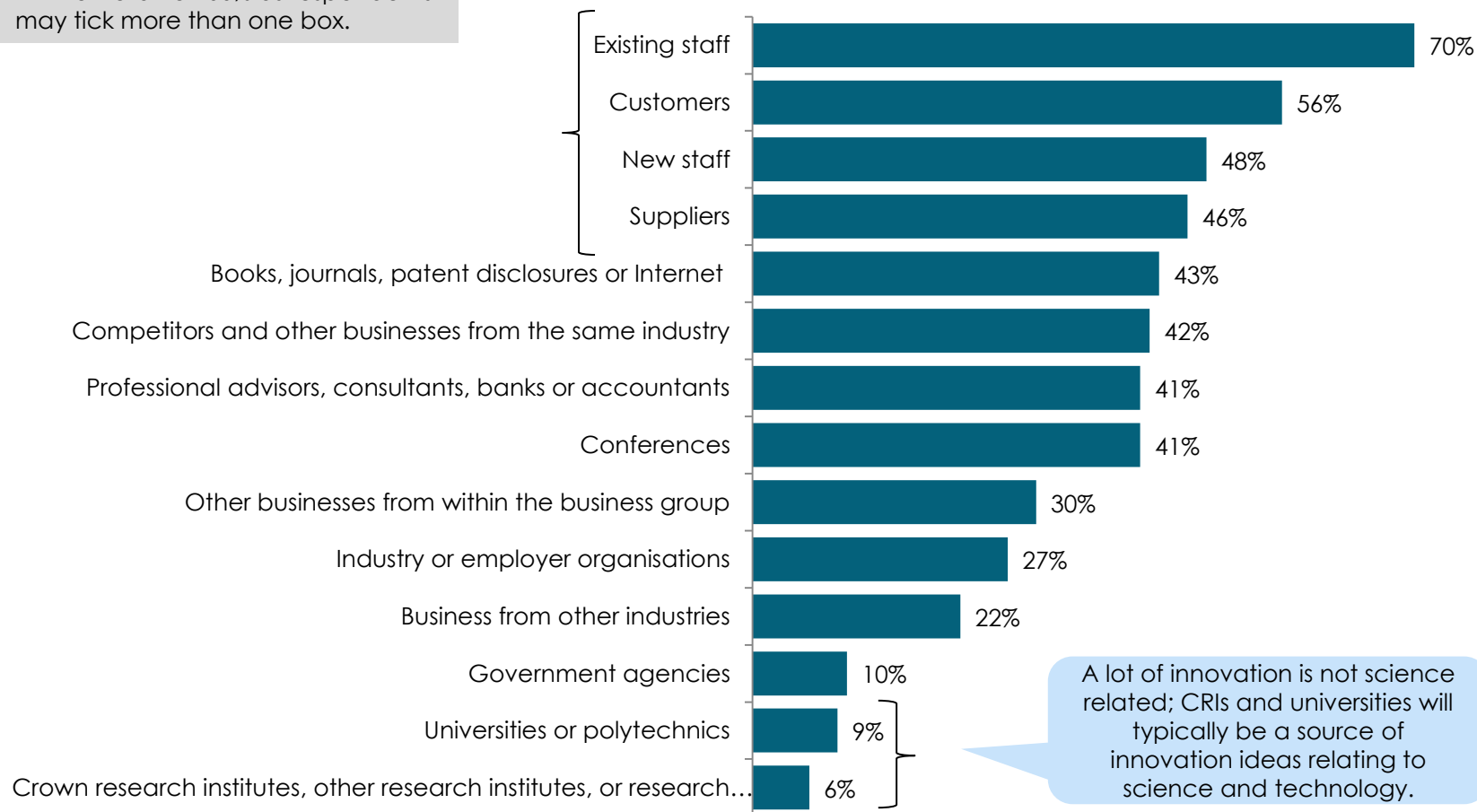
Sources of innovation

For those firms reporting innovation activity, the majority, by far, source their ideas from staff, suppliers or customers

Sources of innovation for firms

% of total respondents; 2011

Will not total to 100% as respondents may tick more than one box.

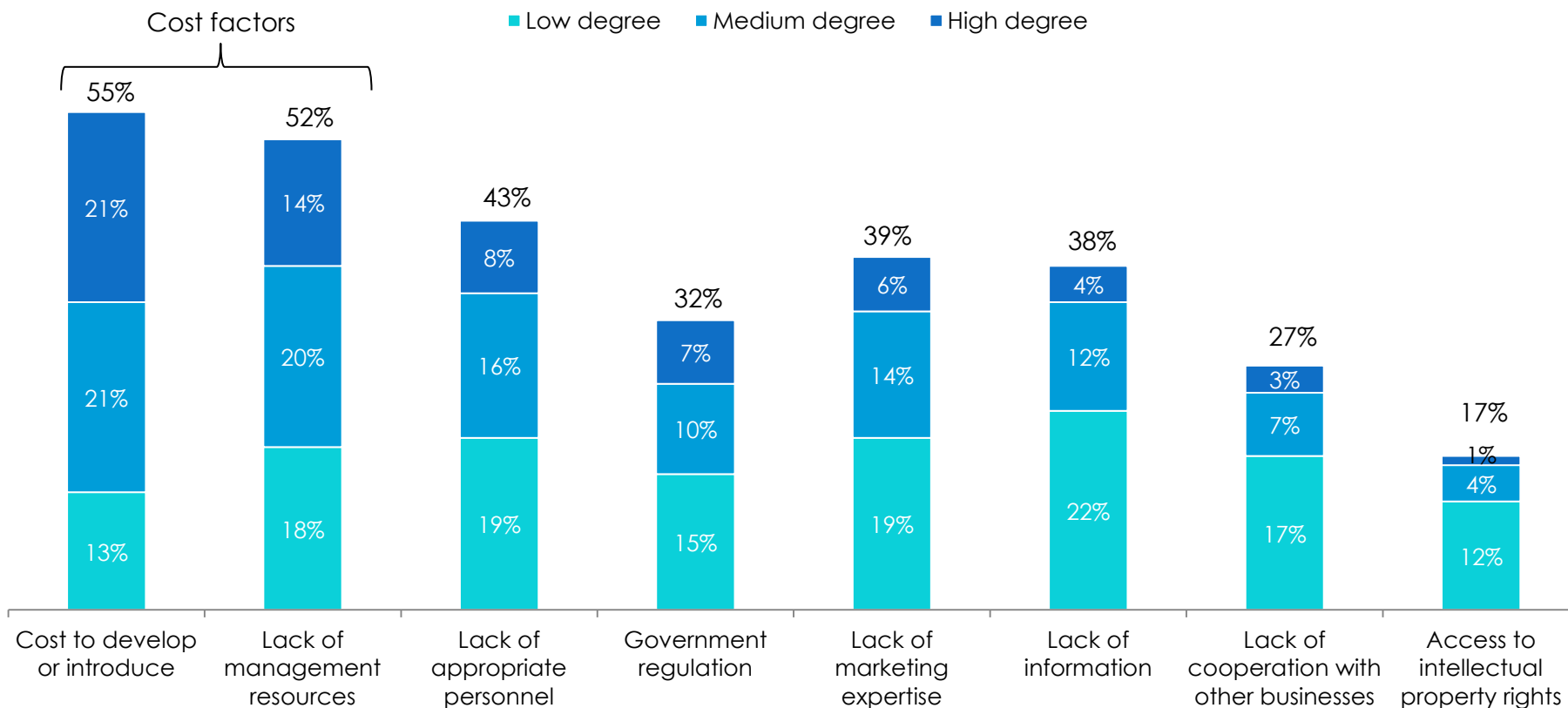


Barriers to innovation

Over half of firms reported that innovation was hampered by cost and lack of management resources e.g. time

Issues that hampered innovation

% of total respondents; 2011





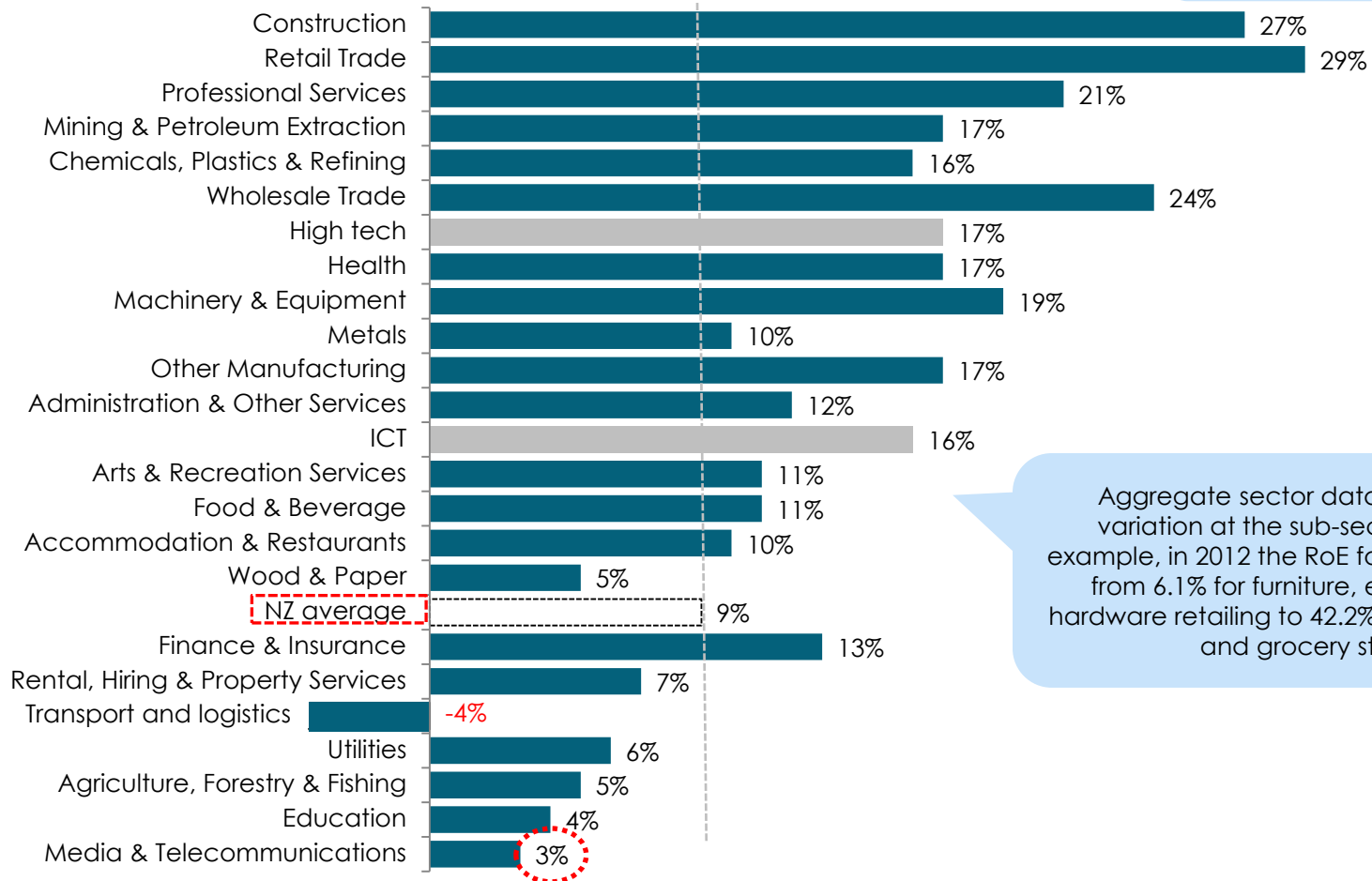
FINANCIAL PERFORMANCE

Return on equity (RoE)

There is a wide variation in return on equity between sectors; seven sectors (plus high technology manufacturing) return 19% and above

Return on equity (surplus before income tax as % of shareholders' funds or owners' equity)

Return on equity; 2012



In the construction sector a lot of large machinery is hired rather than owned e.g. cranes.

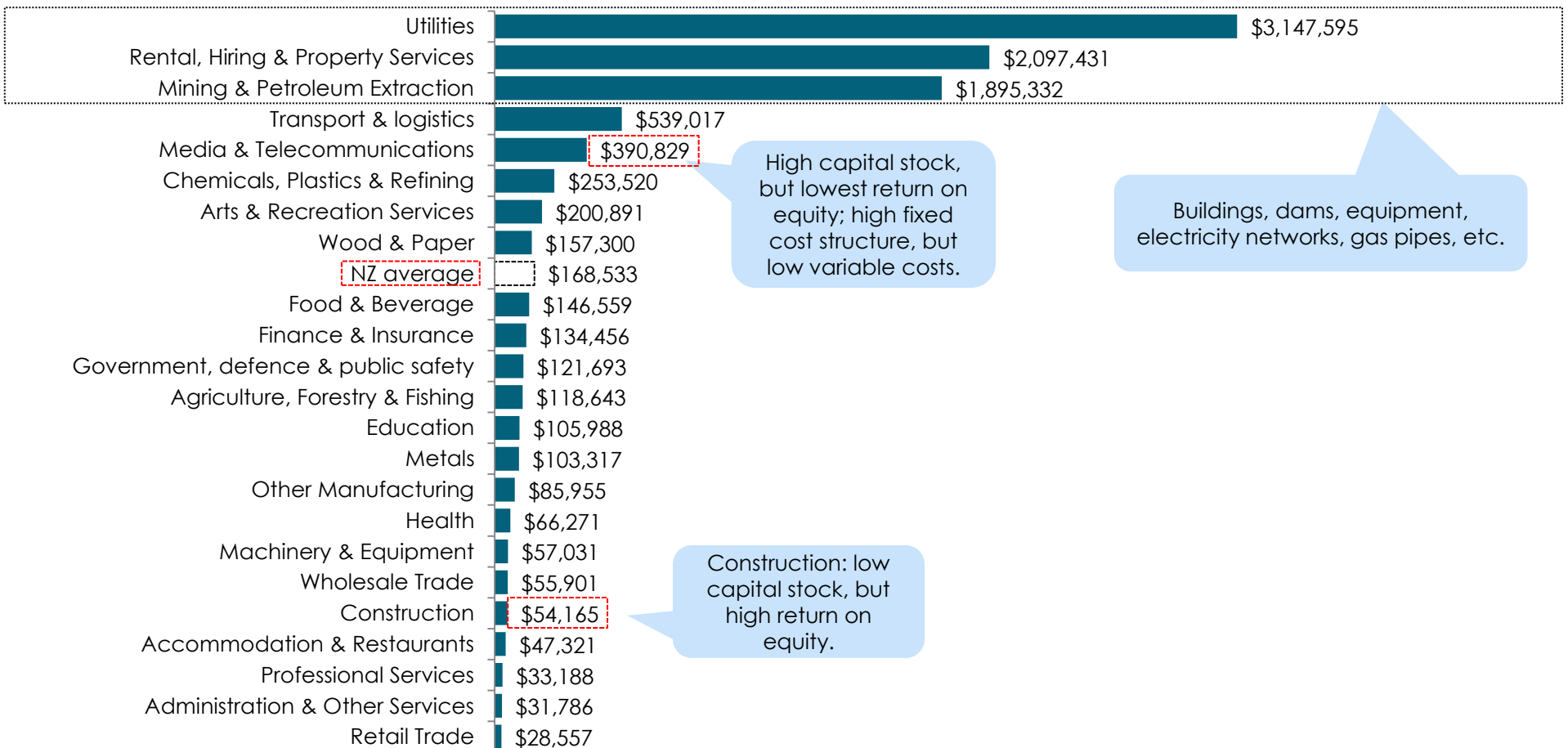
Aggregate sector data masks wider variation at the sub-sector level. For example, in 2012 the RoE for retailers ranged from 6.1% for furniture, electrical, and hardware retailing to 42.2% for supermarkets and grocery stores.

Capital stock (fixed assets) per worker

Capital stock per worker is highest in the utilities, property and petroleum and minerals sectors

Capital stock (or fixed assets) per worker

2011



Note: data on fixed assets has not been through National Accounts system so should be considered as indicative only; data unavailable for cross-cutting sectors

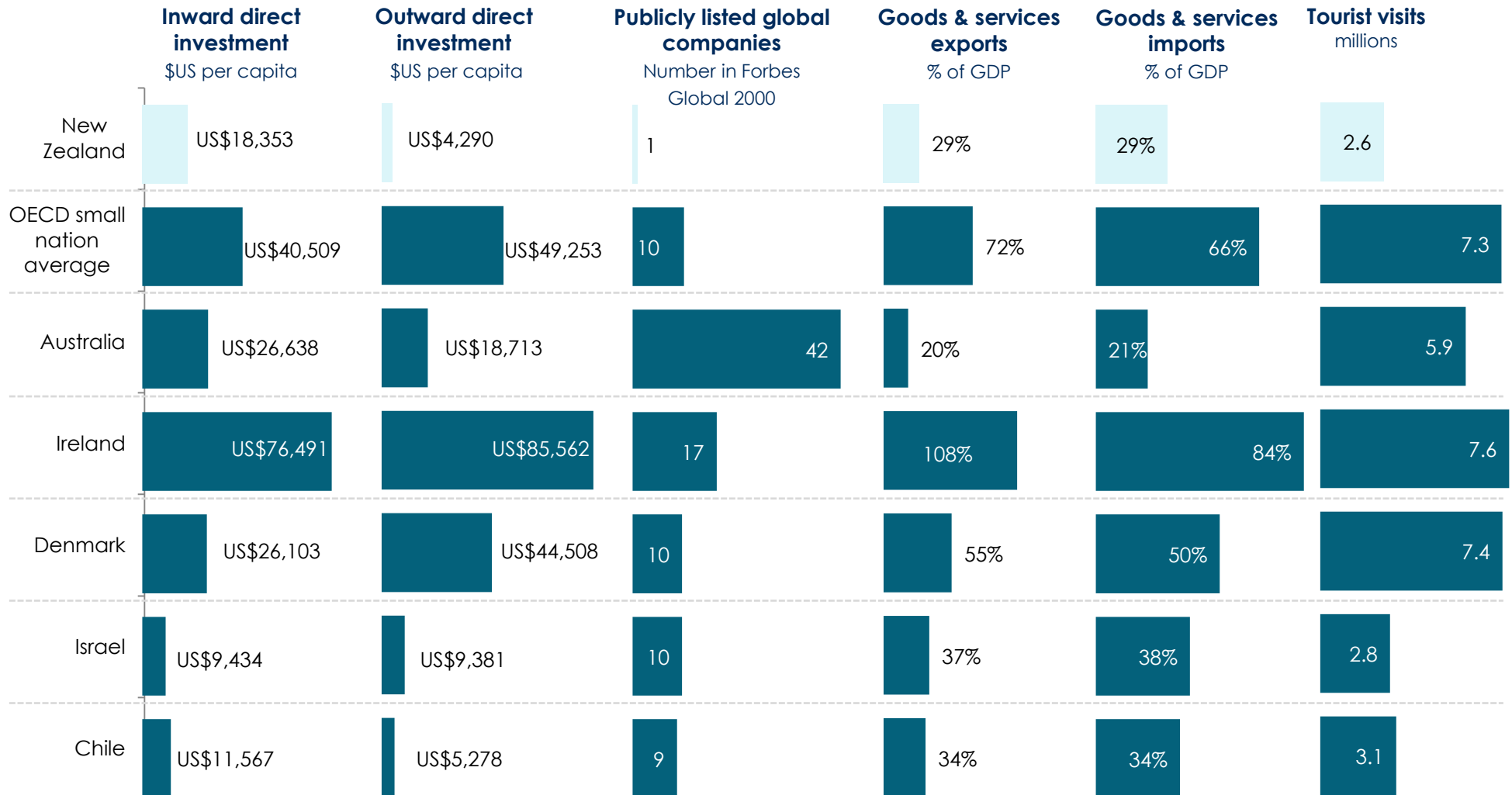
Source: Statistics New Zealand, National Accounts and Tourism Satellite Account (2012)



NEW ZEALAND AND THE WORLD

International connections

New Zealand is less connected with the global economy than similarly developed small countries



Note: OECD small nation peers are Austria, Belgium, Czech Republic, Estonia, Finland, Greece, Hungary, Iceland, Luxembourg, Netherlands, Portugal, Slovak Republic, Slovenia, Sweden and Switzerland

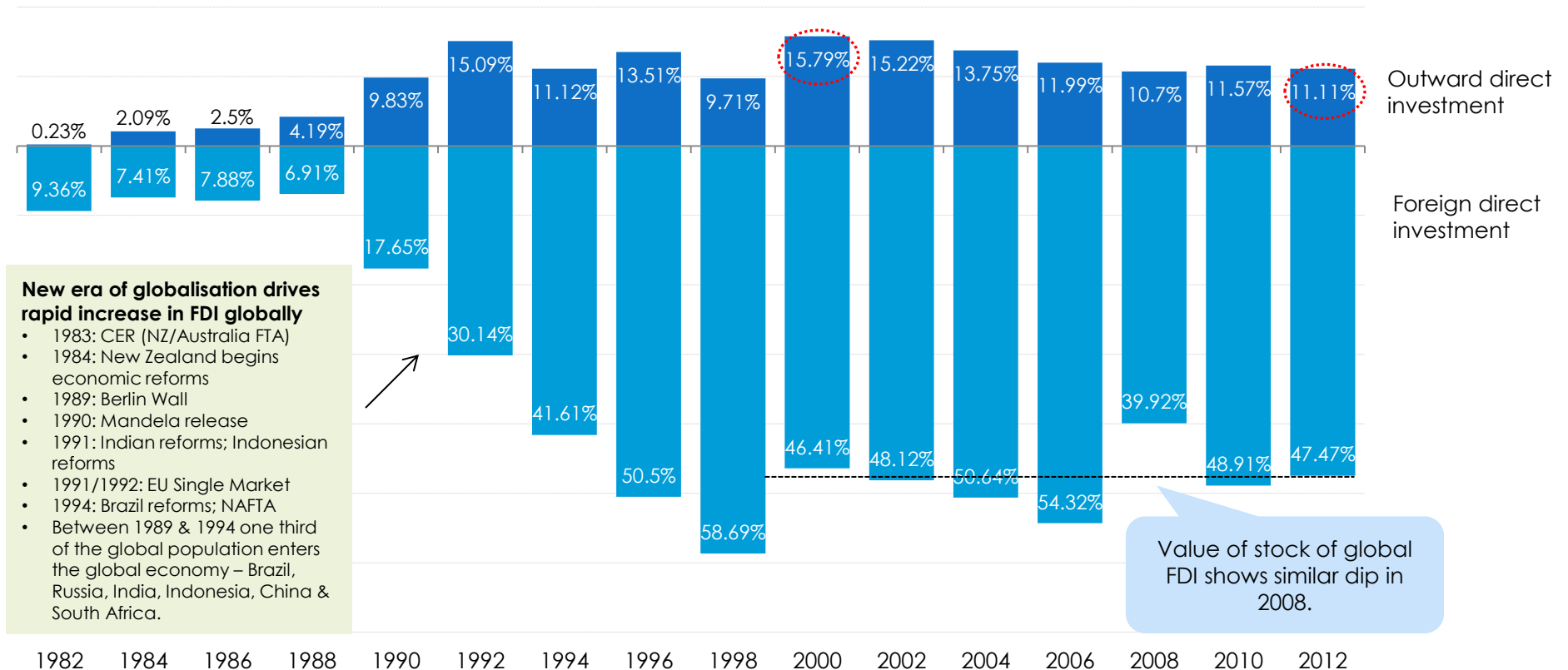
Sources: OECD StatExtract database and World Bank database (2010 or latest available year) and Forbes Global 2000 (2013)

Growth in stocks of outward and foreign direct investment

Foreign direct investment in New Zealand grew strongly from 1988 to 1998 but has been relatively stable since; outward direct investment has declined since 2000

Outward direct investment and foreign direct investment as a percentage of GDP

% GDP; 1982–2012

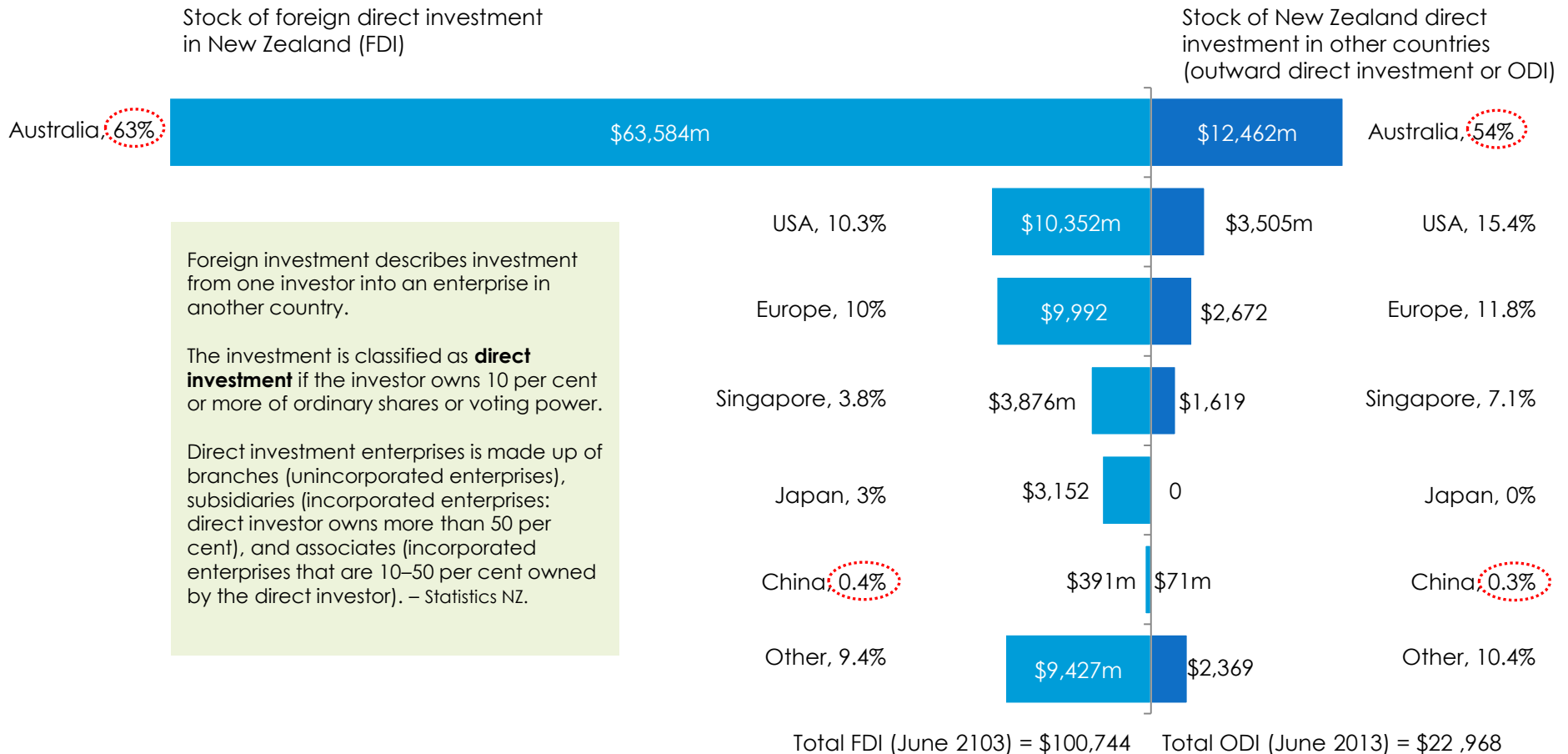


New Zealand's major direct investment partners (and China)

54% of New Zealand outward direct investment is in Australia, and 63% of foreign direct investment in New Zealand is Australian; China is a minor investor

New Zealand stocks of foreign and outward direct investment

NZ\$m, year ended June 2013

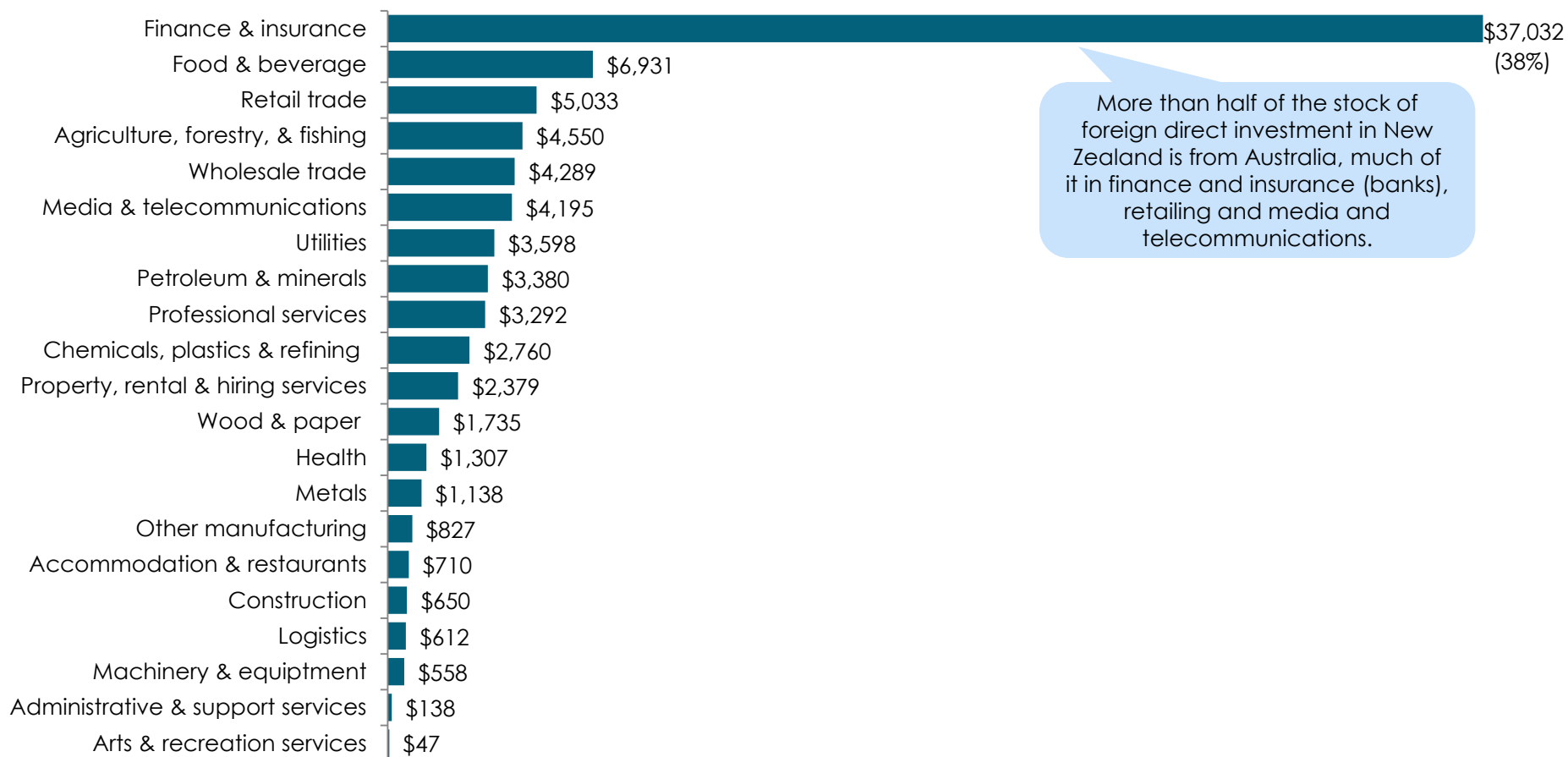


Stock of foreign direct investment (FDI) in New Zealand by sector

Foreign direct investment totalled \$97.3b in 2012; over a third of this is in the finance and insurance sector

Foreign direct investment in New Zealand

NZ\$m; as at March 2012 (latest data by sector available)



Note: some data omitted owing to allocation and confidentiality issues; data for government, defence and public safety is confidential (an example of data that would fall into the sector would be Mt Eden Corrections Facility which is operated by British firm Serco)

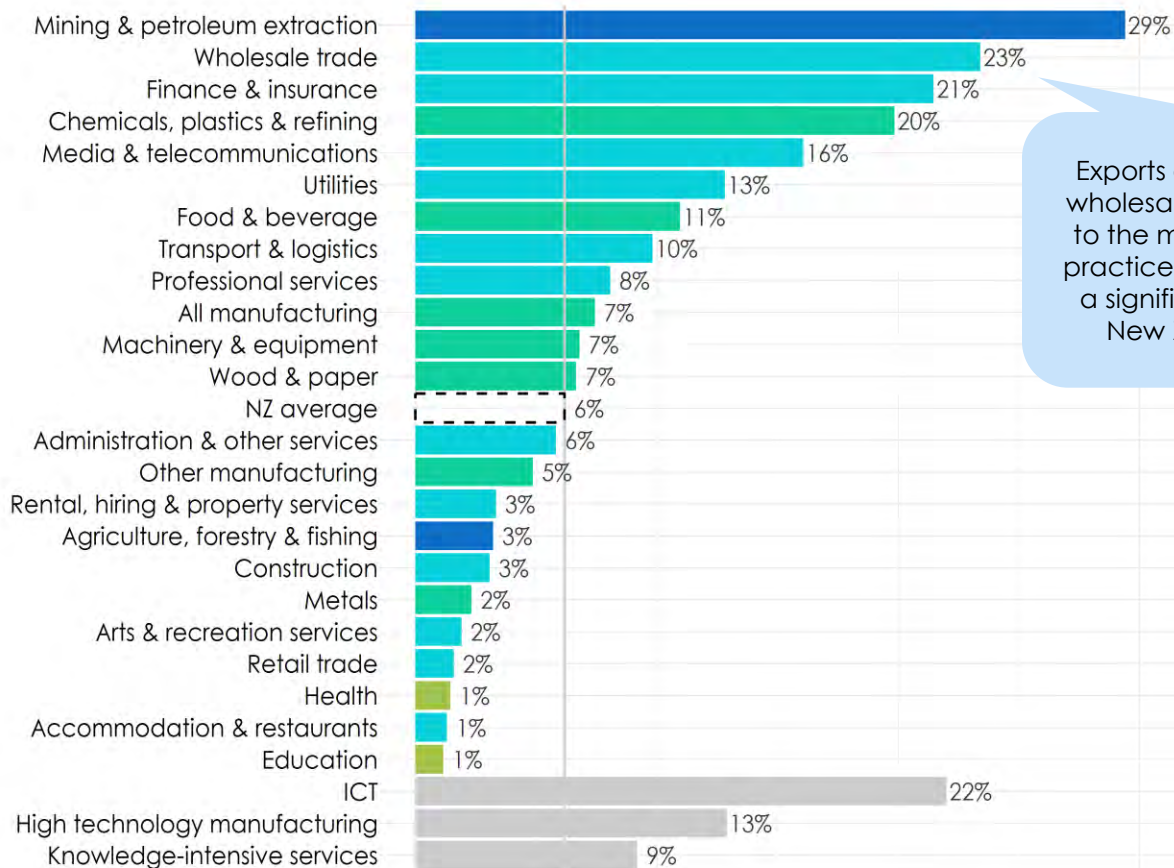
Source: Statistics New Zealand, Balance of Payments and International Investment Position (2013)

Rate of foreign direct investment by sector

23% of all wholesale trade firms are majority foreign owned; larger firms are more likely to be foreign owned

Firms with more than 50% foreign ownership

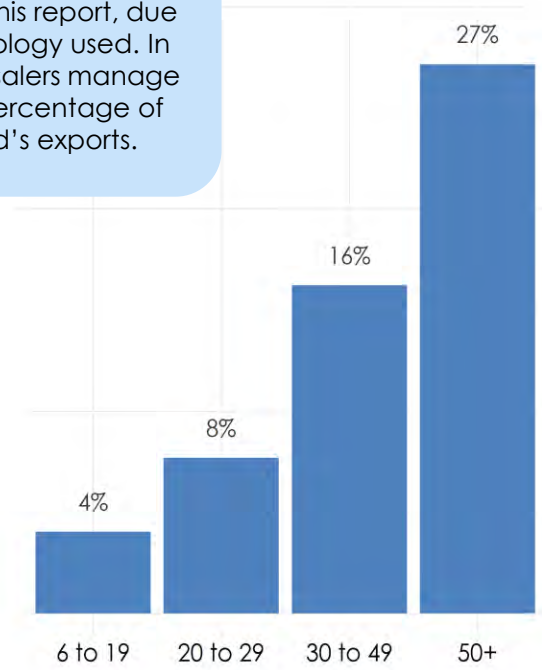
% of firms with six or more employees; 2012



Firms with more than 50% foreign ownership, by firm size

% of firms with six or more employees by firm size; 2012

Exports are not attributed to wholesaling in this report, due to the methodology used. In practice wholesalers manage a significant percentage of New Zealand's exports.



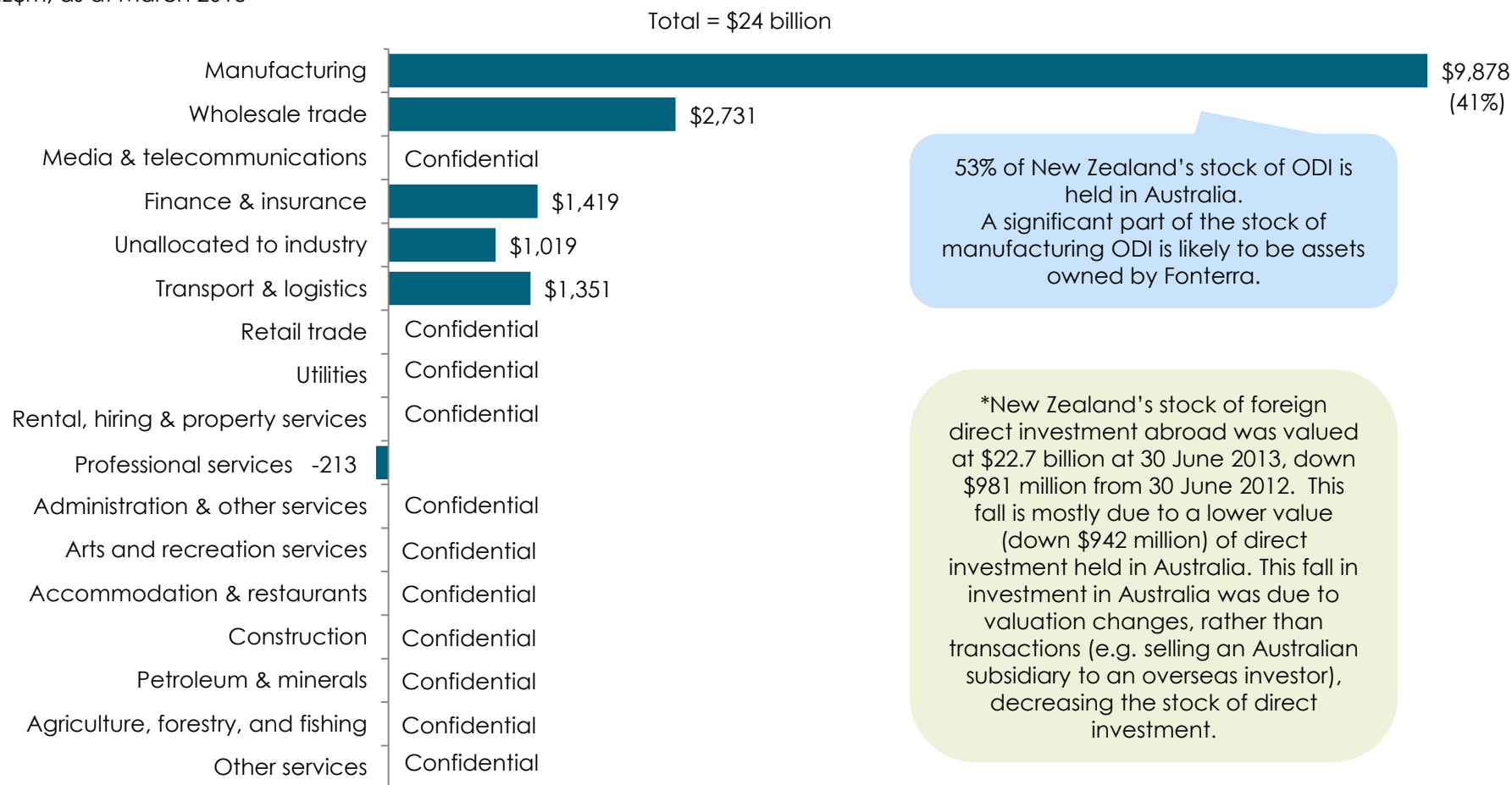
Source: Statistics New Zealand, Business Operations Survey (2012)
 Numbers may differ from those published by Statistics New Zealand due to random rounding of data

Stock of New Zealand outward direct investment (ODI) by sector

New Zealand firms had \$24b in direct investments overseas as at March 2013*; the manufacturing sectors account for 41% of the total

New Zealand's direct investment abroad

NZ\$m; as at March 2013

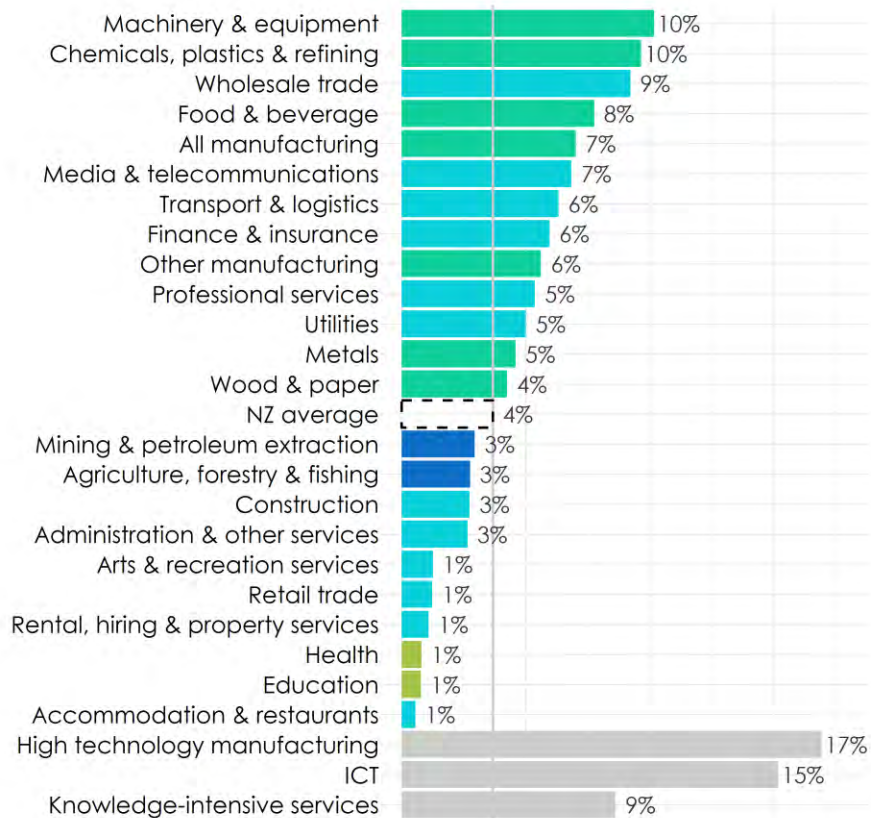


Rate of outward direct investment by sector

A mix of service and manufacturing sectors are leading the rate of outward direct investment

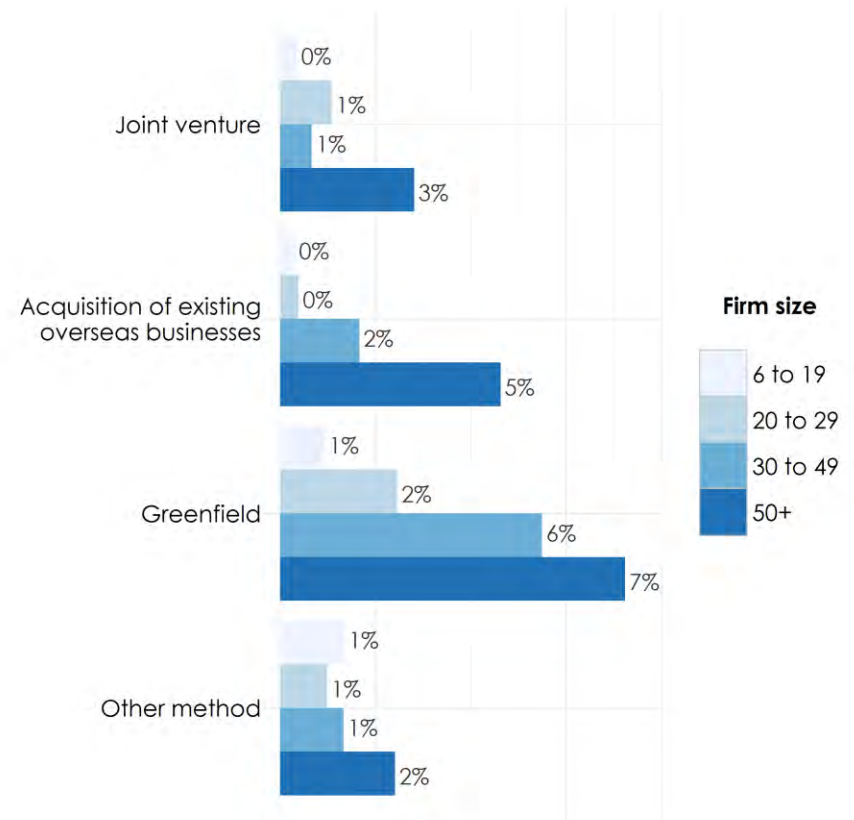
Firms with overseas holdings, selected sectors

% of firms with six or more employees; 2012



Method of gaining overseas ownership interest or shareholdings, by firm size

% of firms with six or more employees; 2012



Source: Statistics New Zealand, Business Operations Survey (2012)

Numbers may differ from those published by Statistics New Zealand due to random rounding of data

Outward investment in services

A number of firms in services sectors have been successful in building significant international businesses, as these examples show

Sector	Firm	Examples
Construction	Fulton Hogan Private Revenues: \$3.2b (2013) (includes some manufacturing, mining and logistics activities)	Significant acquisitions in Australia include Standard Roads Group; Astec; 50% of South East Asphalt Pty Ltd in Melbourne; Central Precast in Victoria; Belmadar Constructions Pty Ltd in NSW; Tylden Quarry in Victoria; PMP in South Australia; Specialised Tanker Transport and Pioneer Road Services. Fulton Hogan is now a leader in the Australasian asphalt and surfacing market.
Logistics	Mainfreight Listed NZX Revenues: \$1.9b (2013)	The company was founded in 1978 by Executive Chairman, Bruce Plested. Substantial operations are now well-established in Australasia, Asia and the US. The acquisition of the Wim Bosman Group in April 2011 has given Mainfreight a significant footprint in Europe.
Retailing	Pumpkin Patch Listed: NZX Revenues: \$0.3b (2013)	Employing over 2,000 people, Pumpkin Patch has company-owned retail stores in New Zealand, Australia and Ireland, and it has distribution agreements in South Africa, the Middle East, Asia, Europe and Africa. The company also sells online and in high-profile department stores in Australia and the US.
Utilities	Mighty River Power State Owned Enterprise / listed NZX/ASX Revenues: \$1.4b (2013)	Mighty River Power is the major shareholder in Geoglobal Energy LLC (GGE), which focuses on the worldwide acquisition, exploration, development and operation of geothermal resources. GGE has established a broad portfolio of geothermal concessions and assets in various stages of development in the US, Chile and Germany.
Professional services	Datacom Private Revenues: \$0.9b (2013)	Datacom has built a significant business in Australia through organic growth and acquisition. Now expanding into the Philippines and Malaysia.
Professional services	BECA Private Revenues: \$0.4b (2013)	BECA has five offices in Australia with over 400 employees. Singapore is now the headquarters of BECA's Asia hub with over 400 employees in five countries.



PART TWO

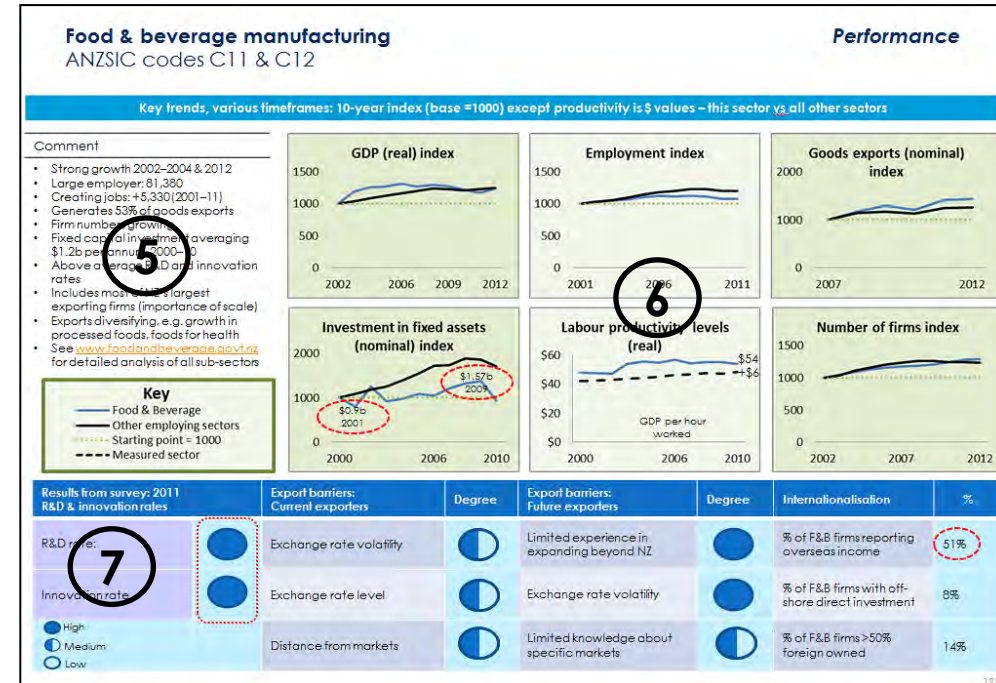
SECTOR SNAPSHOTS

GUIDE TO READING SNAPSHOT CHARTS

Guide to reading snapshot charts

Sectors are reviewed across two pages

Food & beverage manufacturing						Situation			
ANZSIC codes C11 & C12									
Food product, beverage and tobacco product manufacturing, includes meat and meat products, seafood processing, dairy products, fruit and vegetable processing, oils and fats, grain mill and cereal products, bakery products, sugar and confectionery and other food manufacturing (including pet food).									
Scorecard						Example firms			
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)	Firm	Turnover (\$m)	Employees	Ownership
1 GDP 2012 (nominal)	\$7,270m	4.4%	-27.2%	0.1%	2.7%	2 Enterraco Group	\$19,800 (2012)	15,600	Co-op
GDP 2012 (real)	n/a	n/a	6.0%	-0.5%	2.1%	Silverfern Farms	\$2,006 (2012)	5,500	Co-op
Goods exports 2012	\$23,758m	52.9%	2.0%	7.5%	n/a	Alliance Group	\$1,371 (2012)	5,000	Co-op
Employment 2011	81,380	3.6%	-0.7%	-0.9%	0.7%	Anzco Foods	\$1,116 (2010 est)	2,500	Private
Productivity 2010	\$54	112.0%**	-1.9%	-0.3%	1.2%	Goodman Fielder NZ	\$1,091 (2011 est)	1,800	Public
Fixed capital investment 2010	\$1,080m	3.5%	-31.4%	-2.8%	-0.6%				
No. of firms 2012	3,134	0.7%	0.6%	1.9%	2.6%				
Industry level financial performance						Key exports from this sector		Key markets for this sector	
Measure	Total		Growth (1 yr)		Product	Exports (\$m: 2012)	Country	Exports (\$m: 2012)	Country
	This sector	All sectors	This sector	All sectors					
3 Total income per firm 2011*	\$13,866,789	\$575,386	12.9%	4.7%	4 Milk powder	\$6,765	China	\$3,342	
Total income per employee 2011*	\$544,700	\$311,600	14.4%	4.0%	Sheep meat	\$2,645	USA	\$2,643	
Surplus per employee 2011*	\$13,300	\$24,000	0.8%	-12.7%	Butter and dairy spreads	\$2,295	Australia	\$2,448	
Return on equity 2011*	7.8%	6.6%	up	down	Frozen beef meat	\$1,748	Japan	\$1,274	
Debt ratio (liabilities/assets) 2011*	55.6%	64.1%	up	down	Cheese	\$1,420	UK	\$965	
Capital stock per worker 2010	\$151,398	\$169,344	0.1%	5.2%	Other	\$8,885	Other	\$13,086	
* Equals % of total employing firms, except productivity, which is total measured sectors. **NZ average = 100% #All sector total excludes some industries. Refer appendix, terms and definitions.						TOTAL all exports	\$23,758	TOTAL all countries	\$23,758



Situation

- Scorecard: economic metrics of this sector relative to New Zealand average.
- Five example firms in this sector.
- Sector-level financial performance: aggregated financial data for this sector versus New Zealand average.
- Top five exports by product from this sector, top five markets for all products from this sector, 2012 data.

Performance

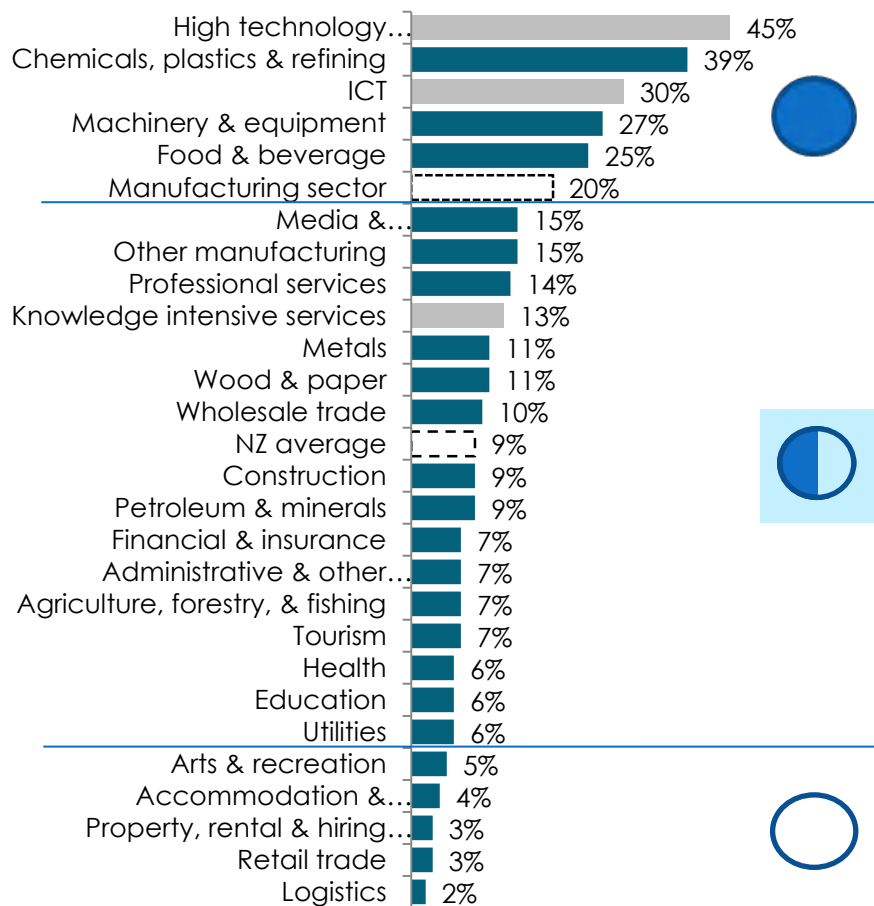
- Comment: highlights of key metrics.
- Key trends, various metrics, various timeframes. An index of this sector's performance over time versus all other sectors, except productivity, which is a simple dollar measure of GDP per hours worked in the sector compared to all other sectors.
- Indicates R&D and innovation rates, top three export barriers and level of internationalisation – see following two pages.

See Appendix for methodology, sources and limitations.

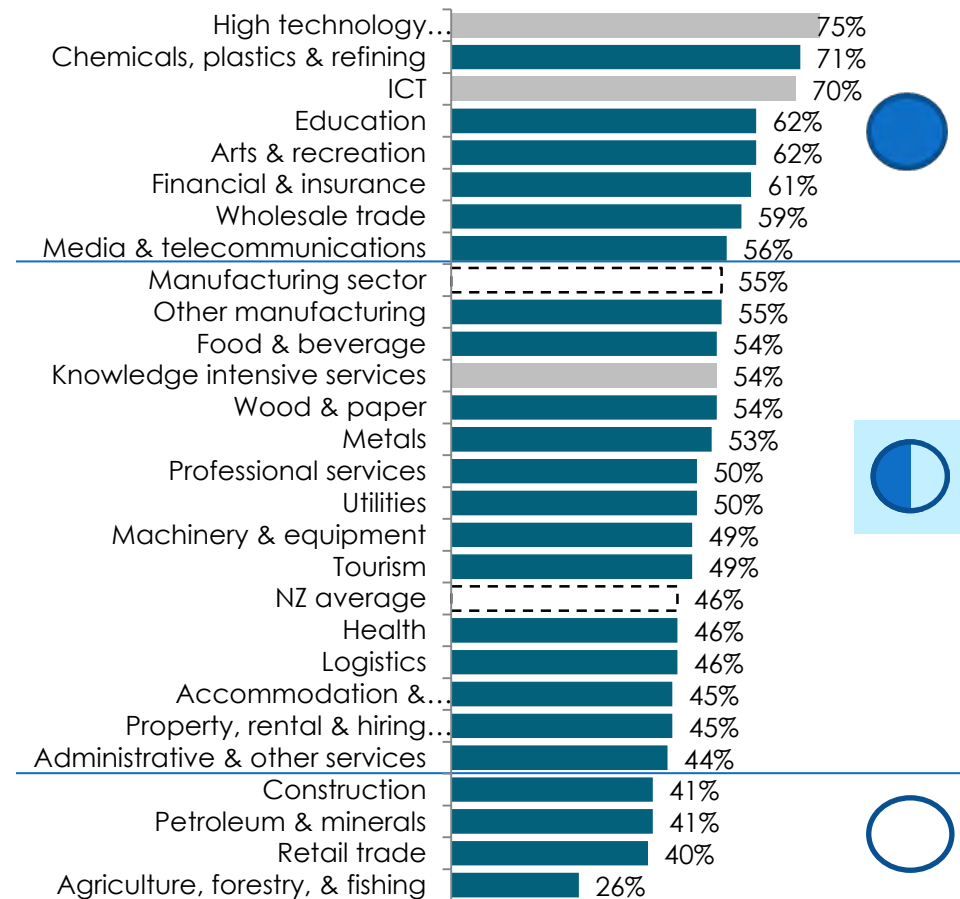
Guide to reading snapshot pages

R&D and innovation rates

Firms reporting R&D activity (2011)



Firms reporting innovation activity (2011)



- The **R&D rate** and **innovation rate** are measures of the number of firms in the sector that reported engaging in some form of R&D activity or innovation activity in the last financial year. This is a different measure from business expenditure on R&D or expenditure on innovation. Firms may report having undertaken either innovation or R&D or both, or none.

Guide to reading snapshot charts

Export barriers & internationalisation

Top three barriers experienced by firms in the sector **currently** generating overseas income
2011 year



Top three barriers experienced by firms in sector **interested** in generating overseas income
2011 year



The degree to which the sector is internationally connected through overseas income and inward and outward investment



Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
1. Exchange rate volatility		1. Limited experience in expanding beyond NZ		% of F&B firms reporting overseas income	51%
2. Exchange rate level		2. Exchange rate volatility		% of F&B firms with off-shore direct investment	8%
3. Distance from markets		3. Limited knowledge about specific markets		% of F&B firms >50% foreign owned	14%

	% firms
	High >50% of firms report barrier
	Medium 25-49% of firms report barrier
	Low 1-24% of firms report barrier

Interpreting the table: example is food and beverage manufacturing

- Top three barriers to exporting are reported by 25 to 49% of **current exporting** firms in the sector in 2011.
- Top two barriers to exporting are reported by more than 50% of firms in the sector **interested in exporting (future exporters)** in 2011, and the third barrier is reported by 25 and 49 percent of firms interested in exporting.
- The sector scores highly on internationalisation with 51% of firms in the sector reporting income from overseas, 8% of firms report overseas holdings, and 14% of firms in the sector being foreign owned.



PRIMARY SECTORS

- Agriculture, forestry & fishing
- Petroleum & minerals
- **See pages 92–94 for guide to reading snapshot pages**

Agriculture, forestry & fishing

ANZSIC Code A

Situation

Includes firms whose main activity is growing crops, raising animals, growing and harvesting timber, and harvesting fish and other animals from farms or their natural habitats. Included are horticulture, livestock production and aquaculture, forestry and logging, and fishing, hunting and trapping. Much of the outputs from this sector are inputs to the food & beverage and wood & paper sectors.

Scorecard					
Measure	Total	% of NZ*	Growth (1 year)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$13,225m	7.7%	19.6%	12.3%	3.6%
GDP 2013 (real)	n/a	n/a	-0.9%	2.1%	0.7%
Goods exports 2013	\$4,951m	11.2%	8.0%	9.8%	5.5%
Employment 2012	163,518	7.1%	-0.1%	0.4%	-0.5%
Productivity 2011	\$46	94.8%	-4%	-2.2%	1.2%
Fixed capital investment 2011	\$2,164m	6.9%	-10.1%	1.2%	3.5%
No. of firms 2013	67,973	14.4%	-3.9%	-2.0%	-1.9%

Example Firms			
Firm	Turnover (\$m)	Employees	Ownership
Sealord	\$530 (2012)	1,100	50/50 Maori trust/foreign
Sanford	\$464 (2012)	1,850	Listed
Ernslaw One	\$284 (2009 est)	100	Private (Tiong family)
Landcorp	\$215 (2012)	573	NZ Government SOE
Aotearoa Fisheries	\$154 (2012)	300	Iwi

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$486,540.7	\$1,377,888	6.3%	6.5%
Total income per employee 2012#	\$343,900	\$327,400	2.8%	4.9%
Surplus per employee 2012#	\$38,500	\$32,100	1.3%	32.1%
Return on equity 2012#	5.4%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	47.3%	57.4%	down	down
Capital stock per worker 2011	\$118,643	\$168,533	-0.7%	1.1%

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Logs	\$1,482	China	\$1,484
Fruit nec (e.g. kiwifruit)	\$1,076	Japan	\$602
Apples, pears, and quinces	\$347	Australia	\$389
Greasy wool	\$286	South Korea	\$380
Live rock lobsters	\$226	EU (unspecified)	\$248
Other	\$1,163	Other	\$1,477
TOTAL all exports	\$4,580	TOTAL all countries	\$4,580

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms, and definitions

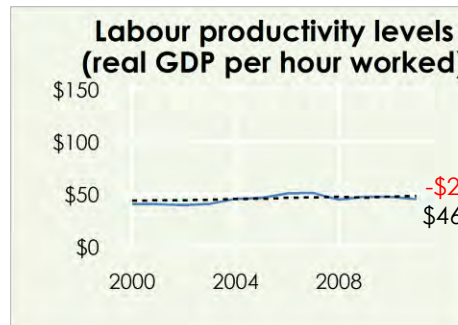
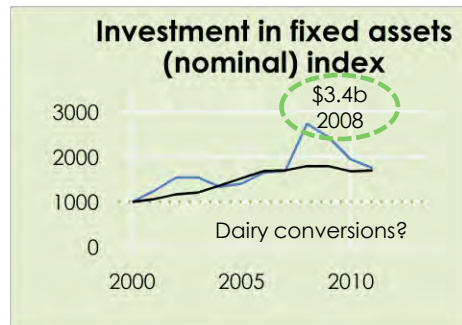
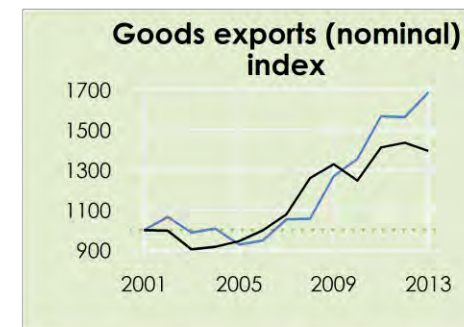
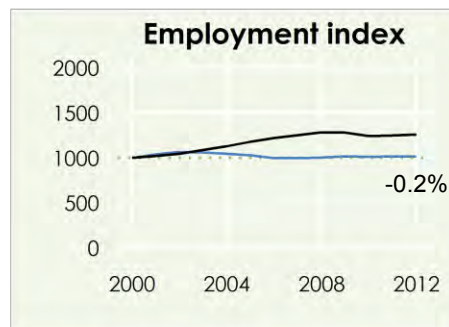
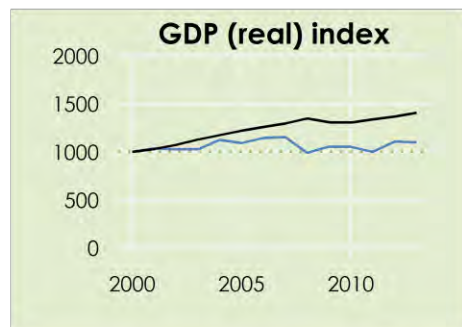
Index of key trends, various timeframes: (base =1000), except productivity is \$ values – this sector vs all other sectors

Comment

- GDP growth below average
- Large employer: 163,518
- Lost jobs overall: -2,442 (2000–12)
- Lost jobs: -11,529 (2002–06)
- Gained jobs: +3,156 (2007–12)
- Firm numbers declining, indicating shift to fewer, larger firms
- R&D carried out collectively through Commodity Levies Act funding so may explain low R&D rate by individual firms
- Most outputs of this sector are inputs into food & beverage manufacturing, e.g. milk into milk powder

Key

- Agriculture, forestry & fishing
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	○	1. Exchange rate volatility	●	1. Limited experience in expanding beyond NZ	●	% of agriculture, forestry & fishing firms reporting overseas income	19%
Innovation rate	○	2. Exchange rate level	●	2. Limited knowledge about specific markets	●	% of agriculture, forestry & fishing firms with off-shore direct investment	2%
		3. Distance from markets	◐	3. Limited access to distribution networks	●	% of agriculture, forestry & fishing firms >50% foreign owned	3%

- High
- ◐ Medium
- Low

This sector includes firms that mainly extract naturally occurring mineral solids, such as coal and ores, and includes liquid minerals such as crude petroleum, and gases, such as natural gas. The products produced by firms in this sector involve the minimum amount of processing to produce a marketable product.

Scorecard					
Measure	Total	% of NZ*	Growth (1 year)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$4,340m	2.5%	5.3%	19.1%	12.1%
GDP 2013 (real)	n/a	n/a	2.3%	-2.3%	0.2%
Goods exports 2013	\$1,795m	4.1%	-13.8%	-7.1%	10.4%
Employment 2012	7,311	0.3%	4.7%	5.3%	6.6%
Productivity 2011	\$330	687.5%	-5.7%	0.1%	-4.7%
Fixed capital investment 2011	\$1,052m	3.4%	-34.8%	8.0%	12.1%
No. of firms 2013	662	0.1%	2.3%	5.9%	5.6%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
OMV New Zealand	\$670 (2009)	90	Foreign (Listed-ASX)
OceanaGold	\$390 (2009)	500	Listed (ASX,TSX,NZX)
Shell Todd Oil Services	\$240 (2012)	350	Private (Todd family & Shell)
Winstone Aggregates	\$220 (2012)	320	Fletcher Building
New Zealand Oil & Gas	\$106 (2011)	20	Listed (NZX)

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$12,151,468	\$1,377,888	1.8%	6.5%
Total income per employee 2012#	\$1,313,600	\$327,400	5.1%	4.9%
Surplus per employee 2012#	\$218,300	\$32,100	-20.4%	32.1%
Return on equity 2012#	17.0%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	73%	57.4%	up	down
Capital stock per worker 2011	\$1,895,332	\$168,533	-2.4%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Export value by product		Export value by market	
Product (excludes coal)	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Crude petroleum oils	\$2,023.3	Australia	\$2,673
Gold and silver	\$714	Singapore	\$39
Other	\$22.7	Indonesia	\$25
TOTAL all exports	\$2,797	China (PRC)	\$22
Note Coal exports are confidential. In 2012 other countries reported imports of New Zealand coal worth US\$394m, with India accounting for 56%, China 30%, Japan 12% and all others 2%.		Japan	\$14
		Other	\$24
		TOTAL all countries	\$2,797

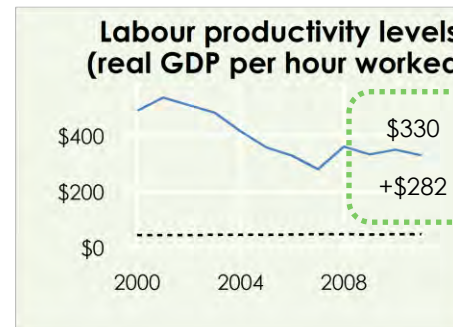
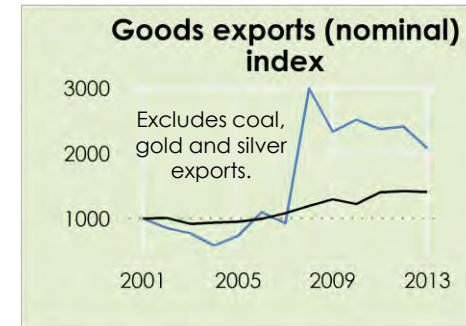
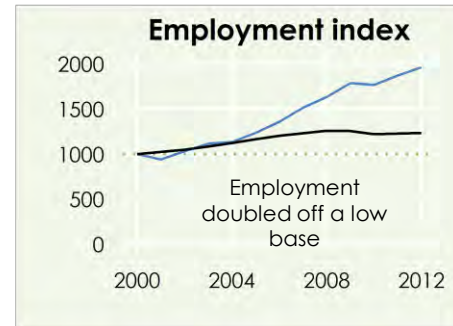
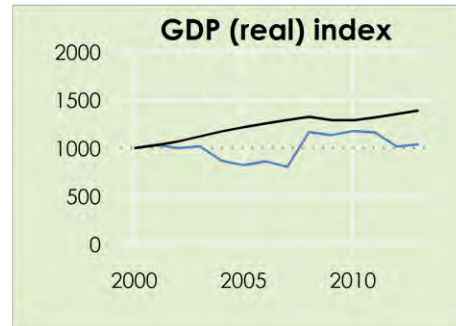
Index of key trends, various timeframes: (base =1000), except productivity is \$ values – this sector vs all other sectors

Comment

- Little real growth 2002–12; price driven nominal growth post 2007
- Small employer: 7,311
- Gained workers: +3,582 (2000–12)
- Most productive sector in the economy; productivity declining
- Investment spiked 2007/08
- Exports tripled in 2008; nearly all NZ crude oil is exported to Australia
- Outputs from this sector are inputs into construction & chemicals, plastics & refining manufacturing e.g. methanol production, fertiliser (urea)
- Sector growth drives demand in other sectors, e.g. engineering, IT services.

Key

- Mining & petroleum extraction
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate (% of firms)	1. Other		1. Limited experience in expanding beyond NZ		% of petroleum & minerals firms exporting	16% (15 firms)
Innovation rate (% of firms)	2. Inability to increase supply		2. Limited knowledge about specific markets		% of petroleum & minerals firms with off-shore direct investment	6%
	3. Distance from markets / Exchange rate volatility / limited access to finance		3. Exchange rate level / Exchange rate volatility / Distance from markets		% of petroleum & minerals >50% foreign owned	16%

- High
- ◐ Medium
- Low

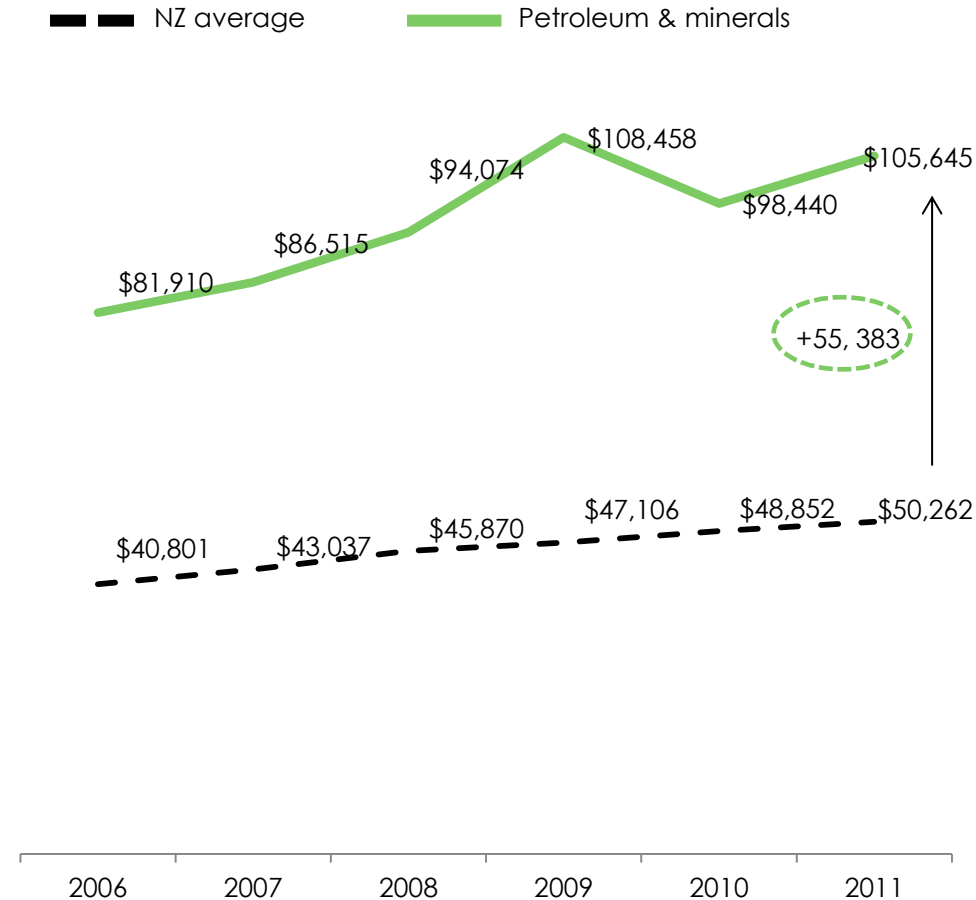
Salaries and wages

Salaries in the petroleum and minerals sector are over twice the New Zealand average

Example chart from the Petroleum and Minerals in-depth report

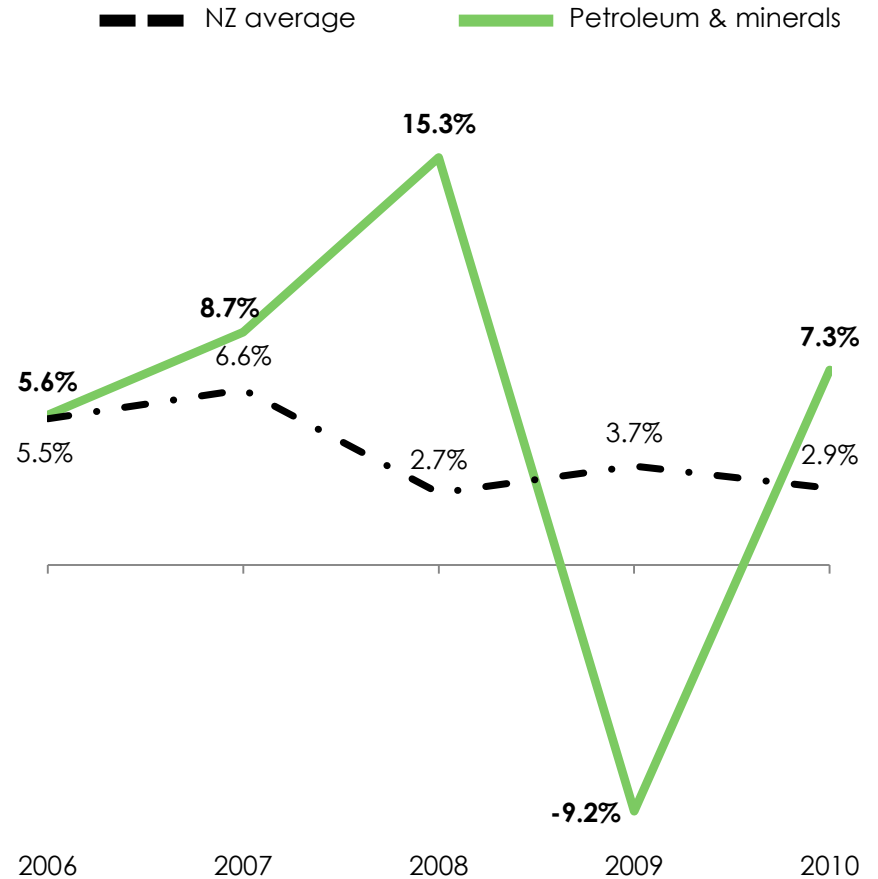
Average salaries/wages

NZ\$; 2006–2011



Growth in average salaries/wages

% change; 2006–2010



Note: average wage is calculated by total salaries & wages paid divided by number of employees

Source: Statistics New Zealand, Annual Enterprise Survey

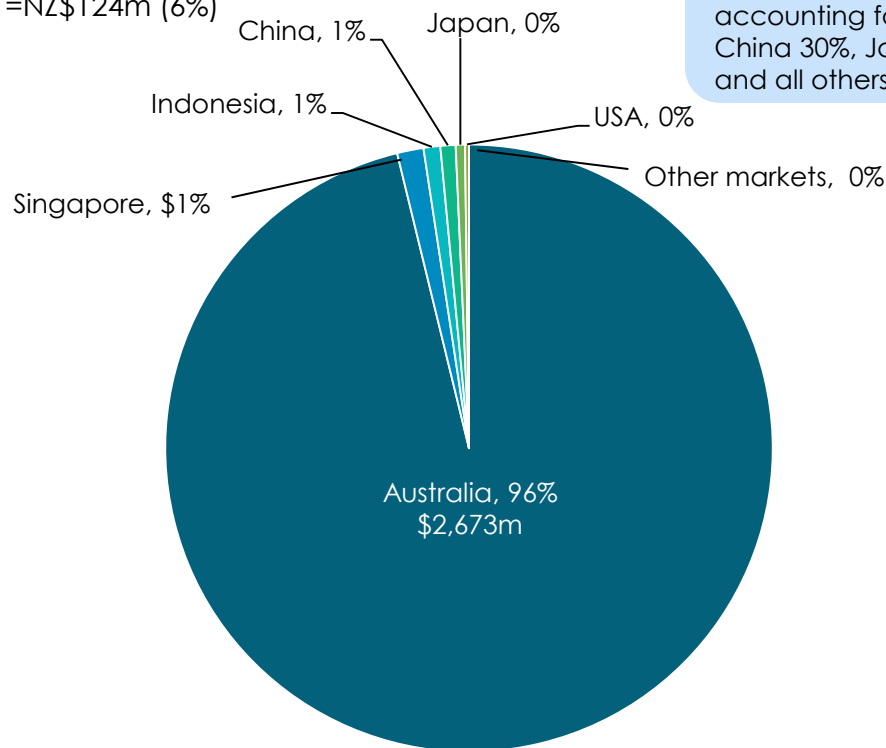
Export destinations

Australia imports 96% of New Zealand's petroleum and minerals exports; oil and gold are New Zealand's two single largest exports to Australia

Petroleum and minerals exports by market

% of petroleum and minerals exports; 2012

Total non-Australian markets
=NZ\$124m (6%)



In addition New Zealand exported US\$394m of coal in 2012, with India accounting for 56%, China 30%, Japan 12% and all others 2%.

Total= 100%; (\$2,797m)

Example chart from the
Petroleum and Minerals
in-depth report

Top ten goods exports to Australia by value

NZ\$m: year ended June 2013

	Description	Value
1	Crude petroleum oils	\$1,632m
2	Gold	\$574m
3	Wine	\$373m
4	Food preparations, not elsewhere specified	\$220m
5	Cheese	\$211m
6	Silver	\$200m
6	Non-crude petroleum oils, waste oil, and biodiesel	\$163m
7	Sawn or chipped wood of thickness 6mm and over	\$161m
8	Plastic containers	\$132m
9	Bread, pastry, cakes, and biscuits	\$132m
10	Sweetened water	\$124m



MANUFACTURING SECTORS

- Wood & paper
- Food & beverage
- Machinery & equipment
- Chemicals, plastics & refining
- Metals & metal products
- Other manufacturing
- **See pages 92–94 for guide to reading snapshot pages**

Wood & paper manufacturing

ANZSIC codes C14 & C15

Situation

Includes firms involved in wood product manufacturing; and pulp, paper and converted paper product manufacturing. For example, wood firms process timber into wood chips, wooden prefabricated buildings and building components, and reconstituted wood products. Paper firms produce wood pulp, paper, cardboard, newsprint, stationery and sanitary products.

Scorecard						Example firms			
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)	Firm	Turnover (\$m)	Employees	Ownership
GDP 2011 (nominal)	\$2,243m	1.3%	9.8%	-0.2%	-0.3%	Carter Holt Harvey	\$468 (2012 est)	857	Private
GDP 2013 (real)	n/a	n/a	-4.2%	-1.3%	-0.2%	Tenon	\$394 (2011 est)	320	
Goods exports 2013	\$2,603m	5.9%	-5.7%	-0.3%	-0.3%	Amcors Packaging	\$329 (2011 est)	205	Foreign
Employment 2012	22,500	1.0%	-4.8%	-5.4%	-2.6%	Norske Skog Tasman	\$316 (2010 est)	350	Foreign
Productivity 2011	\$43	88.5%	2.9%	3.8%	2.7%	SCA Hygiene Australasia	\$288 (2009 est)	40	Foreign
Fixed capital investment 2011	\$276m	0.9%	-21.1%	-12.6%	-11.9%				
No. of firms 2013	1,866	0.4%	-3.7%	-4.3%	-2.3%				

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$4,048,529	\$1,377,888	2.3%	6.5%
Total income per employee 2012#	\$351,200	\$327,400	-0.4%	4.9%
Surplus per employee 2012#	\$9,500	\$32,100	-34%	32%
Return on equity 2012#	5.3%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	47.0%	57.4%	down	down
Capital stock per worker 2011	\$157,300	\$168,533	-6.5%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Sawn or chipped wood of thickness 6mm and over	\$763	Australia	\$776
Chemical wood pulp, soda or sulphate	\$368	Japan	\$474
Fibreboard	\$249	China	\$402
Uncoated kraft paper, nec	\$159	USA	\$179
Plywood	\$144	South Korea	\$152
Other	\$1,076	Other	\$776
TOTAL all exports	\$2,759	TOTAL all countries	\$2,759

Wood & paper manufacturing

ANZSIC codes C14 & C15

Performance

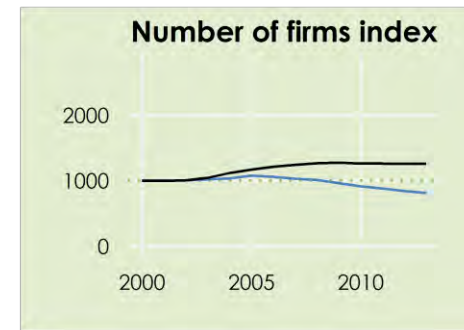
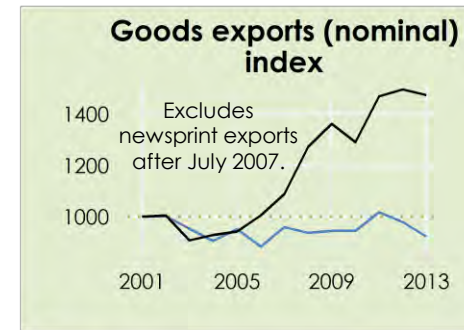
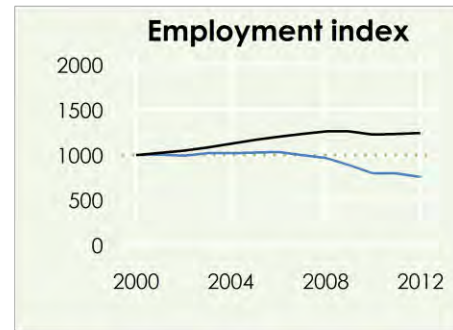
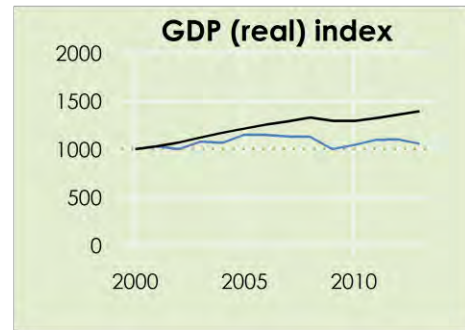
Index of key trends, various timeframes: (base =1000), except productivity is \$ values – this sector vs all other sectors

Comment

- GDP growth below average after 2006
- Small employer: 22,500
- Lost jobs overall: -7,160 (2000-12)
- Firm numbers declining
- Exports flat/declining
- Fixed capital investment lumpy but growth overall
- Productivity improving: +2.9% in 2011
- Many outputs from this sector are inputs into construction; historical data may reflect construction downturn
- Excludes confidential newsprint exports from July 2007; other countries report newsprint imports from NZ valued at NZ\$179m in the 2011 calendar year

Key

- Wood & paper
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate:		1. Exchange rate volatility		1. Limited experience in expanding beyond NZ		% of wood & paper firms reporting overseas income	27%
Innovation rate		2. Exchange rate level		2. Exchange rate volatility		% of wood and paper firms with off-shore direct investment	3%
		3. Low market demand or increased competition in overseas markets		3. Limited access to distribution networks		% of wood and paper firms >50% foreign owned	6%

- High
- ◐ Medium
- Low

Food & beverage manufacturing

ANZSIC codes C11 & C12

Situation

Food product, beverage and tobacco product manufacturing, includes meat and meat products, seafood processing, dairy products, fruit and vegetable processing, oils and fats, grain mill and cereal products, bakery products, sugar and confectionery and other food manufacturing (including pet food).

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$7,737m	4.5%	3.3%	0%	2.6%
GDP 2013 (real)	n/a	n/a	4.1%	-0.1%	0.8%
Goods exports 2013	\$23,820m	54%	0.2%	4.3%	6.1%
Employment 2012	81,370	3.5%	-0.2%	-0.7%	0.3%
Productivity 2011	\$57	118.7%	-3.3%	-1.6%	0.9%
Fixed capital investment 2011	\$1,243m	4%	8.5%	0.7%	3.1%
No. of firms 2013	3,280	0.7%	3.8%	2.5%	2.5%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Fonterra Co-op Group	\$19,800 (2012)	15,600	Co-op
Silver Fern Farms	\$2,006 (2012)	5,500	Co-op
Alliance Group	\$1,371 (2012)	5,000	Co-op
Anzco Foods	\$1,116 (2010 est)	2,500	Private
Goodman Fielder NZ	\$1,091 (2011 est)	1,800	Public

Industry level financial performance				
	Total		Growth (1 yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$13,082,252	\$1,377,888	-1.1%	6.5%
Total income per employee 2012#	\$527,300	\$327,400	-0.6%	4.9%
Surplus per employee 2012#	\$20,400	\$32,100	43.7%	32.1%
Return on equity 2012#	11.1%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	52.6%	57.4%	down	down
Capital stock per worker 2011	\$146,558	\$168,533	-1.3%	1.1%

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Milk powder	\$6,765	China	\$3,342
Sheep meat	\$2,645	USA	\$2,643
Butter and dairy spreads	\$2,295	Australia	\$2,448
Frozen beef meat	\$1,748	Japan	\$1,274
Cheese	\$1,420	UK	\$965
Other	\$8,885	Other	\$13,086
TOTAL all exports	\$23,758	TOTAL all countries	\$23,758

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

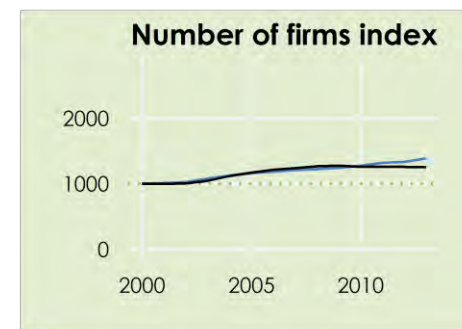
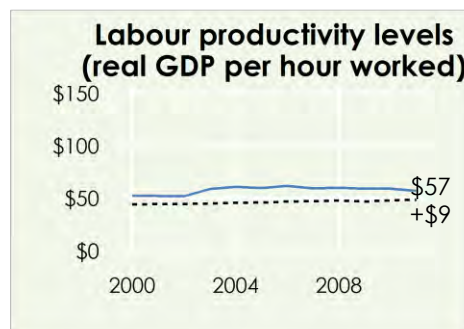
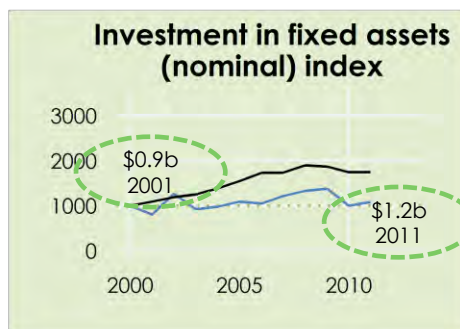
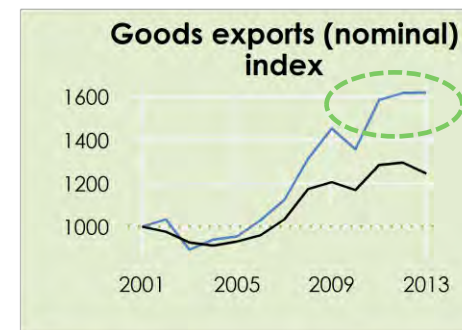
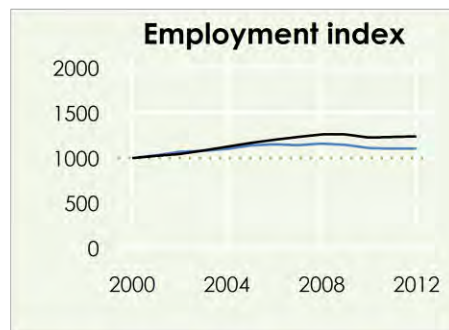
Index of key trends, various timeframes (base =1000), except productivity is \$ values – this sector vs all other sectors

Comment

- Strong export growth, 54% of NZ goods exports
- Large employer: 81,370
- Created jobs 2000–08: +11,698
- Lost jobs: 2009–12: -4,110
- Firm numbers growing
- Fixed capital investment averaging \$1.2b per annum 2000–10
- Above average innovation rate
- Includes most of NZ's largest exporting firms (importance of scale)
- Exports diversifying, e.g. growth in processed foods, foods for health
- **See www.foodandbeverage.govt.nz for detailed analysis of all sub-sectors**

Key

- Food & beverage
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate:	1. Exchange rate volatility	Medium	1. Limited experience in expanding beyond NZ	High	% of F&B firms reporting overseas income	51%
Innovation rate	2. Exchange rate level	Medium	2. Exchange rate volatility	High	% of F&B firms with off-shore direct investment	8%
	3. Distance from markets	Medium	3. Limited knowledge about specific markets	Medium	% of F&B firms >50% foreign owned	14%

- High
- ◐ Medium
- Low

Machinery & equipment manufacturing

ANZSIC codes C23 & C24

Situation

Includes firms which transform materials, substances or components into new products. It includes the production of all kinds of vehicles, from cars to baby strollers; lenses; medical equipment; scientific and measuring equipment; cables, wires and fibre optics; computers and communication equipment; and electrical, domestic, commercial and industrial appliances.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$3,776m	2.2%	5.2%	3.5%	5.1%
GDP 2013 (real)	n/a	n/a	-1.6%	-0.8%	0.7%
Goods exports 2013	\$3,196m	7.2%	-6.2%	-1.2%	1.7%
Employment 2012	43,900	1.9%	0.7%	-1.8%	-0.7%
Productivity 2011	\$41	84.8%	7.4%	1.3%	1.1%
Fixed capital investment 2011	\$278m	0.9%	101.4%	-4.3%	0.5%
No. of firms 2013	5,149	1.1%	-1.0%	-0.9%	0.4%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Fisher & Paykel Appliances	\$1,037 (2012)	1,600	Foreign (Haier)
Compac Sorting Equipment	\$755 (2009 est)	180	Private
Fisher & Paykel Healthcare	\$516 (2012)	1,800	Listed
Gallagher Security	\$328 (2012 est)	600	Private
NDA Engineering Ltd	\$265 (2009 est)	150	Private/Foreign

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$1,934,460	\$1,377,888	6.8%	6.5%
Total income per employee 2012#	\$259,500	\$327,400	5.4%	4.9%
Surplus per employee 2012#	\$17,600	\$32,100	18.1%	32.1%
Return on equity 2012#	19.4%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	55.9%	57.4%	down	down
Capital stock per worker 2011	\$57,031	\$168,533	-3.0%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Mechano-therapy & massage appliances	\$290	Australia	\$1,275
Refrigerators & freezers	\$213	USA	\$588
Yachts and other vessels	\$153	UK	\$115
Telephones & cellphones	\$129	China	\$112
Electric control boards, panels & consoles	\$112	Canada	\$93
Other	\$2,511	Other	\$1,225
TOTAL all exports	\$3,408	TOTAL all countries	\$3,408

Machinery & equipment manufacturing

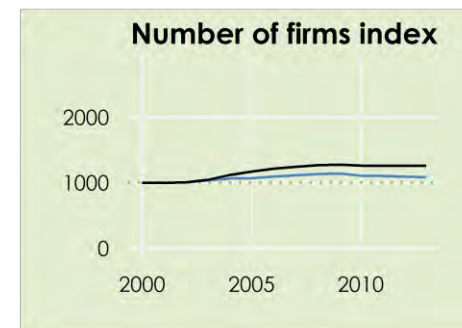
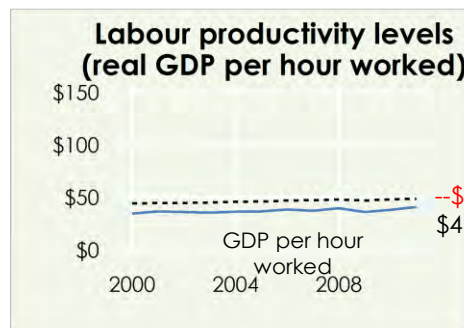
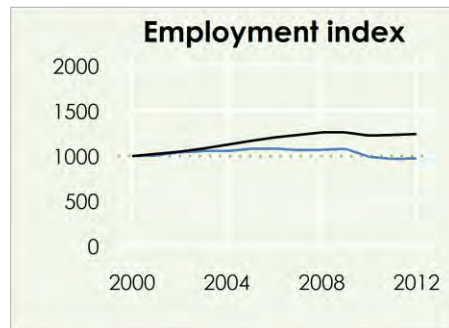
ANZSIC codes C23 & C24

Performance

Index of key trends, various timeframes: (base =1000), except productivity is \$ values – this sector vs all other sectors

Comment

- GDP growth below average
- Medium-large employer: 43,900
- Losing jobs overall: -1,140 (2000–12)
- Created jobs: +3,700 (2001–09)
- Lost jobs: -5,150 (2009–11)
- Created jobs: +310 (2012)
- Productivity spike in 2011: +7.4%
- Exports declined -2.1% 2008–13
- Australia takes a third of exports
- High R&D rate: includes many high technology manufacturing firms
- Aggregate data may mask some high performing firms



Key

- Machinery & equipment
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors

Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Exchange rate volatility		1. Limited experience in expanding beyond NZ		% of machinery & equip. firms reporting overseas income	41%
Innovation rate	2. Distance from markets		2. Distance from markets		% of machinery & man. firms with off-shore direct investment	n/a
	3. Exchange rate level / low market demand or increased competition		3. Limited knowledge about specific markets		% of machinery & man. firms >50% foreign owned	n/a

- High
- ◐ Medium
- Low

Chemicals, plastics & refining manufacturing

ANZSIC codes C17, C18 & C19

Situation

Includes firms focused on petroleum and coal product manufacturing, basic chemical and chemical product manufacturing, and polymer product and rubber product manufacturing. Products include paints and coatings, fuels, oils and fluids, fertilisers, pesticides, resins, rubber and plastic products, pharmaceuticals and medicines, cleaners and cosmetics.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$3,223m	1.9%	-6.8%	-5.3%	0.6%
GDP 2013 (real)	n/a	n/a	5.3%	4.0%	1.6%
Goods exports 2013	\$1,712m	3.9%	-15.7%	2.3%	0.0%
Employment 2012	20,420	0.9%	1.9%	-3.2%	-1.1%
Productivity 2011	\$107	222.6%	17.3%	7.9%	3.0%
Fixed capital investment 2011	\$312m	1%	-4.3%	-4.9%	1.8%
No. of firms 2013	1,185	0.3%	-1.2%	-1%	-0.2%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Nuplex Industries	\$1,616 (2012)	230	Listed
Ravensdown Fertiliser	\$1,070 (2012)	700	Co-op
Ballance Agri-Nutrients	\$915 (2012)	750	Co-op
Dulux	\$478	700	Foreign (Orica – Listed ASX)
Resene Paints	\$328 (2012 est)	600	Private

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$15,348,624	\$1,377,888	11.9%	6.5%
Total income per employee 2012#	\$909,500	\$327,400	6.3%	4.9%
Surplus per employee 2012#	\$49,200	\$32,100	-22.2%	32.1%
Return on equity 2012#	16.4%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	49.0%	57.4%	down	down
Capital stock per worker 2011	\$253,520	\$168,533	-4.1%	1.1%

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Non-crude petroleum oils, waste oil and biodiesel	\$215	Australia	\$949
Plastic containers	\$168	USA	\$104
Retail medicines	\$159	Japan	\$91
Insecticides, rodenticides, herbicides and fungicides	\$122	UK	\$53
Bitumen mixtures	\$91	China	\$41
Other	\$957	Other	\$474
TOTAL all exports	\$1,712	TOTAL all countries	\$1,712

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Chemicals, plastics & refining manufacturing

ANZSIC codes C17, C18 & C19

Performance

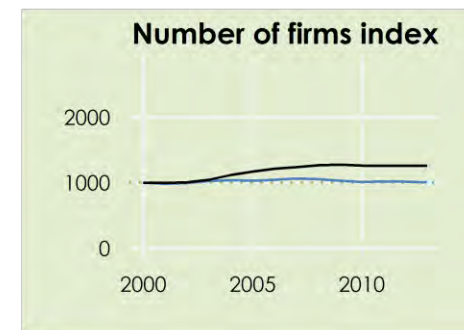
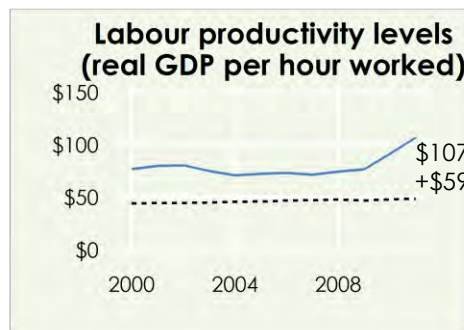
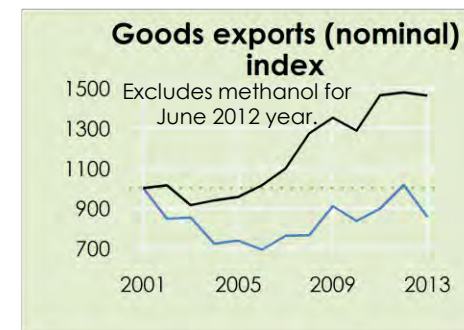
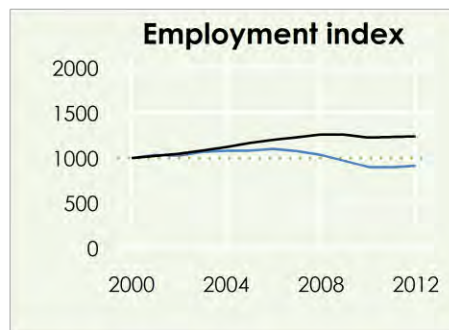
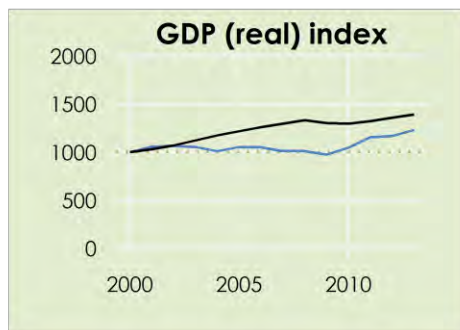
Index of key trends, various timeframes: (base =1000), except productivity is \$ values – this sector vs all other sectors

Comment

- Share of GDP declining
- Medium employer: 20,420
- Lost jobs overall: -1,860 (2000–12)
- Created jobs: +390 (2012)
- Highly productive
- Return on equity high: 23%
- Fixed capital investment trending up till 2010
- High R&D and innovation rates
- Includes pharmaceuticals
- Australia key market
- Highly internationalised sector
- Exports data excludes confidential methanol for the June 2012 year (\$242m in June 2011 year)

Key

- Chemicals, plastics & refining
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Distance from markets	Medium	1. Limited access to finance for expansions beyond NZ	High	% of chemicals, plastics & refining firms reporting overseas income	75%
Innovation rate	2. Low market demand or increased competition in overseas markets	Medium	2. Limited experience in expanding beyond NZ	Medium	% of chemicals, plastics & refining firms with off-shore direct investment	10%
	3. Exchange rate volatility	High	3. Distance from markets	Medium	% of chemicals, plastics & refining firms >50% foreign owned	18%

- High
- ◐ Medium
- Low

Metals & metal products manufacturing

ANZSIC codes C21 & C22

Situation

Includes primary metal and metal product manufacturing, plus fabricated metal product manufacturing. Products include iron and steel, tubes and pipes, aluminium production and smelting, smelting of metals, such as silver, metal building products, and other products made of metal such as bathroom fixtures, tools, containers and tanks.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$2,613m	1.5%	0.1%	-0.8%	2.7%
GDP 2013 (real)	n/a	n/a	-0.2%	-3%	-1.7%
Goods exports 2013	\$2,832m	6.4%	-9.8%	-2%	3.8%
Employment 2012	29,320	1.3%	-1.8%	-3.4%	-0.5%
Productivity 2011	\$41	85.3%	17%	-2.4%	-0.5%
Fixed capital investment 2011	\$371m	1.2%	36.4%	4.9%	8%
No. of firms 2013	3,102	0.7%	-2.4%	-3%	-1%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
New Zealand Steel	\$845 (2011)	1600	Foreign
New Zealand Aluminium Smelters	\$704 (2011)	750	Foreign
Pacific Steel	\$282 (2012 est)	500	Listed (Fletchers)
Ullrich Aluminium	\$282 (202 est)	500	Private
Methven	\$106 (2012)	100	Listed

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$2,842,089	\$1,377,888	1.7%	6.5%
Total income per employee 2012#	\$344,300	\$327,400	1.1%	4.9%
Surplus per employee 2012#	\$19,600	\$32,100	-1.0%	32.1%
Return on equity 2012#	n/a	8.6%	n/a	up
Debt ratio (liabilities/assets) 2012#	53.5%	57.4%	up	down
Capital stock per worker 2011	\$103,317	\$168,533	3.0%	1.1%

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Unwrought aluminium	\$937	Australia	\$949
Gold	\$609	USA	\$104
Ferrous waste & scrap	\$220	Japan	\$91
Hot-rolled iron or non-alloy steel flat-rolled 600mm or more	\$198	UK	\$53
Clad iron or non-alloy steel 600mm or more flat-rolled	\$112	China	\$41
Other	\$1,010	Other	\$1,848
TOTAL all exports	\$3,086	TOTAL all countries	\$3,086

* Equals % of total employing firms, except productivity, which is total measured sectors.

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions.

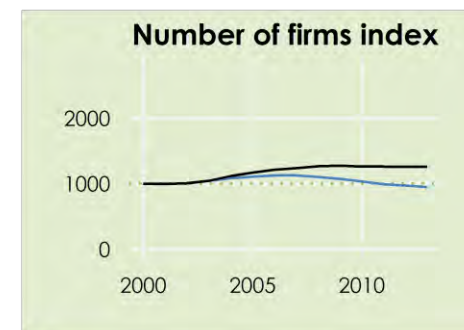
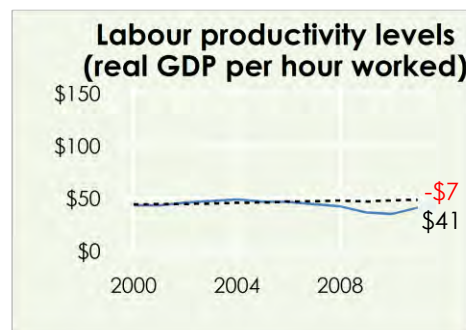
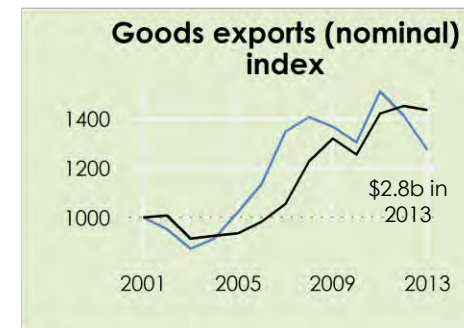
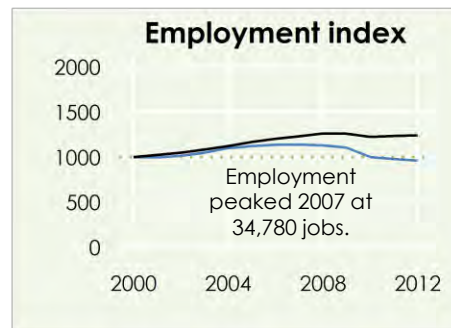
Index of key trends, various timeframes: (base =1000), except productivity is \$ values – this sector vs all other sectors

Comment

- Contribution to GDP declining
- Medium employer: 29,320
- Lost jobs overall: -1,210 (2000–12)
- Created jobs: +4,250 (2001–07)
- Lost jobs: -5,460 (2008–12)
- Exports flat; aluminium accounts for nearly 30% of total exports
- 'Low market demand/increased competition' factor in export performance e.g. aluminium price drop
- Productivity improved 17% in 2011 after a period of decline
- Christchurch rebuild may stimulate demand

Key

- Metals
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Low market demand or increased competition in overseas markets		1. Limited experience in expanding beyond NZ		% of metals & metals products firms reporting overseas income	23%
Innovation rate	2. Exchange rate volatility		2. Limited knowledge about specific markets		% of metals & metals products firms with off-shore direct investment	n/a
	3. Limited access to finance for expansion beyond New Zealand		3. Limited access to finance for expansion beyond NZ		% of metals & metals products firms >50% foreign owned	n/a

- High
- ◐ Medium
- Low

Other manufacturing

ANZSIC codes C13, C16, C20 & C25

Situation

Other manufacturing includes firms producing textiles, leather, clothing and footwear; printing, non-metallic mineral products, and furniture. Products include leather clothing and goods, carpets, t-shirts, printed materials and services, reproduction of recorded materials (such as CDs), bottles, windows, bricks, cement, concrete, furniture, toys, sports goods, jewellery and umbrellas.

Scorecard						Example firms			
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)	Firm	Turnover (\$m)	Employees	Ownership
GDP 2011 (nominal)	\$2,830m	1.6%	-1.1%	-3.1%	0.5%	Blue Star Group	\$569 (2011)	1,100	Foreign
GDP 2013 (real)	n/a	n/a ⁵	2.2%	-4.2%	-1.8%	Firth	\$437 (2012 est)	800	Listed (Fletchers)
Goods exports 2013	\$1,755m	4%	-5.2%	-0.9%	-2.2%	Cavalier Bremworth	\$217 (2012)	600	Listed (Cavalier Corporation)
Employment 2012	41,630	1.8%	-4.0%	-5.3%	-3.4%	NZ Comfort Group (Sleepyhead)	\$180 (2013 est)	320	Private
Productivity 2011	\$35	72.1%	1.6%	0.7%	1.2%	Low Corporation	\$169 (2013 est)	300–500 (seasonal)	Private
Fixed capital investment 2011	\$356m	1.1%	-10.8%	-7.3%	2.9%				
No. of firms 2013	5,899	1.2%	-1.7%	-2.9%	-1.8%				

Industry level financial performance					Export value by product		Export value by market	
	Total		Growth (1yr)		Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
	This sector	All sectors	This sector	All sectors				
Total income per firm 2012 [#]	\$950,858	\$1,377,888	1.6%	6.5%	Degreased wool	\$490	Australia	\$469
Total income per employee 2012 [#]	\$208,900	\$327,400	5.1%	4.9%	Raw sheep or lamb skins	\$236	China	\$401
Surplus per employee 2012 [#]	\$9,300	\$32,100	13.4%	32.1%	Tanned cattle hides and skins	\$162	Italy	\$227
Return on equity 2012 [#]	17.1%	8.6%	up	up	Tufted carpets	\$119	UK	\$84
Debt ratio (liabilities/assets) 2012 [#]	61.8%	57.4%	down	down	Raw cattle hides and skins	\$102	USA	\$83
Capital stock per worker 2011	\$85,955	\$168,533	0.0%	1.1%	Other	\$741	Other	\$587
					TOTAL all exports	\$1,850	TOTAL all countries	\$1,850

* Equals % of total employing firms, except productivity, which is total measured sectors.

**NZ average = 100%

[#]All sector total excludes some industries. Refer appendix, terms and definitions.

Other manufacturing

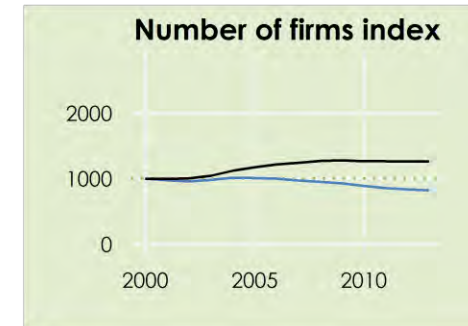
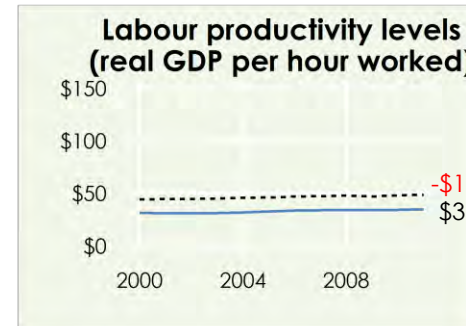
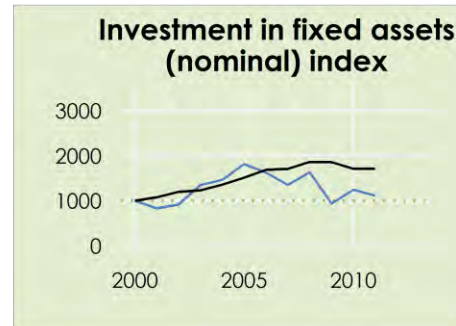
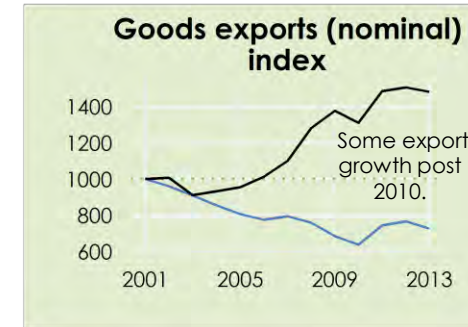
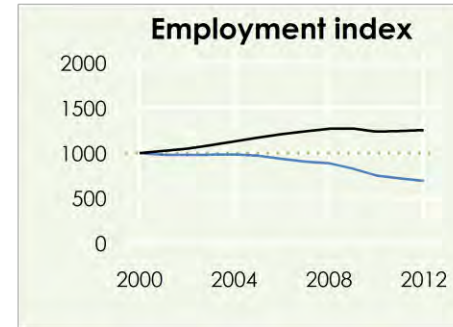
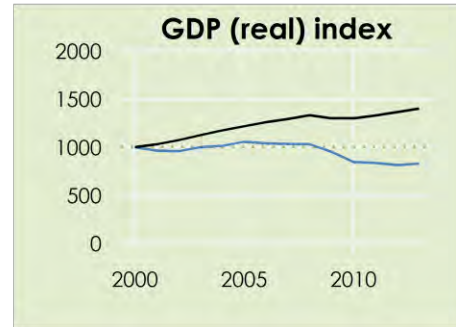
ANZSIC codes C13, C16, C20 & C25

Performance

Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- Sector GDP declining 2005–12
- Medium employer: 41,630
- Lost jobs overall: -18,630 since 2000
- Exports declined to \$1.7b in 2013, from \$2.4b in 2001
- Includes many firms which supply materials to the construction sector; may recover as construction picks up
- Data may indicate long-term restructuring in some activities driven by competition from emerging economies, outsourcing and/or new technologies.



Key

- Other manufacturing
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors

Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Distance from markets		1. Limited experience in expanding beyond NZ		% of other manufacturing firms reporting overseas income	31%
Innovation rate	2. Low market demand or increased competition in overseas markets		2. Limited access to finance for expansion beyond NZ		% of other manufacturing firms with off-shore direct investment	Data n/a
	3. Exchange rate volatility		3. Limited access to distribution networks		% of other manufacturing firms >50% foreign owned	Data n/a

- High
- ◐ Medium
- Low



SERVICES SECTORS

- Utilities
- Construction
- Logistics
- Wholesale trade
- Retail trade
- Accommodation & restaurants
- Arts & recreation services
- Property, rental & hiring services
- Administration & other services
- Finance & insurance
- Media & telecommunications
- Professional, scientific & technical services

See pages 92–94 for guide to reading snapshot pages.

This covers firms engaged in the provision of electricity, gas (through mains systems) and water, including drainage and sewage services. Firms which collect, treat and dispose of waste materials are also included in this sector. Includes electricity generation.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$6,686m	3.9%	8.5%	6.6%	7.7%
GDP 2013 (real)	n/a	n/a	-2.4%	0.7%	1.6%
Goods exports 2013	0	0%	n/a	n/a	n/a
Employment 2012	14,418	0.6%	1.1%	4.2%	3.9%
Productivity 2011	\$210	436.8%	-2.9%	-1.6%	-3.4%
Fixed capital investment 2011	\$3,195m	10.2%	-4.5%	3.2%	9.6%
No. of firms 2013	1,037	0.2%	1.8%	0.9%	2.2%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Contact Energy	\$2,700 (2012)	600	Listed NZX
Meridian Energy	\$2,570 (2012)	365	SOE/listed
Genesis Power	\$2,270 (2012)	500	SOE
Mighty River Power	\$1,520 (2012)	843	SOE/listed
Vector	\$1,252 (2012)	1000	Listed NZX

Industry level financial performance				
	Total		Growth (1 yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$17,222,767	\$1,377,888	8.6%	6.5%
Total income per employee 2012#	\$1,160,400	\$327,400	8.5%	4.9%
Surplus per employee 2012#	\$129,900	\$32,100	-10.5%	32.1%
Return on equity 2012#	6.1%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	48.5%	57.4%	up	down
Capital stock per worker 2011	\$3,147,595	\$168,533	0.3%	1.1%

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)

Sector does not generate goods exports. Some firms in this sector have the scale to invest in building international businesses, particularly based around knowledge and capability developed in New Zealand.

Examples include:

- Mighty River Power investments in geo-thermal energy in the US, Chile and Germany
- Meridian investments in wind energy in Australia

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

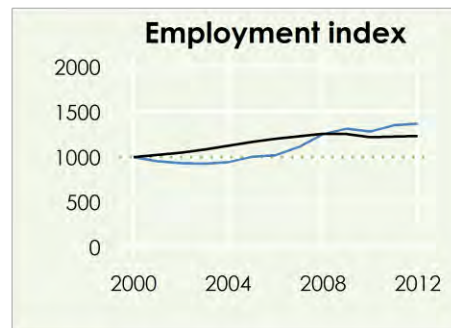
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

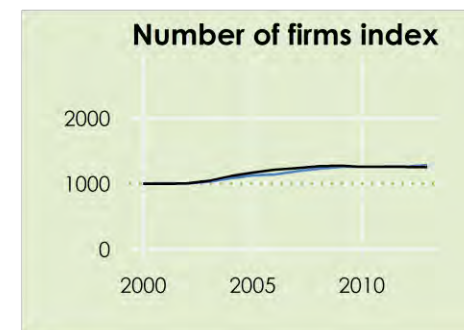
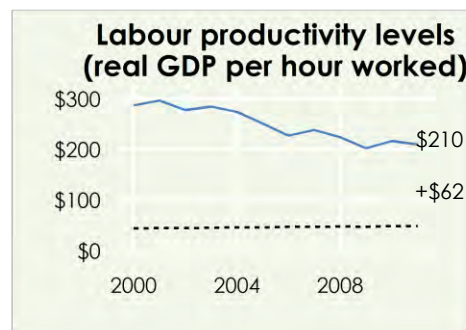
- Average GDP growth
- Small employer: 14,418 (2012)
- Created jobs: +3,816 (2000–12)
- Highly productive, but productivity declining
- Highly capital intensive
- 8% of firms have invested offshore – similar rate to food & beverage and twice average for all other sectors
- Fixed capital investment growth up (likely to be lumpy due to large nature of projects)
- Highly consolidated sector reflects nature of activity e.g. power generation

Key

- Utilities
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



No goods exports



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Exchange rate volatility	High	1. Limited experience in expanding beyond NZ	Medium	% of utilities firms reporting overseas income	11%
Innovation rate	2. Low market demand or increased competition in overseas markets	Medium	2. Limited knowledge about specific markets	Medium	% of utilities firms with off-shore direct investment	8%
	3. Distance from markets / Overseas government regulations or tariffs.	High	3. Limited access to distribution networks	Medium	% of utilities firms >50% foreign owned	8%

Construction includes firms mainly engaged in the construction of buildings and other structures, including additions, alterations, reconstruction, installation, and maintenance and repairs. Includes demolition of buildings and clearing of building sites. Blasting, test drilling, landfill, levelling, earthmoving, excavating, land drainage and other land preparation are included.

Scorecard					
Measure	Total	% of NZ*	Growth (1 year)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$10,295m	6.0%	-4.4%	3.3%	7.2%
GDP 2013 (real)	n/a	n/a	14.4%	0.1%	3.7%
Goods exports	\$0	0%	n/a	n/a	n/a
Employment 2012	174,021	7.6%	1.4%	-1.4%	3.1%
Productivity 2011	\$34	70.9%	-4.6%	1.0%	0.9%
Fixed capital investment 2011	\$655m	2.1%	-25.1%	-13.2%	0.3%
No. of firms 2013	49,479	10.5%	0.0%	-1.9%	1.8%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Fletcher Residential	\$1b	4,300	Fletcher Building (Listed NZX; ASX)
HEB Construction	\$166m (est)	500	Private
Naylor Love Construction	\$86m (est)	265	Private
Medium size Christchurch firm	\$9m (est)	35	Owner-operated
Small Auckland builder	\$0.65m (est)	3	Owner-operated

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$684,678	\$1,377,888	5.5%	6.5%
Total income per employee 2012#	\$286,200	\$327,400	0.5%	4.9%
Surplus per employee 2012#	\$15,600	\$32,100	-4.3%	32.1%
Return on equity 2012#	26.7%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	66.1%	57.4%	up	down
Capital stock per worker 2011	\$54,165	\$168,533	-3.4%	1.1%

Export value by product		Export value by market	
Service	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Construction services	\$24m	Australia	\$6m

Construction does not generate goods exports. But some of the largest firms in construction have built significant international businesses focused in particular on Australia.

Examples include:

- Fletcher Building
- Fulton Hogan.

Typically these firms have built integrated businesses that may include manufacturing of building materials, quarrying, design, distribution, wholesaling and retailing as well as core construction activities described above.

* Equals % of total employing firms, except productivity, which is total measured sectors

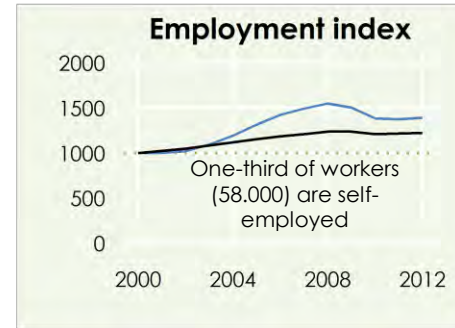
**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

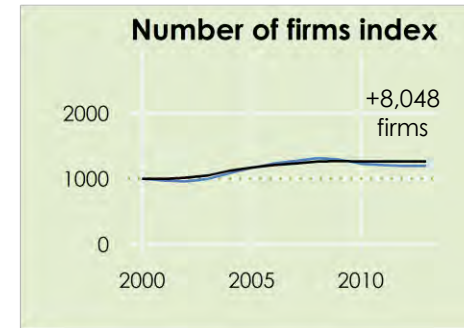
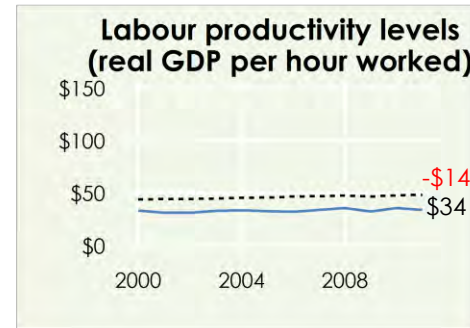
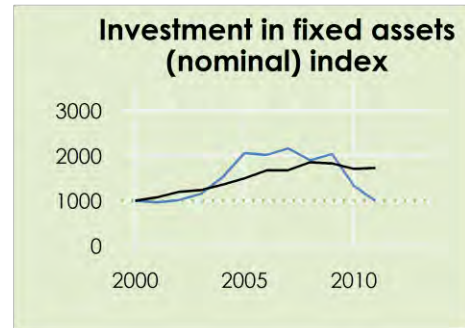
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- GDP grew above average 2002–2008
- Large employer: 174,021
- Created jobs overall: +49,065 (2000–12)
- Created jobs: +68,598 (2001–08)
- Lost jobs: -21,894 (2008–11)
- Number of firms increasing
- Surge in fixed capital investment 2005–09, e.g. in plant, machinery and equipment and transport equipment
- Low R&D/innovation rates at firm level
- R&D funded collectively through the Building Research Levy (\$8.7m in 2012)
- Many inputs to this sector are outputs from manufacturing and mining



No goods exports



Key

- Construction
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors

Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	○	1. Exchange rate volatility	●	1. Limited experience in expanding beyond NZ	●	% of construction firms exporting	3%
Innovation rate	○	2. Limited experience in expanding beyond NZ	●	2. Other	●	% of construction firms with off-shore direct investment	3%
		3. Limited access to distribution networks	●	3. Limited access to distribution networks	●	% of construction firms <50% foreign owned	3%

- High
- ◐ Medium
- Low

Number of employees by sub-sector

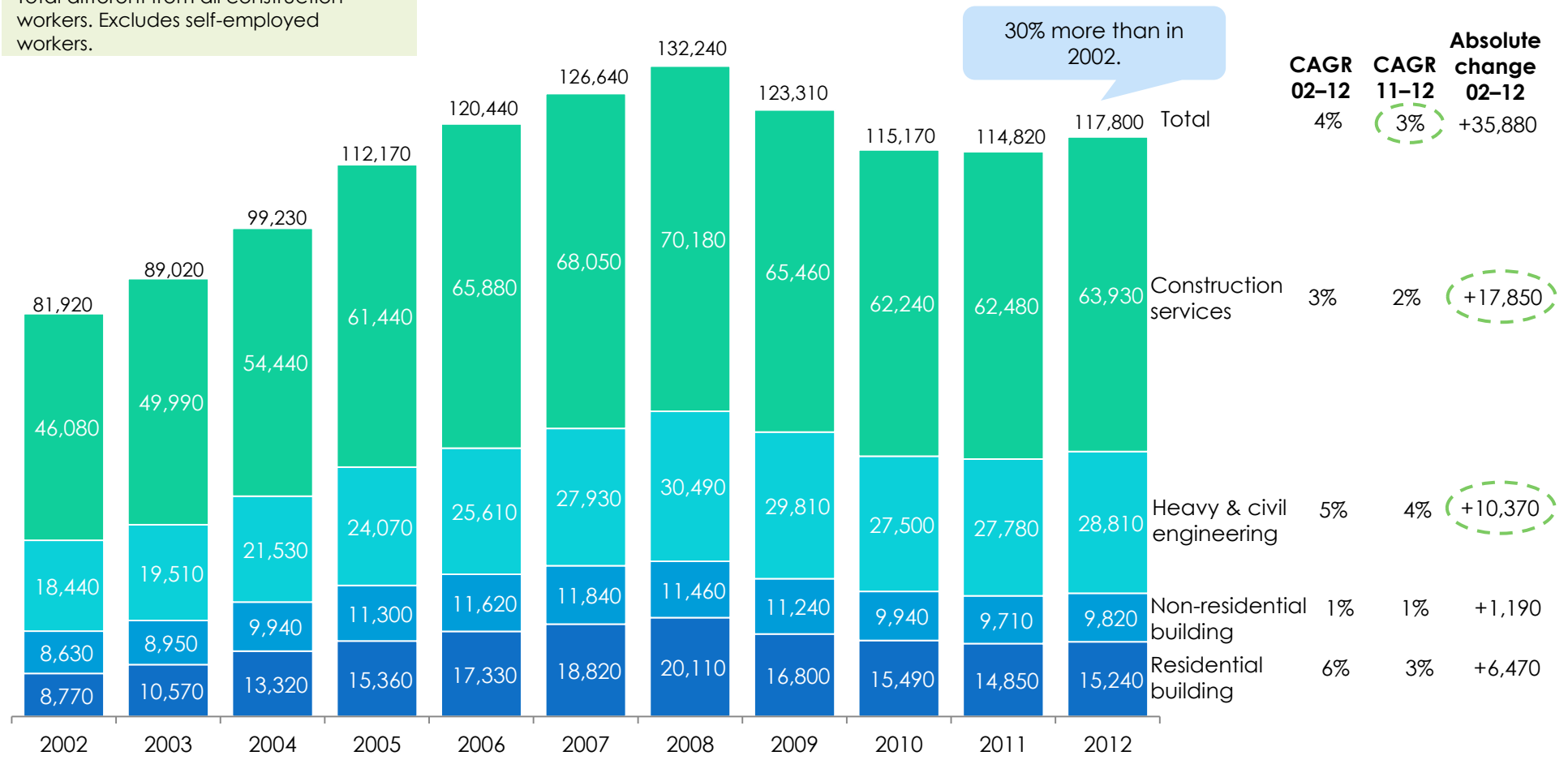
Despite the GFC, employee numbers are 30% higher in 2012 compared to 2002; employment growth driven by construction services and heavy and civil engineering

Number of employees by sub-sector

Employees; 2002–2012

Total different from all construction workers. Excludes self-employed workers.

Example chart from the Construction in-depth report



Note: totals may not match other pages due to rounding;

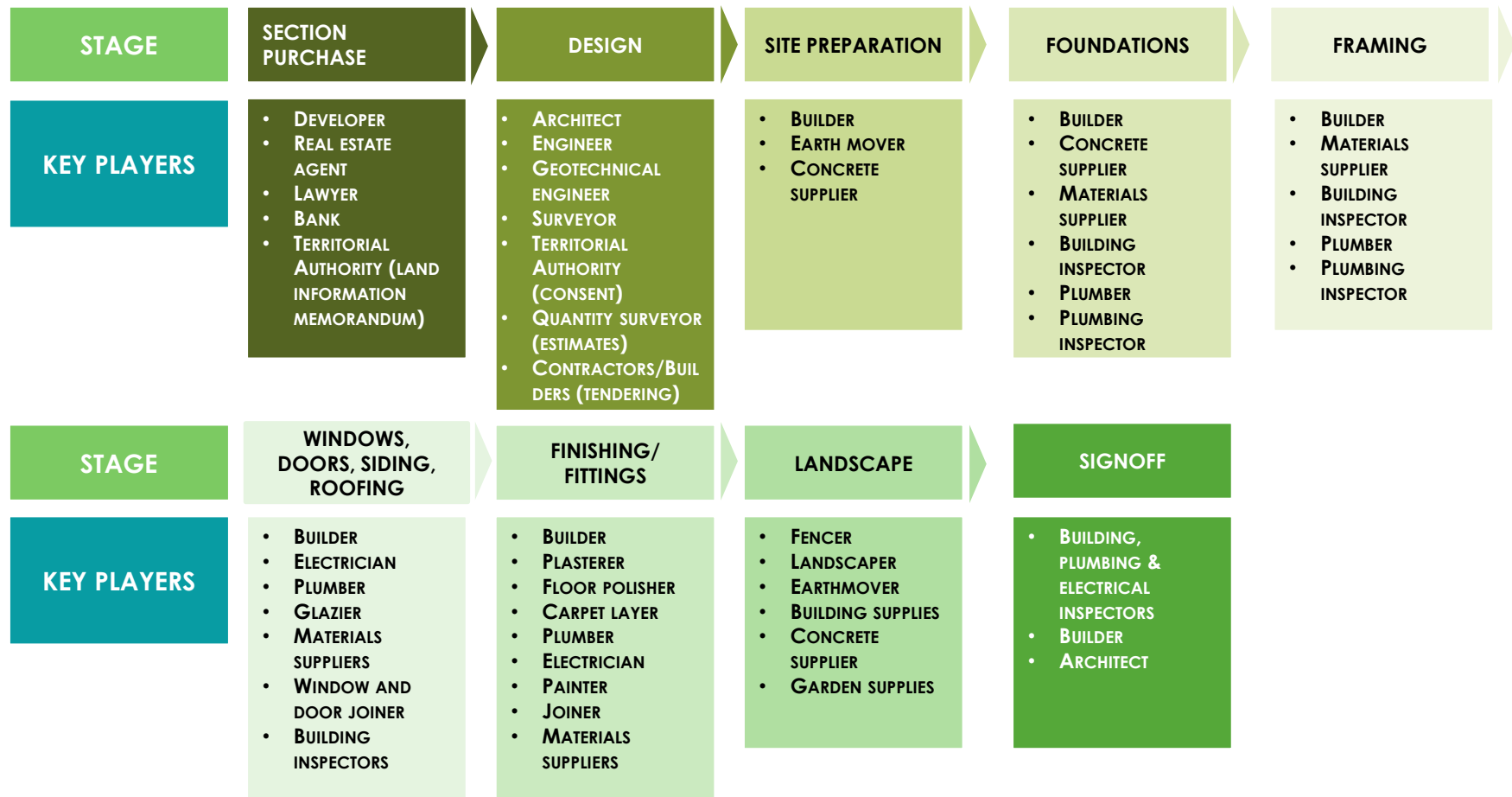
Source: Statistics New Zealand, New Zealand Business Demography Statistics (2012)

Residential construction: building a house

Building a house is a complex business involving a wide range of professions, trades and service providers

Example chart from the Construction in-depth report

Simplified model of the stages required to build a residential house, 2013



Includes firms transporting passengers and freight by road, rail, water or air, as well as related support services and scenic and sightseeing transport, and firms which operate warehouses or otherwise store goods. Also includes stevedoring, harbour, airport and navigation services, customs agency services and postal services.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$8,698m	5.0%	7.7%	2.8%	5.0%
GDP 2013 (real)	n/a	n/a	0.7%	0.6%	1.9%
Goods exports 2013	\$0	0%	n/a	n/a	n/a
Employment 2012	95,844	4.2%	0.9%	-0.1%	1.3%
Productivity 2011	\$50	103.4%	3.4%	0.9%	1.3%
Fixed capital investment 2011	\$4,397m	14.0%	-0.9%	5.6%	9.7%
No. of firms 2013	14,285	3.0%	-1.0%	-1.2%	0.8%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Air New Zealand	\$4,483 (2012)	10,000	Listed/NZ Govt
NZ Transport Agency	\$2,000 (2012)	1300	NZ Govt
Mainfreight	\$1,813 (2012)	1200	Listed
New Zealand Post	\$1,310 (2012)	8132	NZ Govt
KiwiRail	\$715 (2012)	4000	NZ Govt

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$1,424,938	\$1,377,888	4.4%	6.5%
Total income per employee 2012#	\$256,300	\$327,400	0.9%	4.9%
Surplus per employee 2012#	-\$7,500	\$32,100	-137.7%	32.1%
Return on equity 2012#	-3.7%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	50.3%	57.4%	up	down
Capital stock per worker 2011	\$539,017	\$168,533	5.0%	1.1%

Export value by product		Export value by market	
Product (services)	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Transport services	\$2,566	Australia	\$899
		US	\$315
		UK	\$174
		Other	\$1,178
TOTAL all exports	\$2,566	TOTAL all countries	\$2,566

Firms in this sector or with activities in this sector may have the scale to invest in building international businesses, e.g. Mainfreight has built or acquired businesses in Australia, Asia, the United States and Europe.

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

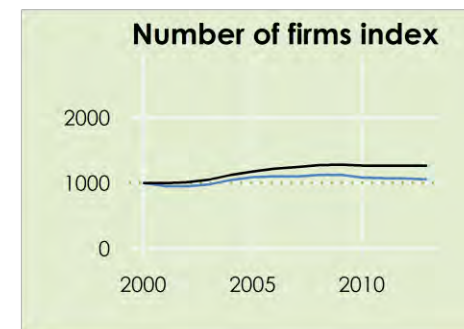
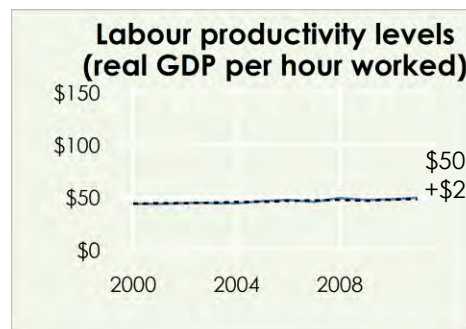
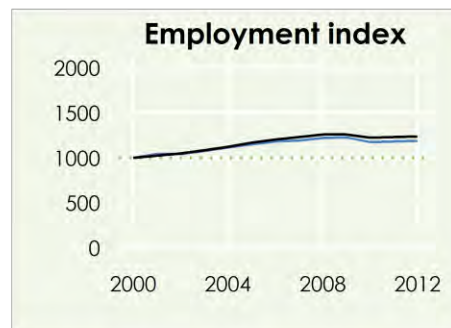
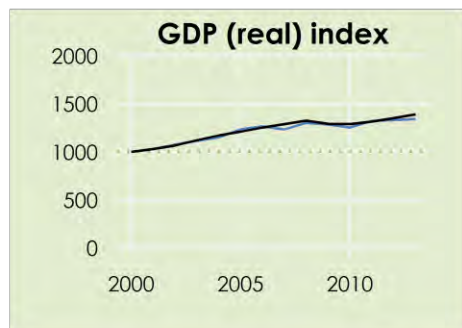
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- GDP growing below average
- Large employer: 94,844 (2011)
- Created jobs: +15,345 since 2000
- Fixed capital investment includes expenditure on roads, railways; growth reflects government investment in infrastructure (NZ Transport Agency)
- Number of firms stable but income per firm growing faster than average
- Low R&D rate
- One in 10 firms generate some overseas income
- Data suggests this sector is a bellwether for overall performance of the economy

Key

- Transport & logistics
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



No goods exports

Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate		1. Low market demand or increased competition in overseas markets		1. Low market demand or increased competition in overseas markets		% of transport & logistics firms reporting overseas income	10%
Innovation rate		2. Language and cultural differences		2. Limited access to finance for expansions beyond NZ		% of transport & logistics firms with off-shore direct investment	2%
		3. Distance from markets		3. Other		% of transport & logistics firms >50% foreign owned	8%

Firms that purchase and on-sell goods, without significant transformation, to other firms; includes commission-based buying and selling.

Scorecard						Example firms			
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)	Firm	Turnover (\$m)	Employees	Ownership
GDP 2011 (nominal)	\$10,327m	6%	9.8%	4.3%	4.6%	Carter Holt Harvey	\$10,531 (2012 est)	10,500	Private
GDP 2013 (real)	n/a	n/a	2.1%	0.1%	2%	Placemakers	\$2,106 (2012 est)	2,100	Listed (Fletcher Distribution)
Goods exports 2013	\$0m	0%	n/a	n/a	n/a	Carters	\$1,203 (2012 est)	1,200	Private (Carter Holt Harvey)
Employment 2012	115,959	5%	0.5%	-0.7%	0.7%	Combined Rural Traders Society (CRT)	\$1,190 (2012)	500	Co-op
Productivity 2011	\$52	108.3%	5.9%	0.7%	0.6%	OfficeMax	\$752 (2013 est)	750	Foreign
Fixed capital investment 2011	\$710m	2.3%	1.6%	-7%	2.2%				
No. of firms 2013	16,700	3.5%	-1.1%	-1.3%	-0.2%				

Industry level financial performance					Export value by product		Export value by market	
	Total		Growth (1yr)		Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
	This sector	All sectors	This sector	All sectors				
Total income per firm 2012#	\$4,834,962	\$1,377,888	5.9%	6.5%	Exports of commercial services year ended June 2011: \$306m			
Total income per employee 2012#	\$847,400	\$327,400	6.2%	4.9%	Experimental data from Statistics NZ indicates that the value of goods exports by wholesale trade firms was around \$8b in 2011. An example is Zespri, which is not a grower or a retailer, but a marketer and distributor.			
Surplus per employee 2012#	\$32,700	\$32,100	3.5%	32.1%	We work with growers and post-harvest operators to source top-quality ZESPRI® Kiwifruit and supply this kiwifruit through our distribution partners to wholesale markets and retail customers. – Zespri website			
Return on equity 2012#	23.6%	8.6%	down	up	The method used in this report maps goods exports to the sectors most likely to produce them . As wholesalers purchase and on-sell goods, no goods exports have been allocated to the wholesale trade sector. See Appendix.			
Debt ratio (liabilities/assets) 2012#	62.8%	57.4%	down	down				
Capital stock per worker 2011	\$55,901	\$168,533	-1.9%	1.1%				

* Equals % of total employing firms, except productivity, which is total measured sectors

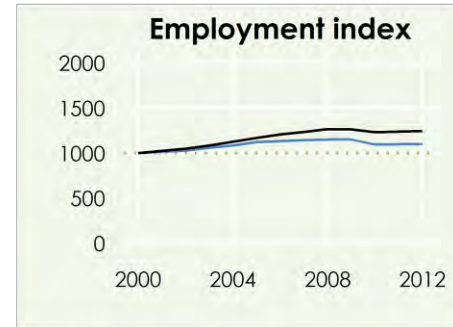
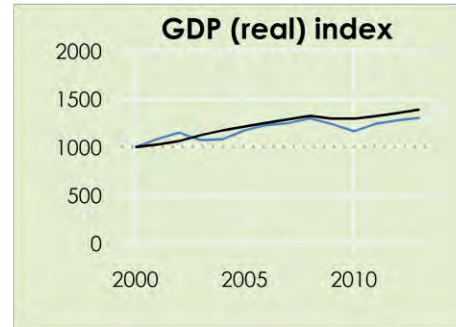
**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

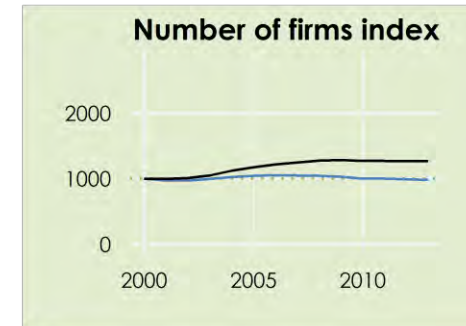
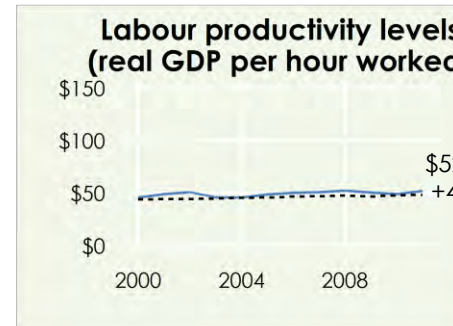
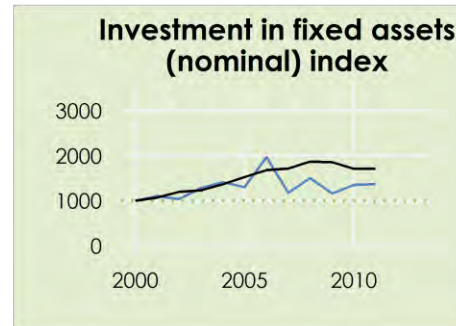
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- GDP growth below average
- Absolute output growth plus small growth in number of firms may indicate industry consolidation
- Large employer: 115,959
- Created jobs overall: +10,827 (200-12)
- Created jobs: +15,930 (2000-08)
- Lost jobs: -5871 (2008-10)
- Productivity above average
- High return on equity: 22.7%
- Relatively internationalised sector in terms of foreign ownership, outward direct investment and overseas income.



See comment on exports previous page.



Key

- Wholesale trade
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors

Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate		1. Exchange rate volatility		1. Limited experience in expanding beyond NZ		% of wholesale trade firms reporting overseas income	41%
Innovation rate		2. Low market demand or increased competition in overseas markets		2. Limited experience in expanding beyond New Zealand		% of wholesale trade firms with off-shore direct investment	9%
		3. Other		3. Limited access to distribution networks		% of wholesale trade firms >50% foreign owned	21%

- High
- ◐ Medium
- Low

Firms that purchase and on-sell goods, without significant transformation, to the general public; includes commission-based buying and selling and internet sales.

Scorecard						Example firms			
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)	Firm	Turnover (\$m)	Employees	Ownership
GDP 2011 (nominal)	\$8,550m	5%	4.4%	1.6%	4.8%	Progressive Enterprises (Countdown)	\$4,965 (2009)	18,000	Foreign
GDP 2013 (real)	n/a	n/a	4.1%	1%	3%	Z Energy	\$3,179 (2012)	250	NZ Super Fund
Goods exports 2013	\$13m	0%	0.1%	16.3%	19.2%	The Warehouse	\$1,732 (2012)	5,562	Listed
Employment 2012	215,544	9.4%	-0.6%	-1.1%	1.2%	Farmers	\$722 (2013 est)	3,100	Private
Productivity 2011	\$26	53.5%	1.5%	0.7%	1.6%	Hallenstein Glasson Holdings	\$215	1,200	Listed (NZX)
Fixed capital investment 2011	\$663m	2.1%	-1%	-8.3%	0.8%				
No. of firms 2013	25,988	5.5%	0.4%	-0.6%	0.7%				

Industry level financial performance					Export value by product		Export value by market	
	Total		Growth (1yr)		Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
	This sector	All sectors	This sector	All sectors				
Total income per firm 2012#	\$2,206,809	\$1,377,888	5.2%	6.5%	Used clothing (goods)	\$13	n/a	n/a
Total income per employee 2012#	\$298,700	\$327,400	3.8%	4.9%	Tourism exports# (services)	\$1,847	n/a	n/a
Surplus per employee 2012#	\$11,000	\$32,100	29.4%	32.1%	Commercial services	\$165		
Return on equity 2012#	29.4%	8.6%	up	up	TOTAL (goods & services)	\$2,025		
Debt ratio (liabilities/assets) 2012#	66.7%	57.4%	down	down	# Expenditure by international tourists: Retail is 19% of total tourism exports.			
Capital stock per worker 2011	\$28,557	\$168,533	-2.3%	1.1%	<ul style="list-style-type: none"> The sector has potential to generate international businesses. Typically these are vertically integrated incorporating retail shops, design, distribution, strong brands and manufacturing (often outsourced). Examples include: Kathmandu (adventure clothing), Pumpkin Patch (designer children's clothing), and Icebreaker (outdoor merino clothing). Due to the integrated nature of these businesses they may not be classified as 'retailers' for statistical purposes. 			

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

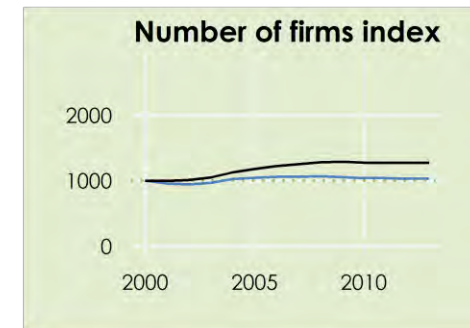
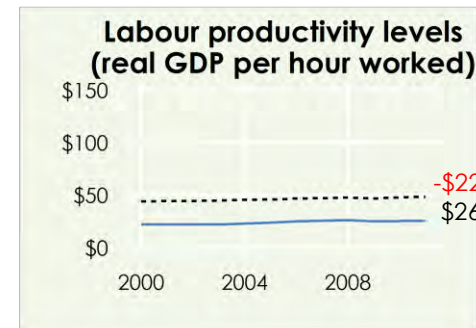
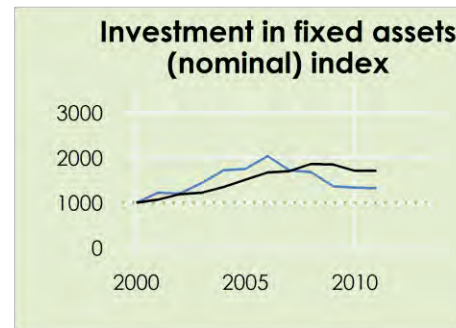
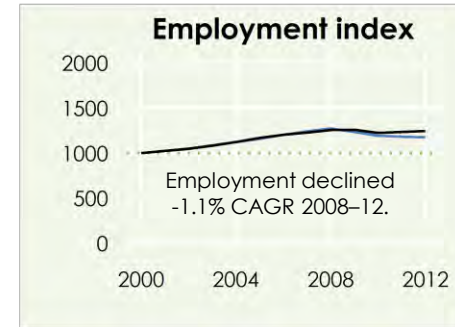
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- GDP growth above average
- Largest employer: 215,514 (2012)
- More jobs overall +32,265 (2000–12)
- Created jobs: +49,953 (2000–08)
- Lost jobs: -17,658 (2009–12)
- Labour-intensive sector: productivity half NZ average
- Productivity growth flat
- Return on equity high: 29%
- Foreign ownership concentrated in large chains, e.g. Countdown (Woolworths Australia), Dick Smith Electronics (Anchorage Capital Partners, Sydney), so low rate (2%) misleading.

Key

- Retail trade
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Exchange rate volatility	High	1. Limited access to finance for expansions beyond NZ	High	% of retail trade firms reporting overseas income	4%
Innovation rate	2. Exchange rate level	High	2. Limited experience in expanding beyond NZ	Medium	% of retail trade firms with off-shore direct investment	0%
	3. Distance from markets	High	3. Overseas government regulations or tariffs	Medium	% of retail trade firms >50% foreign owned	2%

- High
- ◐ Medium
- Low

Accommodation and restaurants

ANZSIC Code H

Situation

This sector includes firms which provide short-term accommodation and/or meals, snacks or beverages for consumption on and off-site. Firms providing other recreation or entertainment facilities, as well as food, beverage and accommodation services (e.g. casinos, amusement parks, sports clubs) are not included in this sector.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$4,175m	2.4%	4.5%	5.3%	6.1%
GDP 2013 (real)	n/a	n/a	0.7%	0.6%	1.8%
Goods exports 2013	\$0m	0%	n/a	n/a	n/a
Employment 2012	152,538	6.6%	1.3%	0.6%	3.1%
Productivity 2011	\$24	49.0%	0.3%	-0.2%	0.3%
Fixed capital investment 2011	\$571m	1.8%	10.2%	-5.3%	3.2%
No. of firms 2013	18,379	3.9%	0.9%	1.0%	2.1%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Spotless Facility Services	\$398 (2011)	12,000	Foreign
Restaurant Brands (KFC, Pizza Hut., Starbucks)	\$308 (2012)	4500	Listed
McDonald's	\$199 (2011)	6000	Foreign
Compass Group	\$134 (2009)	2000	Foreign
Millennium & Copthorne Hotels	\$115 (2010)	2000	Foreign

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$568,081	\$1,377,888	7%	6.5%
Total income per employee 2012#	\$83,800	\$327,400	2.8%	4.9%
Surplus per employee 2012#	\$3,800	\$32,100	65.2%	32.1%
Return on equity 2012#	10%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	55.9%	57.4%	down	down
Capital stock per worker 2011	\$47,321	\$168,533	-1%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Tourism exports#	\$2,775	n/a	n/a

Expenditure by international tourists, 29% of all tourism exports

- The sector has potential to generate international businesses - e.g. through franchising, based particularly on quality and strong brands.
- Examples include:
 - Hell Pizza's franchises in Australia
 - BurgerFuel's expansion into Australia and the Middle East. A brand built around quality NZ ingredients.

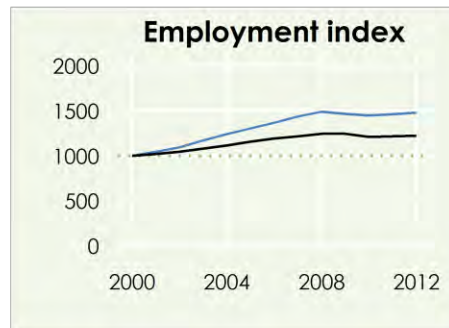
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

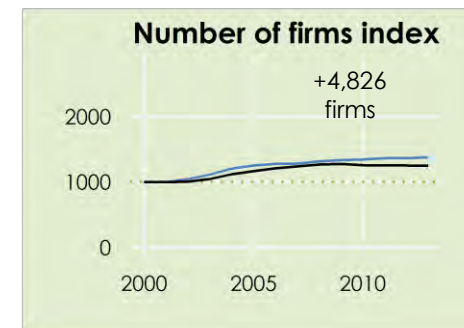
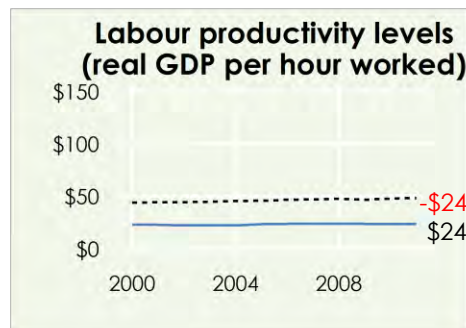
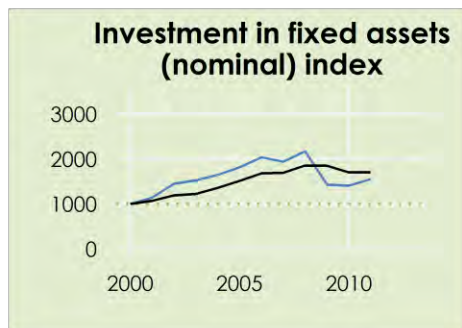
- GDP growth at average
- Large employer: 152,538
- Employment growth above average
- Created jobs: +49,545 (2000–2012)
- Productivity growth flat
- Number of firms growing
- Return on equity 10% (2012)
- 18,000 firms. As many are small NZ-owned businesses, the rate of foreign ownership may be misleading as this will be concentrated in large enterprises, e.g. hotels
- Generated 29% of tourism exports (2012)

Key

- Accommodation & restaurants
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



No goods exports



Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate		1. Exchange rate level		1. Limited experience in expanding beyond NZ		% of accommodation & restaurants firms reporting overseas income	14%
Innovation rate		2. Exchange rate volatility		2. Limited knowledge about specific markets		% of accommodation & restaurants firms with off-shore direct investment	1%
		3. Low market demand or increased competition in overseas markets		3. Exchange rate level / Exchange rate volatility		% of accommodation & restaurants firms >50% foreign owned	1%

- High
- ◐ Medium
- Low

Arts & recreation services

ANZSIC Code R

Situation

This sector includes groups preserving or exhibiting objects and sites of historical, cultural or educational interest such as museums, zoos, art galleries, art productions and live performances or events, such as theatres, and sporting activities, like gyms and sport clubs. Gambling activities are included. Film and TV production and distribution is excluded.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$2,774m	1.6%	-1.3%	1.7%	4.6%
GDP 2013 (real)	n/a	n/a	-1.1%	-2.7%	-0.9%
Goods exports 2013	\$17m	0%	31%	-2.3%	1.3%
Employment 2012	41,865	1.8%	0.8%	1.7%	3.7%
Productivity 2011	\$49	102.2%	-5.7%	-2.9%	-1.8%
Fixed capital investment 2011	\$863m	2.8%	10.4%	12.4%	7.5%
No. of firms 2013	9,422	2%	-0.5%	-0.3%	1.5%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
New Zealand Lotteries Commission	\$885 (2011)	120	NZ Govt
SKYCITY Entertainment	\$851 (2012)	3,360	Listed
New Zealand Racing Board (TAB)	\$301 (2012)	800	Statuary Authority
Te Papa Tongarewa Museum	\$52 (2009)	520	NZ Govt
Ruapehu Alpine Lifts	\$29 (2012)	70	Listed

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$727,878	\$1,377,888	7.0%	6.5%
Total income per employee 2012#	\$176,300	\$327,400	4.9%	4.9%
Surplus per employee 2012#	\$21,800	\$32,100	35.4%	32.1%
Return on equity 2012#	10.7%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	25.2%	57.4%	down	down
Capital stock per worker 2011	\$200,891	\$168,533	3.3%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Paintings, drawings, & pastels	\$6.6	n/a	n/a
Original sculptures & statues	\$2.6		
Collections & collectors' pieces	\$2.4		
Other	\$1.0		
TOTAL (goods)	\$12.7		
Commercial services exports	\$122		
TOTAL all exports	\$134.7	TOTAL all countries	\$134.7

Arts & recreation services

ANZSIC Code R

Performance

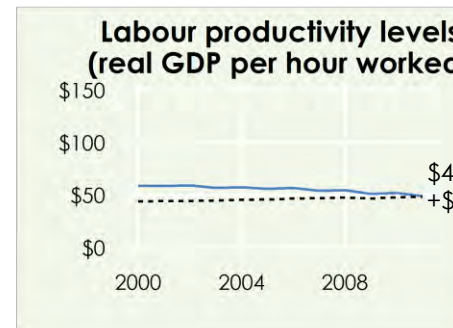
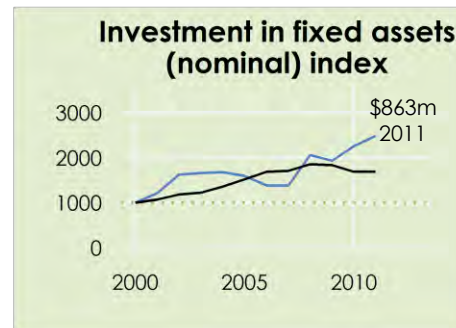
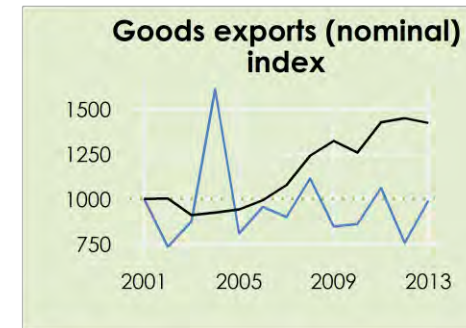
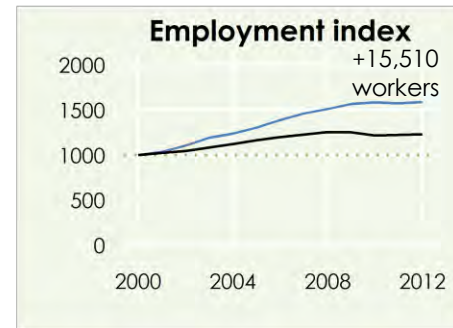
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- GDP growth below average
- Medium employer: 41,865 (2012)
- Gained workers: +15,510(2000–12)
- Has gone from being the 4th smallest employing sector in 2000 to the 7th smallest in 2012, overtaking other manufacturing, metals and wood and paper in number employed
- Productivity in 10 year decline
- Strong fixed capital investment – impact of Rugby World Cup?
- Low R&D rate: 5% of firms
- Return on equity 11% (2012)

Key

- Arts & recreation services
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Exchange rate level		1. Limited experience in expanding beyond NZ		% of arts and recreation services firms reporting overseas income	7%
Innovation rate	2. Exchange rate volatility		2. Distance from markets		% of arts and recreation services firms with off-shore direct investment	2%
	3. Distance from markets		3. Limited knowledge about specific markets		% of arts and recreation services firms >50% foreign owned	2%

- High
- ◐ Medium
- Low

Property & rental services

ANZSIC Code L

Situation

Real estate services such as selling, renting and/or buying real estate for others, managing real estate for others and appraising real estate are found in this sector. Firms renting or hiring out goods such as cars, animals, DVDs or scaffolding are also included.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$13,322m	7.7%	8.5%	5%	7.1%
GDP 2013 (real)	n/a	n/a	1.8%	0.9%	1.9%
Goods exports 2013	\$0m	0%	n/a	n/a	n/a
Employment 2012	49,386	2.1%	-0.4%	-2.3%	0.5%
Productivity 2011	\$192	399.0%	2.0%	1.9%	3.5%
Fixed capital investment 2011	\$5,031m	16.1%	39.2%	-4.5%	6%
No. of firms 2013	100,039	21.2%	2%	0.7%	4.2%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Housing New Zealand	\$1,078 (2012)	1050	NZ Govt
Harcourts	\$522 (2012 est)	2500	Private
Barfoot & Thompson	\$313 (2012 est)	1500	Private
Brookfield Multiplex	\$218 (2010)	80	Foreign
Avis Rent A Car	\$131 (2011)	200	Foreign

Industry level financial performance				
	Total		Growth (1 yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$299,546	\$1,377,888	4.7%	6.5%
Total income per employee 2012#	\$839,900	\$327,400	0.9%	4.9%
Surplus per employee 2012#	\$215,800	\$32,100	26.1%	32.1%
Return on equity 2012#	7.2%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	57.0%	57.4%	down	down
Capital stock per worker 2011	\$2,097,431	\$168,533	0.7%	1.1%

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
n/a	n/a	n/a	n/a

Sector has (theoretical) potential to generate international businesses, e.g. in rural real estate or hire services.

10% of firms in this sector reported generating overseas income in 2011.

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

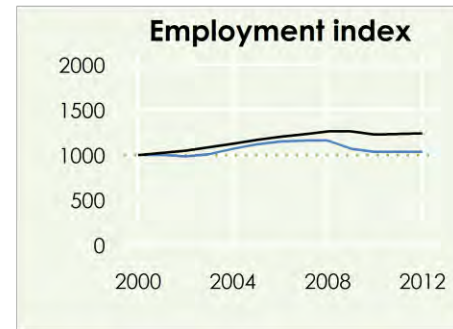
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

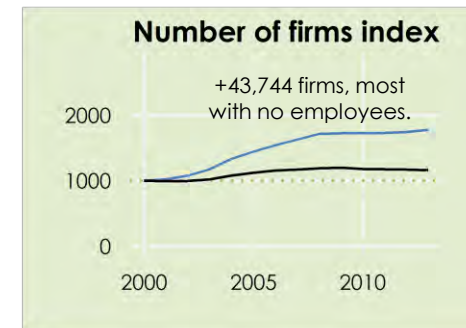
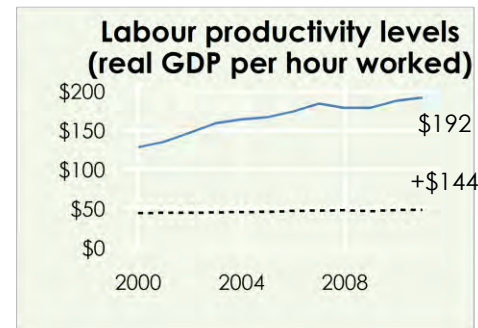
- GDP growth above average
- Medium employer: 49,386
- More jobs overall: +1,629 (2000–12)
- Created jobs: +7,683 (2000–07)
- Lost jobs: -6,054 (2008–12)
- Highly productive: 4 times NZ average, likely due to high capital/labour ratio in rental market.
- +43,744 firms (2000–12); 39,000 of these are in the property operators sub-sector (ANZSIC L671) and have no employees; likely to be 'mum and dad' property investors
- Fixed capital investment pattern reflects property bubble mid-2000s

Key

- Rental, hiring & property services
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



No goods exports



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Limited access to finance for expansion beyond New Zealand	High	1. Other	Medium	% of property & rental services firms reporting overseas income	10%
Innovation rate	2. Limited access to distribution networks	Medium	2. Limited experience in expanding beyond New Zealand	Low	% property & rental services firms with off-shore direct investment	0%
	3. Limited knowledge about specific markets	Low	3. Limited knowledge about specific markets	Low	% of property & rental services firms >50% foreign owned	3%

Administration firms provide routine support activities, such as office administration, hiring staff or arranging travel, for the day-to-day operations of other firms or organisations. Building and other cleaning services also fall within this sector. 'Other services' includes personal care services, such as health and beauty, and organisations which promote and defend the interests of their members.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$7,801m	4.5%	4.9%	4.2%	6.1%
GDP 2013 (real)	n/a	n/a	0.9%	0.9%	2.1%
Goods exports 2013	\$0m	0%	n/a	n/a	n/a
Employment 2012	199,722	8.7%	2%	0.4%	2.5%
Productivity 2011	\$30	61.4%	2%	0.2%	0.5%
Fixed capital investment 2011	\$542m	1.7%	-32.8%	-3.6%	0.7%
No. of firms 2013	36,973	7.8%	1.4%	0.8%	2.3%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
AWF Group	\$119 (2012)	100	Listed
Flight Centre	\$105 (2009)	700	Foreign
New Zealand Rugby Union	\$101 (2011)	80	Incorporated society
Motor Trade Association	\$92 (2011)	50	Industry body
Hays Specialist Recruitment (NZ)	\$59 (2012)	80	Foreign

Industry level financial performance				
	Total		Growth (1 yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$484,762	\$1,377,888	6.1%	6.5%
Total income per employee 2012#	n/a	\$327,400	n/a	4.9%
Surplus per employee 2012#	n/a	\$32,100	n/a	32.1%
Return on equity 2012#	12.2%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	34.3%	57.4%	down	down
Capital stock per worker 2011	\$31,786	\$168,533	-4.8%	1.1%

Export value by product		Export value by market	
Product (services)	Exports (\$m; 2011)	Country	Exports (\$m; 2011)
Commercial services	\$99	n/a	

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Administration & other services

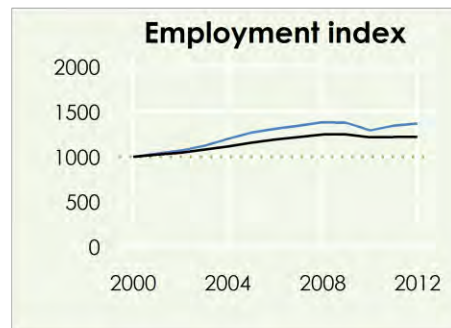
ANZSIC codes S & N

Performance

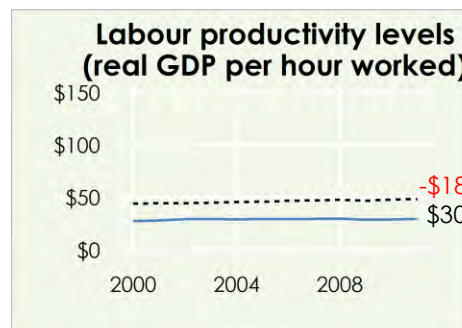
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- GDP growth at average
- Very large employer: 199,722
- Created jobs overall: +54,195 (2000–12)
- Created jobs: +56,208 (2000–2008)
- Lost jobs: -13,368 (2009–10)
- Created jobs: +11,355 (2011– 12)
- Employment growth above average
- Productivity growth below average



No goods exports



Key

- Administration & other services
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors

Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate		1. Exchange rate volatility		1. Limited experience in expanding beyond NZ		% of admin & other services firms reporting overseas income	11.6%
Innovation rate		2. Low market demand or increased competition in overseas markets		2. Limited access to finance for expansions beyond NZ		% of admin & other services firms with off-shore direct investment	n/a
		3. Distance from markets		3. Distance from markets		% of admin & other services firms >50% foreign owned	n/a

- High
- Medium
- Low

Finance and insurance includes firms undertaking financial transactions involving the creation, liquidation or change in ownership of financial assets, and/or in facilitating financial transactions. This includes activities such as raising funds via deposits or issuing securities, investing funds, or providing or underwriting insurance.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$10,244m	5.9%	-7%	6.5%	7.1%
GDP 2013 (real)	n/a	n/a	1.9%	1.4%	4%
Goods exports 2013	\$0m	0%	n/a	n/a	n/a
Employment 2012	63,495	2.8%	2.5%	0.9%	2.9%
Productivity 2011	\$98	203.5%	-2.4%	2.5%	2.6%
Fixed capital investment 2011	\$1,569m	5%	-13.1%	13.9%	8.9%
No. of firms 2013	29,083	6.2%	-2.6%	1.7%	8.2%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
ANZ Bank	\$7,800 (2009)	9,600	Foreign (Listed - ASX)
Accident Compensation Corporation	\$4,600 (2010)	3,000	NZ Govt
Bank of New Zealand	\$4,000 (2009)	5,600	Foreign (Listed - ASX)
ASB Bank	\$3,900 (2010)	3,261	Foreign (Listed - ASX)
Westpac New Zealand	\$3,500 (2010)	5,500	Foreign (Listed - ASX)

Industry level financial performance				
	Total		Growth (1 yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$2,763,344	\$1,377,888	30.0%	6.5%
Total income per employee 2012#	n/a	\$327,400	n/a	4.9%
Surplus per employee 2012#	n/a	\$32,100	n/a	32.1%
Return on equity 2012#	13.5%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	78.6%	57.4%	down	down
Capital stock per worker 2011	\$134,456	\$168,533	2.4%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

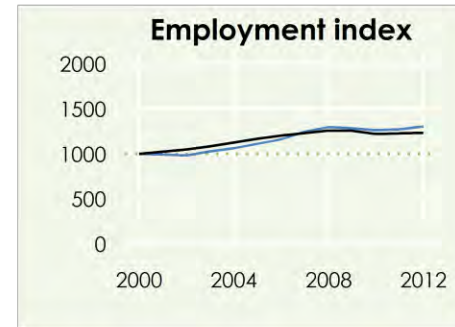
#All sector total excludes some industries. Sector total excludes ANZSIC K6330

Export value by product		Export value by market	
Product (services)	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Insurance services	\$46	Australia	\$102
Financial services	\$281	Other	\$225
TOTAL all exports	\$327	TOTAL all countries	\$327

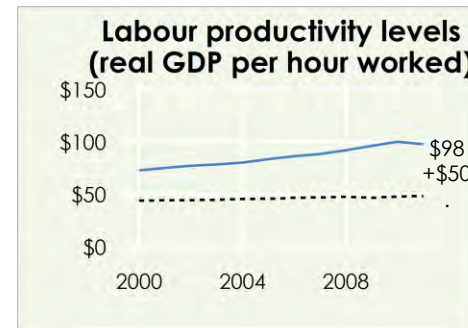
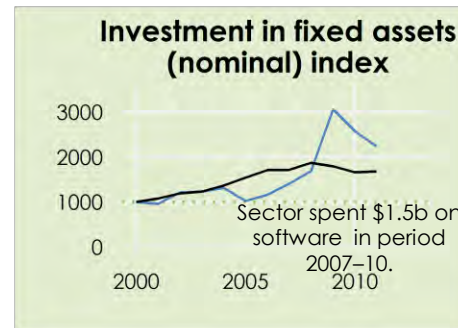
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- GDP growth above average
- Large employer: 63,495
- Created jobs: +14,850 (2000–12) despite high investment in technology
- Productivity: twice NZ average
- Sector added 17,892 firms 2000–12; 16,964 with zero employees in the 'financial asset investing' sub-sector (ANZSIC K624)
- Fixed capital investment \$2.2b in 2009
- High innovation rate: 61% of firms
- 20% of firms foreign owned; likely that small firms NZ owned, large firms foreign owned, e.g. Australian banks



No goods exports



Key

- Finance & insurance
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors

Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Other		1. Limited experience in expanding beyond NZ		% of finance & insurance firms reporting overseas income	17%
Innovation rate	2. Exchange rate volatility		2. Limited knowledge about specific markets		% of finance & insurance firms with off-shore direct investment	7%
	3. Distance from markets / overseas government regulations or tariffs		3. Overseas government regulations or tariffs		% of finance & insurance firms >50% foreign owned	20%

- High
- ◐ Medium
- Low

Media & telecommunications

ANZSIC Code J

Situation

Includes telecommunications firms (transmission services and wired and wireless infrastructure) as well as firms mainly engaged in creating, enhancing and storing information products in media that allows for their dissemination using analogue and digital signals via electronic, wireless, optical and other means. Does not include equipment manufacturing or information technology services.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$5,791m	3.4%	0%	-0.8%	1.8%
GDP 2013 (real)	n/a	n/a	4.0%	3.3%	3.9%
Goods exports 2013	\$19m	0%	-12.4%	-0.9%	-4.3%
Employment 2012	46,005	2%	3%	-0.4%	0.5%
Productivity 2011	\$89	186.0%	5.2%	5.3%	4.0%
Fixed capital investment 2011	\$1,887m	6%	-1.1%	1.1%	-3%
No. of firms 2013	4,980	1.1%	0.1%	1.9%	3.4%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Vodafone	\$1,600 (2010)	1,400	Foreign (Listed –FTSE)
Sky Network TV	\$796 (2011)	1000	Listed (NZX)
Chorus	\$613 (2012)	2,500	Listed (NZX)
Television New Zealand (TVNZ)	\$382 (2012)	1,115	NZ Govt
APN New Zealand (NZ Herald)	\$457M (2007)	3,051	Listed (ASX, NZX)

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$2,917,973	\$1,377,888	1.1%	6.5%
Total income per employee 2012#	\$395,300	\$327,400	2.1%	4.9%
Surplus per employee 2012#	\$8,500	\$32,100	30.8%	32.1%
Return on equity 2012#	3.2%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	60.4%	57.4%	down	down
Capital stock per worker 2011	\$390,829	\$168,533	1.9%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Export value by product		Export value by market	
Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Books, brochures, and leaflets	\$18.9	Australia	\$8.4
Other	\$3.4	UK	\$2.6
		Other	\$11.3
TOTAL (goods)	\$22.3	TOTAL (all countries)	\$22.3
Commercial services	\$769	n/a	
TOTAL (goods and services)	\$791.3	TOTAL all countries	\$791.3

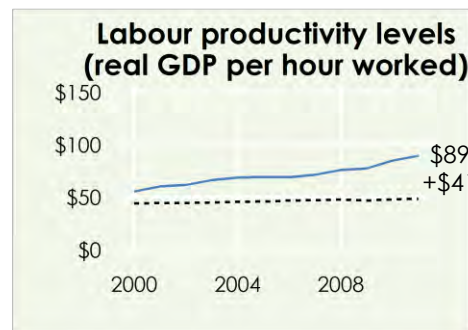
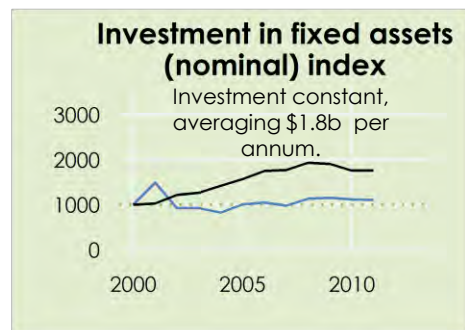
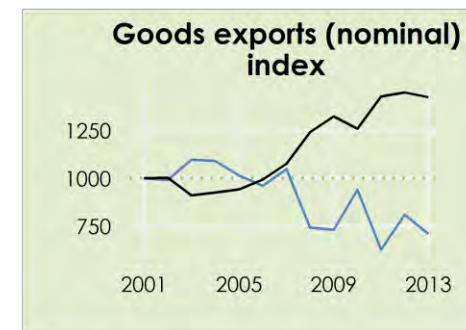
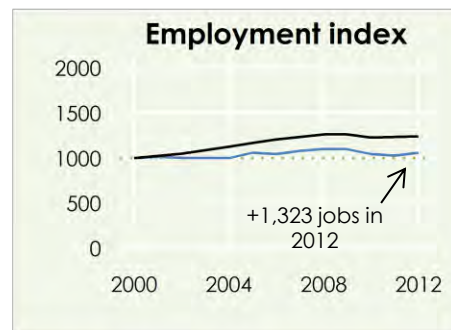
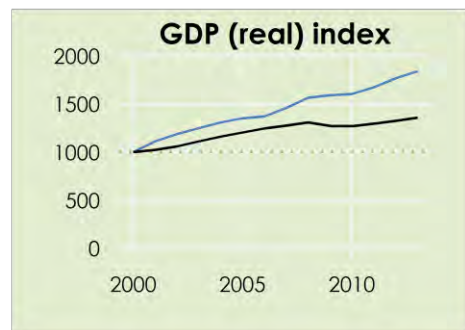
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- Real GDP growth above average; slower nominal growth implies falling prices
- Medium employer: 46,005
- Created jobs overall: +2,550
- Created jobs: +4,434 (2000–08)
- Lost jobs: -3,207 (2008–11)
- Productivity growing strongly
- Firm numbers growing
- Consistent capital investment in equipment & software averaging \$1.8b per annum 2000–10.
- Return on equity low: 3.2%
- 16% of firms foreign owned
- 40% report income from overseas

Key

- Media & telecommunications
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate		1. Other		1. Limited experience in expanding beyond NZ		% of media & telecoms firms reporting overseas income	40%
Innovation rate		2. Low market demand or increased competition in overseas markets		2. Limited knowledge about specific markets		% of media & telecoms firms with off-shore direct investment	5%
		3. Distance from markets		3. Limited access to finance for expansions beyond NZ		% of media & telecoms firms >50% foreign owned	16%

- High
- ◐ Medium
- Low

Professional, scientific & technical services

ANZSIC Code M

Situation

These services include scientific research, architecture, engineering, computer systems design, law, accountancy, advertising, market research, management and other consultancy, veterinary science and professional photography. Firms in this category typically specialise and sell their expertise. In most cases, equipment and materials are not major inputs.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$13,919m	8.1%	6.6%	5.1%	6.9%
GDP 2013 (real)	n/a	n/a	4.0%	2.8%	3.2%
Goods exports 2012	\$0m	0%	n/a	n/a	n/a
Employment 2012	201,132	8.7%	1.4%	0.9%	3.0%
Productivity 2011	\$49	101.1%	3.7%	1.4%	0.9%
Fixed capital investment 2011	\$1,245m	4%	0.3%	2.2%	4.8%
No. of firms 2013	50,953	10.8%	0.9%	0.8%	3.3%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Datacom	\$670 (2010)	1,900	Private (35% NZ Super Fund)
BECA	\$610 (2012)	2,600	Employee-owned
Opus International Consultants	\$370 (2010)	1,800	Listed (NZX)
PwC (NZ)	\$330 (2012)	1,300	Limited Partnership
Datam	\$255 (2013 est)	860	NZ Govt (NZ Post)

Industry level financial performance				
	Total		Growth (1 yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$572,702	\$1,377,888	-2.3%	6.5%
Total income per employee 2012#	\$225,400	\$327,400	-4.9%	4.9%
Surplus per employee 2012#	\$33,300	\$32,100	-11.2%	32.1%
Return on equity 2012#	21.3%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	62.2%	57.4%	up	down
Capital stock per worker 2011	\$33,188	\$168,533	-2.4%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions

Export value by product		Export value by market	
Product (services)	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Computer system design & related services	\$628	n/a	n/a
Other commercial services	\$784		
TOTAL (all services)	\$1,412		

Sector includes many firms that export services and/or are building significant international businesses, e.g. Datacom, BECA and Opus International.

Professional, scientific and technical services

ANZSIC Code M

Performance

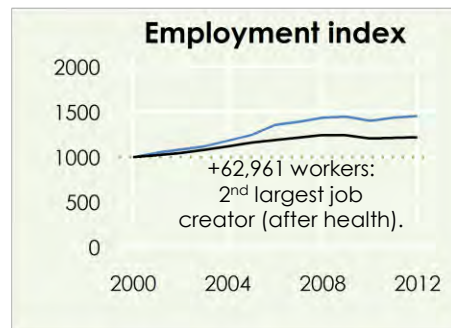
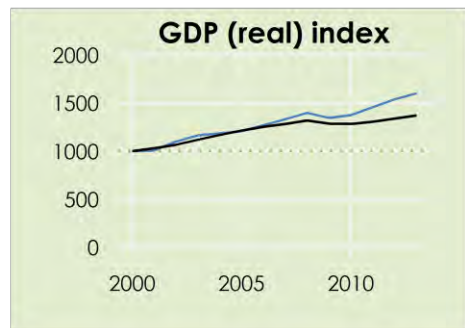
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

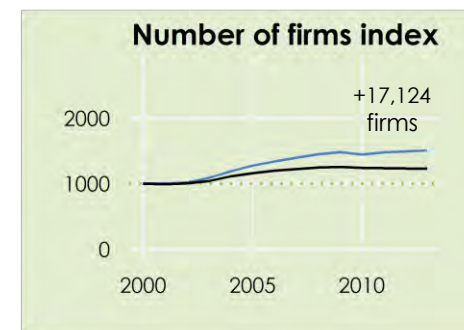
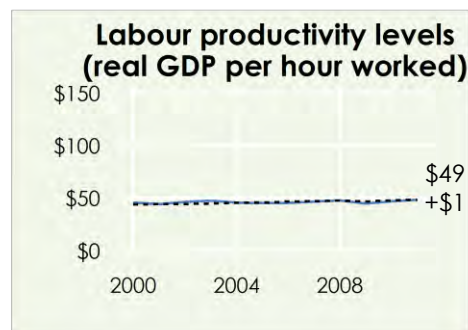
- GDP growth above average from 2009
- Large employer: 201,123
- Created jobs overall +62,961 (2000–12)
- Lost jobs: -6,456 (2009–10)
- Created jobs: +8,041 (2011–12)
- Productivity growth flat overall
- Number of firms growing
- Return on equity high: 21%
- Aggregate data may mask high performing firms
- Includes firms also included in knowledge intensive services & ICT.
- See separate in-depth reports on Knowledge Intensive Service and ICT for detailed analysis: mbie.govt.nz

Key

- Professional services
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



No goods exports. Sector generates significant services exports.



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Distance from markets	Medium	1. Limited access to finance for expansion beyond NZ	Medium	% of professional services firms reporting overseas income	27%
Innovation rate	2. Low market demand or increased competition in overseas markets	Medium	2. Limited experience in expanding beyond NZ	Medium	% of professional services firms with off-shore direct investment	7%
	3. Other	Low	3. Distance from markets	Medium	% of professional services firms >50% foreign owned	7%

- High
- ◐ Medium
- Low



GOVERNMENT, EDUCATION AND HEALTH SECTORS

- Government, defence & public safety
- Education
- Health & social assistance

See pages 92–94 for guide to reading snapshot pages.

Special note on productivity:

Statistics New Zealand released productivity statistics for the health and education sectors for the first time in 2013. Increases in productivity for health and education sectors increase people's value for tax money. Even though health services are non-marketable and may not help export growth, it is still meaningful in improving welfare in New Zealand.

Includes central, state or local government legislative, executive and judicial activities directed at providing physical, social, economic and general public safety and security services, and in enforcing regulations. Includes defence and police, government representation and international government organisations. Does not include state owned enterprises.

Scorecard						Example firms			
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)	Firm	Turnover (\$m)	Employees	Ownership
GDP 2011 (nominal)	\$8,570m	5.0%	1.6%	6.8%	7.2%	Auckland Council	\$3,000 (2012)	8,200	Local Govt
GDP 2013 (real)	n/a	n/a	-0.2%	1.8%	4.6%	New Zealand Defence Force	\$2,100 (2009)	11,142	NZ Govt
Goods exports 2013	\$0m	0%	n/a	n/a	n/a	Ministry of Education	\$1,700 (2010)	2,600	NZ Govt
Employment 2012	109,200	4.7%	1.8%	2.7%	3.6%	New Zealand Police	\$1,400 (2010)	10,884	NZ Govt
Productivity 2010**	n/a	n/a	n/a	n/a	n/a	Ministry of Social Development	\$1,100 (2009)	6,300	NZ Govt
Fixed capital investment 2011	\$1,031m	3.3%	-25.7%	-6.2%	5.4%				
No. of firms 2013	1,209	0.3%	-2.1%	0.3%	1.1%				

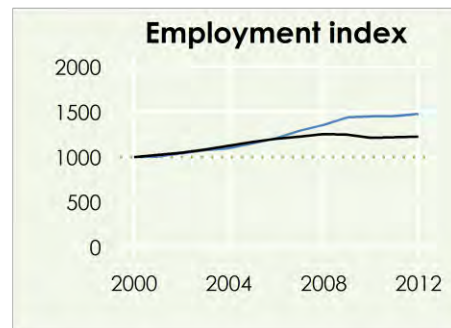
Industry level financial performance					Export value by product		Export value by market	
	Total		Growth (1yr)		Product	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
	This sector	All sectors	This sector	All sectors				
Total income per firm 2012#	\$30,944,939	\$1,377,888	-6.1%	6.5%	Government services	\$766	n/a	n/a
Total income per employee 2012#	n/a	\$327,400	n/a	4.9%	As a significant purchaser of goods and services – including large infrastructure projects and IT systems and software – the government can have a material effect (both positive and negative) on growth and innovation in many sectors.			
Surplus per employee 2012#	n/a	\$32,100	n/a	32.1%				
Return on equity 2012#	0.4%	8.6%	up	up				
Debt ratio (liabilities/assets) 2012#	28.0%	57.4%	up	down				
Capital stock per worker 2011	\$121,693	\$168,533	0.3%	1.1%				

* Equals % of total employing firms, except productivity, which is total measured sectors.
**NZ average = 100%
#All sector total excludes some industries. Refer appendix, terms and definitions.

Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

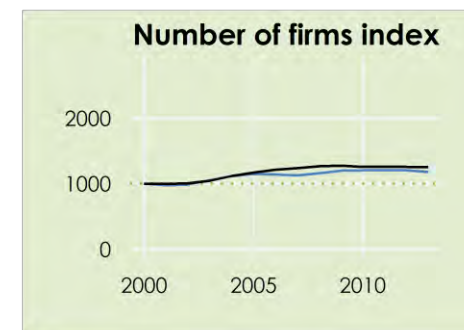
- GDP growth above average 2006–09
- Large employer: 109,200
- Created jobs: +35,470 (2000–2012)
- Includes local government, defence forces and police
- Number of enterprises increased from 1,027 in 2000 to 1,209 in 2013 (+186)
- Fixed capital investment includes prisons but excludes hospitals and schools
- In 2010 fixed capital investment was \$1.27b, \$244m of this was in intangible assets, likely to be software and software development



No goods exports



Non-measured sector. No productivity data



Results from survey: 2011 R&D & innovation rates		Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	n/a		n/a		n/a		n/a
Innovation rate	n/a		n/a		n/a		n/a
<ul style="list-style-type: none"> ● High ◐ Medium ○ Low 							

This includes firms or organisations mainly engaged in the provision and support of education and training, including preschools, schools, technical colleges, training centres and universities. They may be publicly owned and operated, or privately owned and operated, either for profit or not for profit.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$8,984m	5.2%	3.1%	6.6%	6.5%
GDP 2013 (real)	n/a	n/a	0.6%	1.1%	0.4%
Goods exports 2012	\$0m	0%	n/a	n/a	n/a
Employment 2012	183,129	8.0%	-0.8%	1.6%	2.4%
Productivity 2011	\$33	68.8%	-6.7%	-1.3%	-1.6%
Fixed capital investment 2011	\$1,602m	5.1%	15.8%	7.1%	10%
No. of firms 2013	7,810	1.7%	0.3%	1.1%	1.5%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
University of Auckland	\$788 (2008)	4,493	n/a
UNITEC Institute of Technology	\$141	1,200	n/a
Kidicorp	\$62 (2008)	~3,500	Private
Rangitoto College	\$27.8 (2012)	190	NZ govt
Ashburton Borough School	\$2.5 (2012)	19	NZ govt

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$1,900,629	\$1,377,888	1.2%	6.5%
Total income per employee 2012#	n/a	\$327,400	n/a	4.9%
Surplus per employee 2012#	n/a	\$32,100	n/a	32.1%
Return on equity 2012#	3.7%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	24.0%	57.4%	down	down
Capital stock per worker 2011	\$105,988	\$168,533	3.6%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors.

**NZ average = 100%

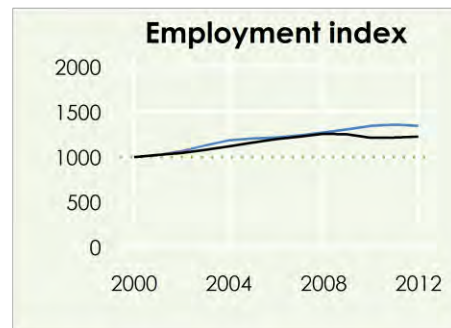
#All sector total excludes some industries. Refer appendix, terms and definitions.

Export value by product		Export value by market	
Product (services)	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Education-related travel	\$650	n/a	n/a
Provision of commercial education and training services overseas	\$76		
TOTAL all exports	\$726		

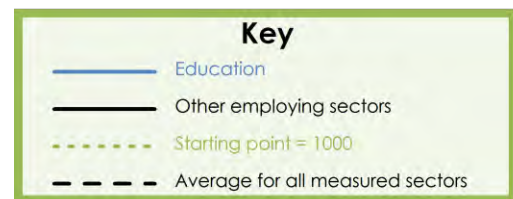
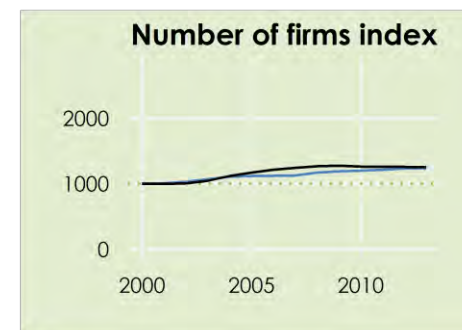
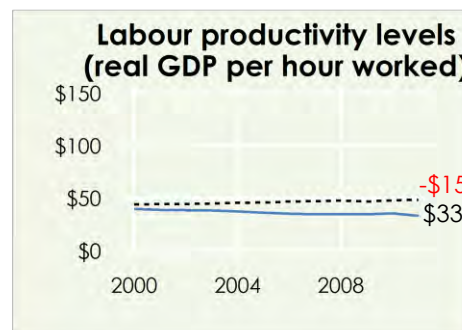
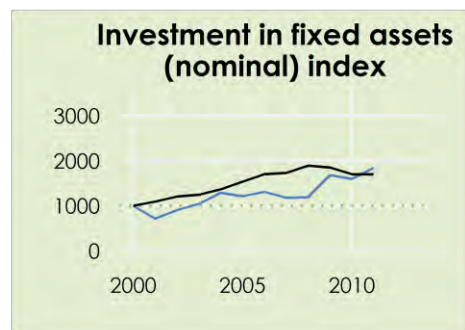
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- Below average real GDP growth
- Large difference between nominal and real GDP growth implies that prices have increased significantly more than volumes
- Large employer: 183,129 (2012)
- Created jobs : +47,289 (2000–12)
- Productivity declining
- Includes private providers
- Two-thirds of fixed capital investment is buildings, and around 10% likely to be software



No goods exports.
In 2012/13 the value of international education to New Zealand was measured at \$2.6 billion.
See page 52.
See Infometrics report available from www.enz.govt.nz



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate:	1. Distance from markets		1. Limited experience in expanding beyond NZ		% of education enterprises reporting overseas income	19%
Innovation rate:	2. Exchange rate level		2. Limited access to finance for expansion beyond NZ		% of education enterprises with off-shore direct investment	2%
High Medium Low	3. Language and cultural differences		3. Other		% of education enterprises >50% foreign owned	2%

This includes firms or organisations mainly engaged in providing human healthcare and social assistance. Includes hospitals, medical services, residential care, childcare and counselling services. They may be publicly owned and operated, or privately owned and operated, either for profit or not for profit.

Scorecard					
Measure	Total	% of NZ*	Growth (1 yr)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$12,359m	7.2%	3.6%	7.2%	8.1%
GDP 2013 (real)	n/a	n/a	3.3%	1.5%	3.1%
Goods exports 2012	\$0m	0.0%	n/a	n/a	n/a
Employment 2012	210,141	9.1%	1.6%	3.1%	3.1%
Productivity 2011	\$39	81.5%	-2%	-0.7%	-0.2%
Fixed capital investment 2011	\$1,304m	4.2%	22.7%	6.5%	5.8%
No. of firms 2013	17,148	3.6%	0.8%	1.1%	2.5%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Auckland District Health Board	\$1.7B (2010)	10,500	NZ Govt
Ryman Healthcare Limited	\$257 (2012)	2,600	Listed (NZX)
Mercy Ascot Hospital	\$137 (2013 est)	1,000	Private
Labtests Ltd	\$82 (2013 est)	600	Foreign
Royal New Zealand Plunket Society	\$72 (2012)	562	Charity

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$1,584,352	\$1,377,888	6.0%	6.5%
Total income per employee 2012#	n/a	\$327,400	n/a	4.9%
Surplus per employee 2012#	n/a	\$32,100	n/a	32.1%
Return on equity 2012#	17.4%	8.6%	down	up
Debt ratio (liabilities/assets) 2012#	49.8%	57.4%	down	down
Capital stock per worker 2011	\$66,271	\$168,533	1.4%	1.1%

* Equals % of total employing firms, except productivity, which is total measured sectors.

**NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions.

Export value by product		Export value by market	
Product (services)	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
No exports allocated.			

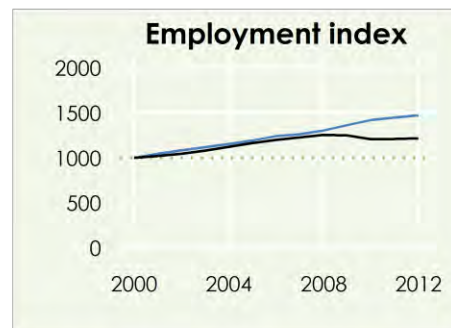
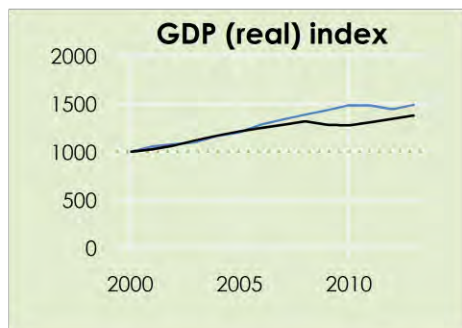
Key trends, various timeframes: 10-year index (base =1000) except productivity is \$ values – this sector vs all other sectors

Comment

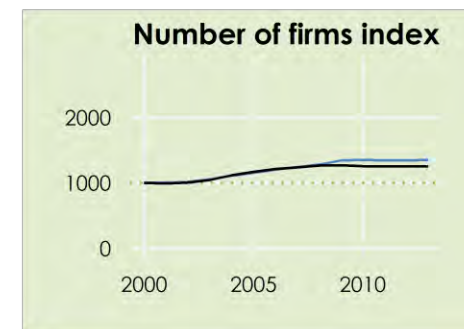
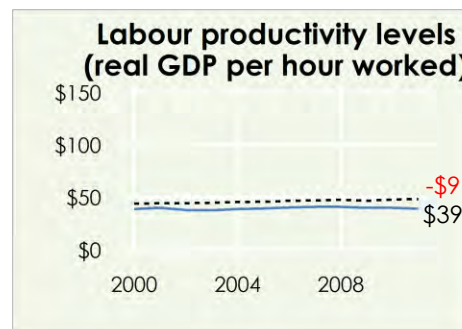
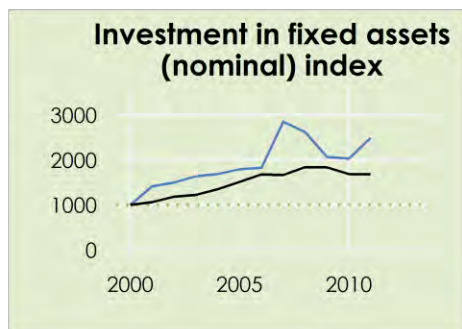
- GDP growth above average from 2009
- Large difference between nominal and real GDP growth implies that prices have increased significantly more than volumes
- Very large employer: 210,141 (2012)
- Largest increase in jobs in the economy: +67,443 (2000–12)
- Number of firms growing (e.g. +373 childcare services 2002–2012)
- Includes private providers
- Annual fixed capital investment (nominal) in 2010 was twice that in 2000 (\$1,061m vs \$523m)
- \$800m investment in buildings in 2007

Key

- Health
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



No goods exports



Results from survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Other	High	1. Other	Medium	% of health enterprises reporting overseas income	0.8%
Innovation rate	2. Exchange rate level	Low	2. Low market demand or increased competition in overseas markets	Medium	% of health enterprises with off-shore direct investment	2%
	3. No others reported	Medium	3. Limited experience in expanding beyond NZ	Low	% of health enterprises >50% foreign owned	2%

- High
- ◐ Medium
- Low



PART THREE

CROSS-CUTTING SECTORS

HIGH-TECHNOLOGY MANUFACTURING

MEDIUM-HIGH TECHNOLOGY

MANUFACTURING

130 page in-depth available from
www.mbie.govt.nz

See pages 92–94 for guide to reading snapshot pages.

What are the high and medium-high technology manufacturing sectors?

High and medium-high technology firms are defined by their level of expenditure on R&D

- The following charts provide a snapshot of New Zealand's high and medium-high technology manufacturing sectors, as defined by the OECD.*
- Data is provided for the high and medium-high technology sectors separately, to enable comparisons, and because they are made up of distinctly different industries.
- For a full analysis - including some industry commentary – see the separate report on high and medium-high technology manufacturing available from www.mbie.govt.nz

High technology manufacturing

- High technology manufacturing is a narrow sub-set of manufacturing industries. Based on combined data from 25 developed countries an industry is classified as high technology if expenditure on R&D is greater than 8% of revenues.
- This includes pharmaceuticals, aircraft manufacturing, professional and scientific equipment manufacturing (including medical technologies), and computer and electronic manufacturing. In New Zealand these industries spend between 0.9% (pharmaceuticals) and 6.9% (professional and scientific equipment) on R&D as a percentage of revenues.
- This definition is considerably tighter than is commonly meant when reference is made to New Zealand's 'high tech' sector, for example, in the annual TIN 100 publication or at the annual High Tech Awards.

Medium-high technology manufacturing

- Many of the manufacturing firms in New Zealand commonly thought of as 'high tech' firms are in industries which are formally classified as medium-high technology manufacturing.
- Medium-high technology industries are those in which expenditure on R&D is between 2% and 8% of revenues, based on combined data from 25 developed countries.
- Industries captured include the manufacture of polymers, chemicals (excluding pharmaceuticals), transport equipment, and machinery and equipment. In New Zealand these industries spend between 0.3% (chemicals) and 2.3% (transport equipment) of revenues on R&D.
- These R&D figures are aggregates. Individual firms may spend significantly more or less on R&D.

It is very important to keep the industry dimension in perspective. High tech industries... make up only a small component of manufacturing, and an even smaller component of GDP. This is true of all OECD economies... All OECD economies rest on a combination of large medium-technology and low-technology manufacturing industries, such as food and beverages, or fabricated metal products, and large-scale service activities, of which the largest are education, and health and social services.

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

Long-term rise in export value

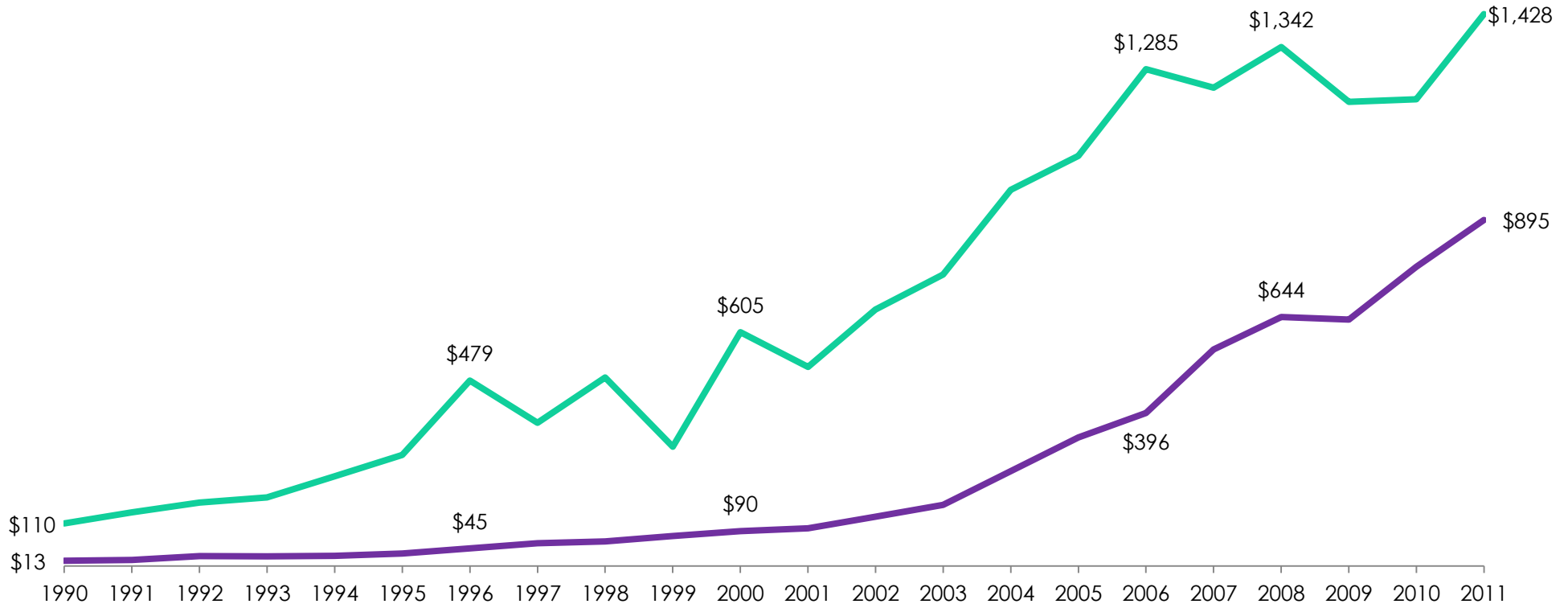
Like the wine industry, high technology manufacturing has developed from small beginnings to become a significant export earner

NZ exports of high technology manufactured goods and wine

US\$m; nominal; 1990–2012

Example chart from High Technology Manufacturing in-depth report

High Technology Manufacturing
Wine



Note: data is taken from two different databases so should be treated as illustrative.

Source: OECD STAN Bilateral Trade Database (high technology manufacturing data) and COMTRADE database (wine data).

High technology manufacturing

Cross-cutting sector

Situation

The technology level of manufacturing is defined internationally by the average share of revenue that each industry spends on research and development. When examined across multiple countries combined, high technology manufacturing industries are currently defined as those that spend over 8% of their collective revenue on research and development.

Scorecard						Example firms			
Measure	Total	% of NZ*	Growth (1 year)	Growth (5 yr CAGR)	Growth (10 yr CAGR)	Firm	Turnover (\$m)	Employees	Ownership
GDP 2011 (nominal)	\$1,338m	1%	9.9%	3.5%	n/a	Fisher & Paykel Healthcare	\$517	2,600	Listed; NZ (NZX: FPH)
GDP 2013 (real)	n/a	n/a	n/a	n/a	n/a	Tait Communications	~\$200	930	Private; NZ (charitable trusts)
Goods exports 2013	\$1,430m	3.2%	2.7%	3.3%	3.6%	Rakon	\$178	2,300	Listed; NZ (NZX: RAX)
Employment 2012	14,310	0.6%	0.9%	-0.4%	1.6%	Gallagher	\$187	760	Private; NZ (Gallagher family)
Value added / employees 2011	\$94,352	125%	9.6%	3.6%	n/a	Dynamic Controls	\$92	391	Listed; USA (NYSE: IVC)
Investment in fixed assets 2011	\$94	0%	-10.5%	n/a	n/a				
No. of firms 2013	1,036	0.2%	1.4%	0.9%	1.8%				

Industry level financial performance					Export value by product		Export value by market	
	Total		Growth (1yr)		Product	Exports (NZ\$m; 2012)	Country	Exports (NZ\$m; 2012)
	This sector	All sectors	This sector	All sectors				
Total income per firm 2012#	\$3,829,746	\$1,377,888	-2.0%	6.5%	Therapeutic respiration devices	\$287.2	Australia	\$330
Total income per employee 2012#	\$295,000	\$327,400	1.7%	4.9%	Piezo-electric quartz crystals	\$87.8	USA	\$286
Surplus per employee 2012#	\$20,600	\$32,100	-14.5%	32.1%	Medicines for humans	\$62.5	China & HK	\$96
Return on equity 2012#	17.2%	8.6%	down	up	Medicines for animals	\$61.8	UK	\$75
Debt ratio (liabilities/assets) 2012#	50.0%	57.4%	down	down	Radio telephones	\$57.1	France	\$65
Capital stock per worker 2011	n/a	\$168,533	n/a	1.1%	Other	\$897.4	Other	\$540
					TOTAL all exports	\$1,392	TOTAL All countries	\$1,392

* NZ is total employing firms, except for productivity where it is the total measured sector.

** Cross-cutting sector: uses value added per employee for productivity, NZ average = 100%.

All sectors total excludes some industries: refer to methodology and sources.

High technology manufacturing

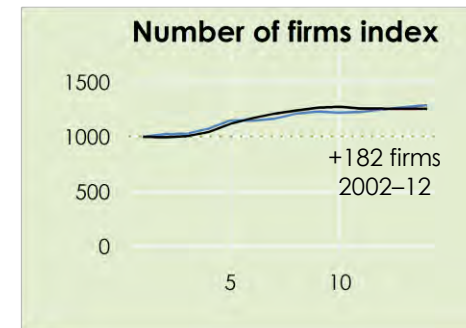
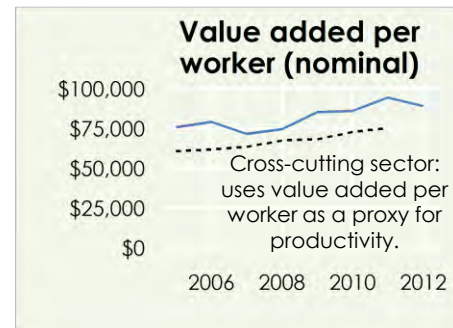
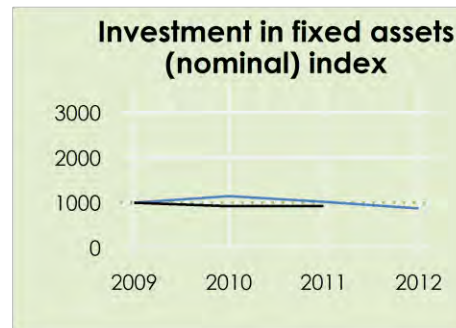
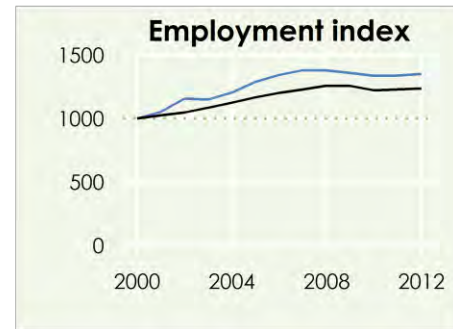
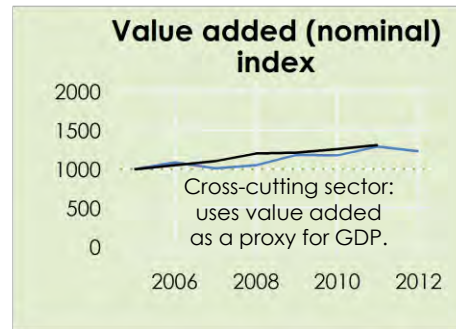
Cross-cutting sector

Performance

Key trends, various timeframes: 10-year index (base=1000) except productivity is \$ values – this sector vs all other sectors

Comment

- Share of GDP growing
- Small employer: 14,310 employees
- Created jobs overall: +3,708 (2000–12)
- Employment growth flat from 2008
- Nominal export values growing 2010–2013, after GFC dip (2008–09)
- Highly productive
- Number of firms increasing
- Investment in fixed assets stable, averaging \$90m per annum 2009–11
- Highest R&D rate: 45% of firms
- Highest innovation rate: 75% of firms
- Return on equity 17% (2012)
- Highly internationalised sector



Key

- High technology manufacturing
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors

R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate (% of firms)	1. Exchange rate volatility	Medium	1. Limited access to distribution networks	High	% of high technology firms exporting	70%
Innovation rate (% of firms)	2. Exchange rate level	Medium	2. Limited experience in expanding beyond NZ	High	% of high technology firms with overseas holdings	17%
	3. Low market demand or increased competition in overseas markets	Medium	3. Limited knowledge about specific markets / Language and cultural differences	High	% of high technology firms >50% foreign owned	13%

- High
- ◐ Medium
- Low

Medium-high technology manufacturing

Cross-cutting sector

Situation

The technology level of manufacturing is defined internationally by the average share of revenue that each industry spends on research and development. When examined across multiple countries combined, medium-high technology manufacturing industries are currently defined as those that spend between 2% and 8% of their collective revenue on research and development.

Scorecard					
Measure	Total	% of NZ*	Growth (1 year)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$2,826m	2%	17%	-0.4%	n/a
Real GDP 2013	n/a	n/a	n/a	n/a	n/a
Goods exports 2013	\$2,634m	6%	-15.3%	-2.4%	-0.6%
Employment 2012	33,876	1.5%	2.3%	-1.9%	-1.3%
Value added / employees 2011	\$85,372	113.10%	18.4%	2.6%	n/a
Investment in fixed assets 2011	\$164m	1%	n/a	n/a	n/a
No. of firms 2013	4,015	0.8%	-1.1%	-1%	0.4%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Fisher and Paykel Appliances	\$1,000	3,050	Foreign (Haier Group)
Glidepath	\$75	200	Private
Buckley Systems	\$70	270	Private
Compac Sorting Equipment	\$83	310	Private
Scott Technology	\$54	225	Listed, NZX

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$2,700,000	\$1,377,888	9.7%	6.5%
Total income per employee 2012#	\$358,900	\$327,400	5.6%	4.9%
Surplus per employee 2012#	\$24,800	\$32,100	15.3%	32.1%
Return on equity 2012#	17.2%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	49.5%	57.4%	down	down
Capital stock per worker 2011	n/a	\$168,533	n/a	1.1%

Export value by product			Export value by market	
Product	Exports (NZ\$m; 2012)	Country	Exports (NZ\$m; 2012)	
Specialised machinery and equipment	\$759	Australia	\$1,327	
Electrical equipment	\$509	USA	\$351	
Other machinery and equipment	\$315	China & HK	\$115	
Domestic appliances	\$259	Japan	\$103	
Motor vehicles and parts	\$173	UK	\$37	
Other	\$777	Other	\$859	
TOTAL all exports	\$2,792	TOTAL All countries	\$2,792m	

* NZ is total employing firms, except for productivity where it is the total measured sector.

** Cross-cutting sector: uses value added per employee for productivity, NZ average = 100%.

All sectors total excludes some industries: refer to methodology and sources.

Medium-high technology manufacturing

Cross-cutting sector

Performance

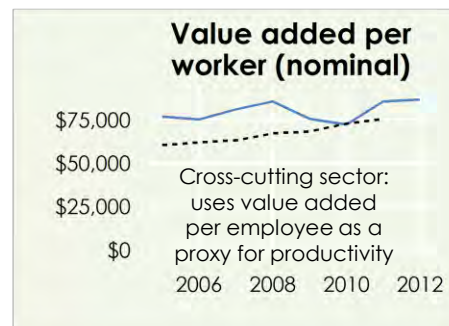
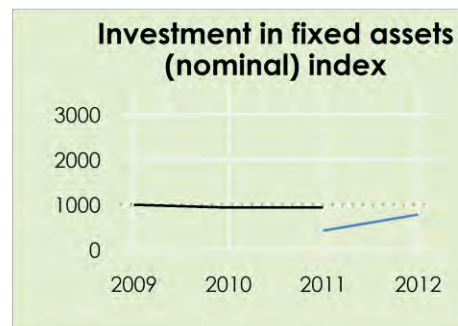
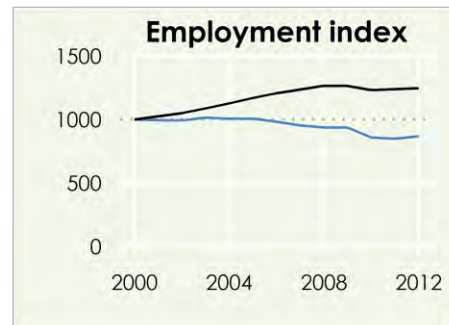
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- Share of GDP has fallen
- Medium sized sector for employment: 33,876 workers
- Lost jobs overall: -5,211 (2000-2012)
- Created jobs: +774 (2012)
- Number of firms declining since 2009
- Nominal export values declining
- Number of firms declining
- Identification of distance and increased competition in overseas markets as barriers possibly reflects nature of goods exported, e.g. whiteware versus health technologies
- Almost exactly twice the size of high technology manufacturing

Key

- Medium-high technology manufacturing
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate (% of firms)	1. Distance from markets		1. Limited experience in expanding beyond NZ		% of medium-high technology firms exporting	50%
Innovation rate (% of firms)	2. Low market demand or increased competition in overseas markets		2. Distance from markets		% of medium-high technology firms with overseas holdings	12%
High Medium Low	3. Exchange rate level / exchange rate volatility,		3. Limited access to distribution networks		% of medium-high technology firms >50% foreign owned	10%



Cross-cutting sector

INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)

102 page in-depth available from
www.mbie.govt.nz

See pages 92–94 for guide to reading snapshot pages.

Definition

OECD definition for information and communications technology (ICT)

The OECD definition includes telecommunications goods and services, but **excludes** internet publishing and broadcasting. The ICT sector is defined as:

- goods and services which enable the function of information processing and communication by electronic means including transmission and display
- goods which use electronic processing to detect, measure and/or record physical phenomena or control a physical process.

Applying the OECD's definition, four industries are classified as part of the ICT sector: telecommunications; IT services (software and computer services); ICT manufacturing; and IT wholesaling.

The full definition is provided in the in-depth publication on ICT available at www.mbie.govt.nz

Note on interpreting aggregated ICT data

How statisticians define the industry and how the industry sees itself is very different.

Industry leaders commented that aggregated data on the ICT sector is misleading. Firms in the three different activities captured by the definition for ICT – ICT manufacturing, IT services and telecommunications – have very different dynamics and capital requirements.

In response to feedback, the in-depth report on ICT focuses on the largest IT services subsector, computer systems design, which appears to capture firms in New Zealand's growing IT services export sector.

For the full analysis of this sector, see the ICT Sector Report available from www.mbie.govt.nz

Average R&D expenditure

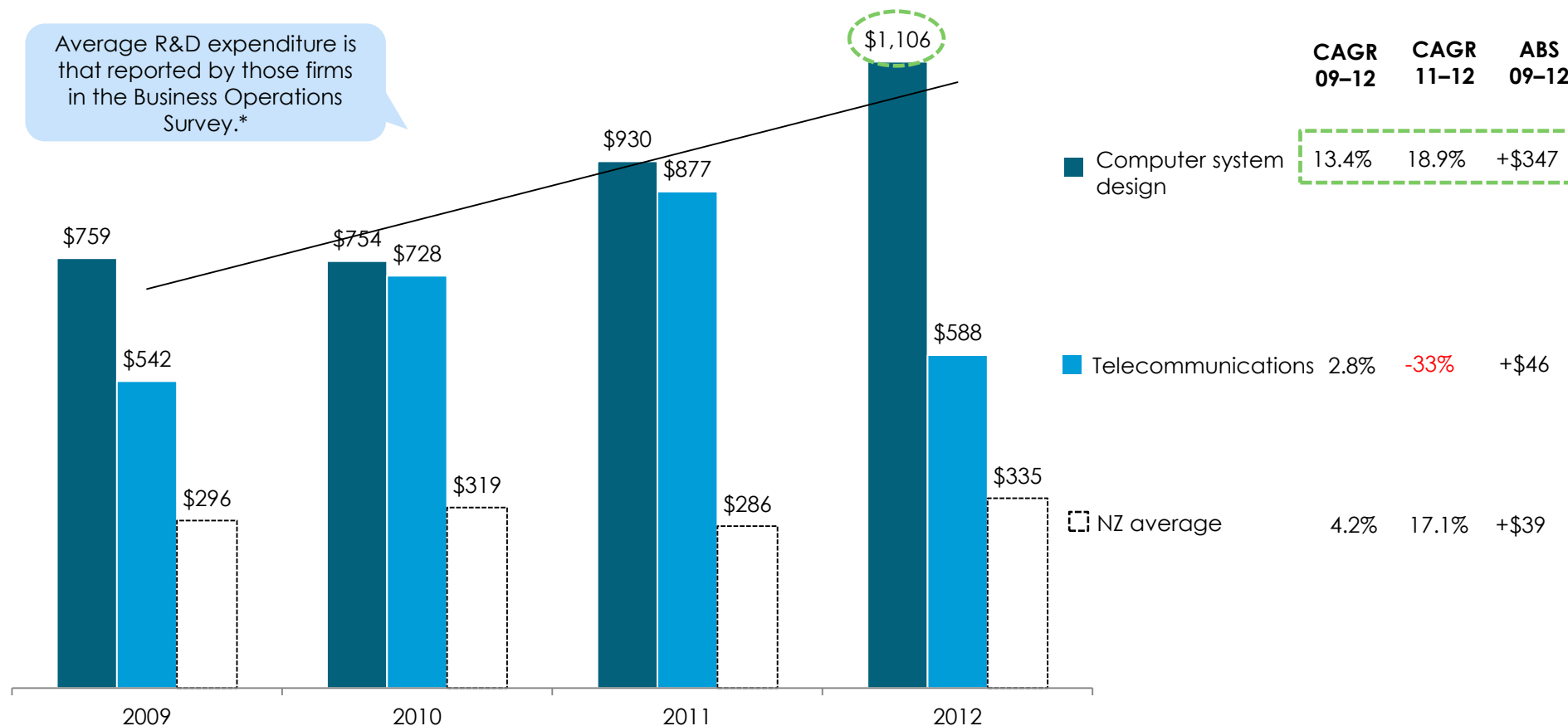
The computer system design sector is significantly increasing investment in R&D

Average R&D expenditure*

NZ\$000; 2009–2012

Average R&D expenditure is that reported by those firms in the Business Operations Survey.*

Example chart from ICT in-depth report



*Note: Total survey sample is 35,976 firms with six or more employee; 600 of the surveyed firms are in computer system design.

Source, Statistics NZ, Business Operations Survey, 2012

ICT (OECD definition)

Situation

Cross-cutting sector (data is aggregated and double-counted with other sectors)

Includes firms whose main activity is provision of goods and services which fulfil or enable the function of information processing and communication by electronic means including transmission and display. Also includes firms that provide goods which use electronic processing to detect, measure and/or record physical phenomena or control a physical process.

Scorecard					
Measure	Total	% of NZ*	Growth (1 year)	Growth (5 yr CAGR)	Growth (10 yr CAGR)
GDP 2011 (nominal)	\$9,189m	5%	8%	3%	n/a
GDP 2013 (real)	n/a	n/a	n/a	n/a	n/a
Goods exports 2013	\$632m (subset of high tech manufacturing exports, see p.154)				
Employment 2012	76,665	3.30%	4%	1.3%	2.1%
Value added / employees 2011	\$124,649	165.20%	5.4%	1.8%	n/a
Fixed capital investment 2011	\$1,317	4%	2.1%	n/a	n/a
No. of firms 2013	15,188	3.2%	1.1%	0.9%	2.8%

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Chorus	\$613m (7 months ending June 2012)	548	Listed NZX
Telecom	4,576m (2012)	7,866 (2012)	Listed NZX
Revera	\$38 (2012)	133	Acquired by Telecom
Orion Health	\$100 (2012)	633	Private
Optimization (NZ)	\$48 (2012)	230	Private

Industry level financial performance				
	Total		Growth (1yr)	
	This sector	All sectors	This sector	All sectors
Total income per firm 2012#	\$1,780,174	\$1,377,888	-2.9%	6.5%
Total income per employee 2012#	\$437,100	\$327,400	-3.7%	4.9%
Surplus per employee 2012#	\$30,300	\$32,100	41.6%	32.1%
Return on equity 2012#	16.1%	8.6%	up	up
Debt ratio (liabilities/assets) 2012#	62.9%	57.4%	down	down
Capital stock per worker 2011	n/a	\$168,533	n/a	1.1%

Key services exports from this sector		Export value by market	
Service (aggregated ICT data)	Exports (\$m; 2012)	Country	Exports (\$m; 2012)
Computer services	\$391.3	n/a	
Communication services	\$183.6		
Software royalties	\$123.2		
News & information services	\$21.5		
Other royalties & franchises	\$15.5		
Other	\$383.9	Other	
TOTAL all exports	\$1,119	TOTAL all countries	\$1,119

* NZ is total employing firms, except total measured sector for productivity

** Cross-cutting sector: uses value add per employee for productivity, NZ average = 100%

#All sector total excludes some industries. Refer appendix, terms and definitions.

ICT (OECD definition)

Performance

Cross-cutting sector (data is aggregated and double-counted with other sectors)

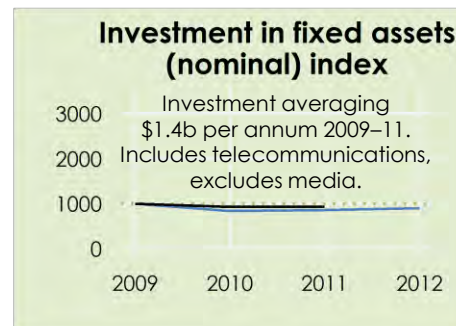
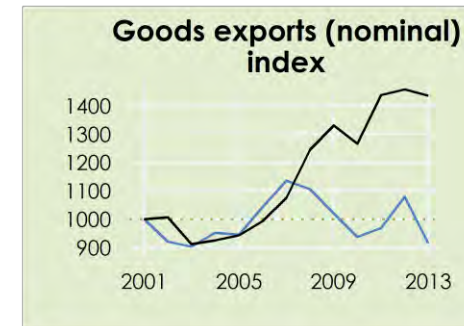
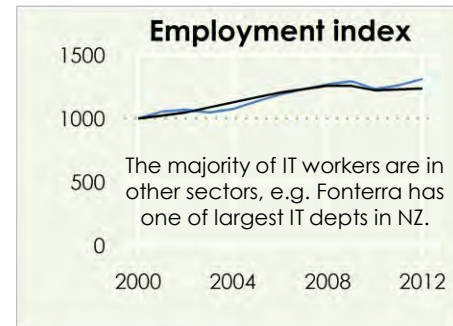
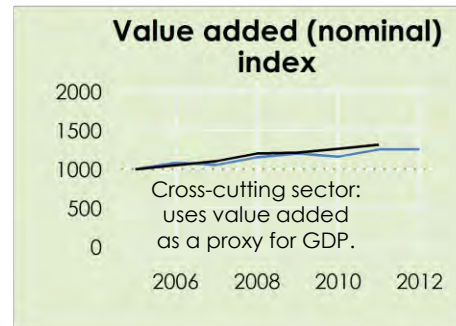
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- Sector value add growing
- Large employer: 76,665
- Creating jobs overall: +11,820 (2000–12)
- Lost jobs: -3,627(2009)
- Created jobs: +4,722 (2010–12)
- Productivity improving
- Goods exports a subset of high technology manufacturing exports
- Services exports growing (not shown)
- Number of firms increasing
- Fixed capital investment stable
- R&D and innovation rates high
- See ICT report for a more granular analysis, available from www.mbie.govt.nz

Key

- ICT
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors



Results from Survey: 2011 R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate	1. Distance from markets	Medium	1. Limited experience in expanding beyond NZ	Medium	% of ICT firms reporting overseas income	n/a
Innovation rate	2. Other	Medium	2. Limited access to finance for expansion beyond NZ	Medium	% of ICT firms with off-shore direct investment	11%
<ul style="list-style-type: none"> ● High ◐ Medium ○ Low 	3. Exchange rate volatility/ Limited access to finance for expansion beyond NZ	Medium	3. Limited knowledge about specific markets/ Low market demand or increased competition	Medium	% of ICT firms >50% foreign owned	19%



Cross-cutting sector

KNOWLEDGE INTENSIVE SERVICES

140 PAGE IN-DEPTH REPORT AVAILABLE
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See pages 92–94 for guide to reading snapshot pages

Definition

This report uses the OECD definition of knowledge intensive services as a starting point only

OECD definition

The OECD defines knowledge intensive services by using three criteria:

- the extent to which high technology is used within that service industry
- the workers' level of skills and education
- the amount that the service industry invests in research and development.

The result is a broad range: the definition encompasses one third of the GDP generated by all services industries in New Zealand.

Drawing on the OECD's definition, the following services industries are classified as knowledge intensive:

- information media and telecommunications;
- financial and insurance services
- professional scientific and technical services
- post and courier pick-up services
- rental and hiring services (except real-estate)
- commission based wholesaling;
- employment services
- other administrative services.

Wide range of activities

The OECD definition for knowledge intensive services captures a wide range of activities and a wide variety of firms that operate in different markets with different structures and dynamics.

The aggregated data should be treated with caution.

Starting point

The in-depth report in this series on knowledge intensive services takes this broad definition as a starting point only. The main focus of the analysis is confined to the professional, scientific and technical services sector (except computer systems design, which is covered in the ICT report).

This approach is chosen because it captures activities such as scientific research, architecture, engineering, design, law, accountancy, advertising, market research, veterinary science, management and other consultancy.

These parts of the economy are all of interest, either as activities where firms are expanding off-shore (such as the engineering firms Beca and Opus International) or in terms of providing services to support the growth and build the capability of the export sector. Design, marketing and scientific research are examples of the latter.

Exports

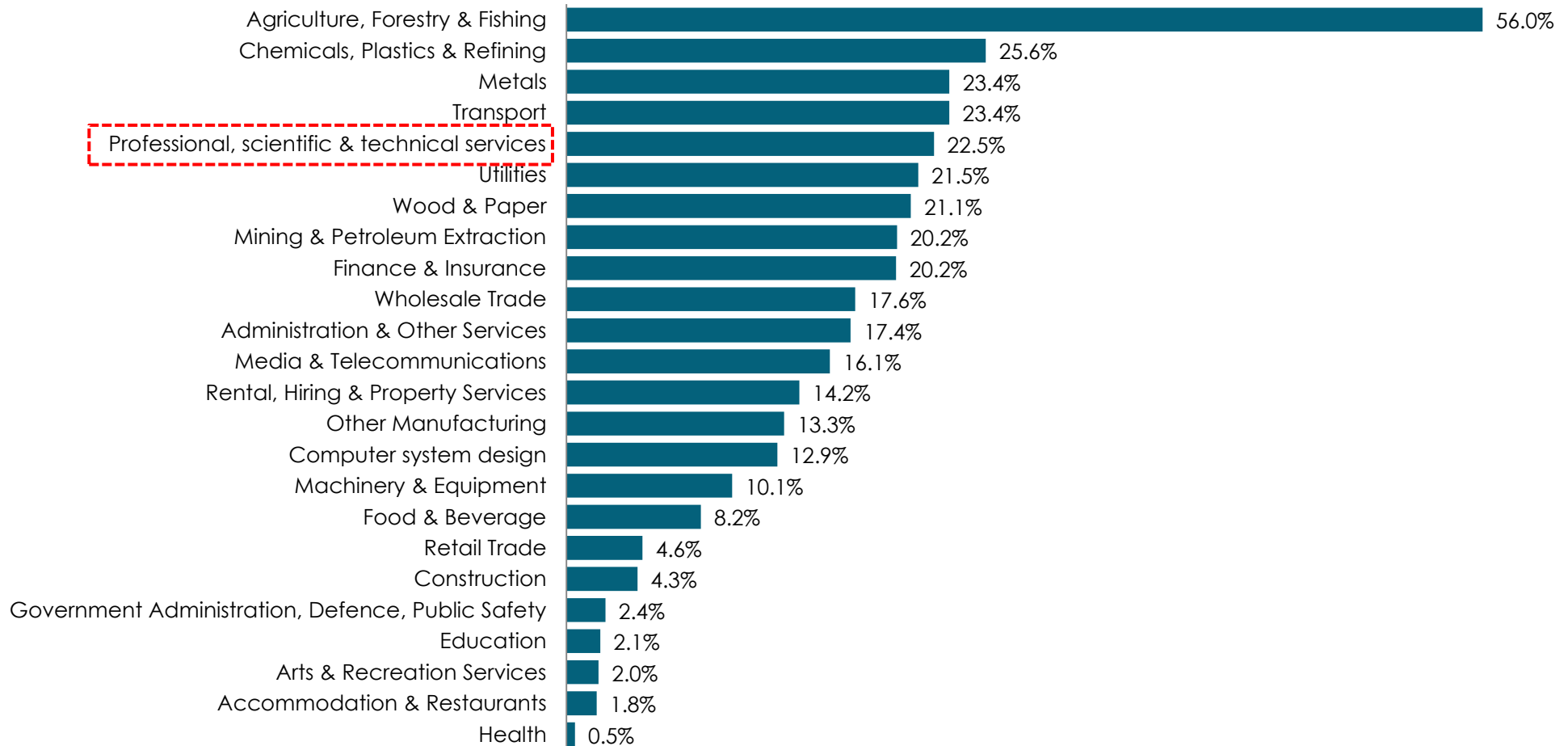
Exports that could be attributed to firms in the professional, scientific and technical services sector (excluding computers systems design) are likely to be captured in the 'miscellaneous business, professional and technical services' export category. In 2012 this category generated \$2 billion in exports, up from \$968 million in 2006.

Share of income from exports: professional, scientific and technical services

22% of the output from professional, scientific & technical services firms contributed to other firms' exports

Direct exports as a % of total sector gross output
2007; nominal

Example chart from the
Knowledge Intensive Services
in-depth report



Knowledge intensive services

Cross-cutting sector

Situation

The definition of knowledge intensive services used in this report is based on the definition of knowledge intensive market services published in OECD Science, Technology and Industry Scoreboard 2011. While manufacturing technology intensity can be defined by R&D intensity, many service industries perform relatively limited amounts of formal R&D, so other metrics such as workforce skill composition and intensity of investment in ICT equipment have been used.

Scorecard						Example firms			
Measure	Total	% of NZ*	Growth (1 year)	Growth (5 yr CAGR)	Growth (10 yr CAGR)	Firm	Turnover (\$m)	Employees	Ownership
GDP 2011 (nominal)	\$33,752m	20%	-2.9%	2.6%	n/a	Beca	\$612m (2013 est)	2400	Private
Employment 2012	n/a	n/a	2.1%	0.7%	2.7%	Cawthron Institute	\$34m (2013 est)	200	Cawthron Trust
Goods exports 2013	\$0m	0%	n/a	n/a	n/a	PricewaterhouseCoopers	\$330m (2013 est)	1300	Private
Value added / employees 2011**	\$79,789	105.7%	-5.4%	1.7%	n/a	AJ Park	\$37m (2013 est)	220	Private
Fixed capital investment in 2011	\$3,018	10%	-28.8%	n/a	n/a	Warren & Mahoney	\$17m (2013 est)	105	Private
No. of firms 2013	103,815	22%	0.2%	1%	4%				
GDP 2011 (nominal)	\$33,752m	20%	-2.9%	2.6%	n/a				

Industry level financial performance					Leading export service types		Exports by destination	
	Total		Growth (1yr)		Product (services) exported by knowledge intensive service firms	Exports (NZ\$m; 2011)	Country	Exports (NZ\$m; 2011)
	This sector	All sectors	This sector	All sectors				
Total income per firm 2012#	\$1,305,610	\$1,377,888	14.9%	6.5%	Computer services	\$447	Australia	\$860
Total income per employee 2012#	\$419,300	\$327,400	11.5%	4.9%	Management fees between related parties	\$290	USA	\$523
Surplus per employee 2012#	\$106,300	\$32,100	78.4%	32.1%	Communication services	\$243	UK	\$178
Return on equity 2012#	14.0%	8.6%	up	up	Financial services	\$207	Japan	\$72
Debt ratio (liabilities/assets) 2012#	77.0%	57.4%	down	down	Software royalties	\$168	France	\$55
Capital stock per worker 2011#	n/a	\$168,533	n/a	1.1%	Engineering consultancy	\$154	Singapore	\$52
Total income per firm 2012	\$1,305,610	\$1,377,888	14.9%	6.5%	TOTAL all service types	\$2,494	TOTAL all countries	\$2,494

** Cross-cutting sector: uses value added per employee for productivity, NZ average = 100%

All sectors total excludes some industries: refer to methodology and sources

Knowledge intensive services

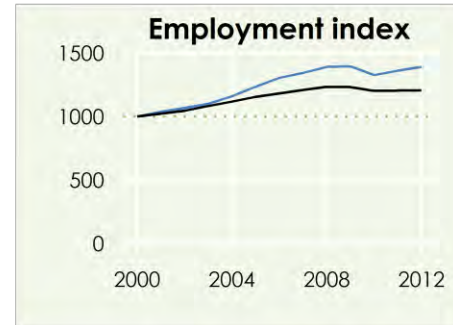
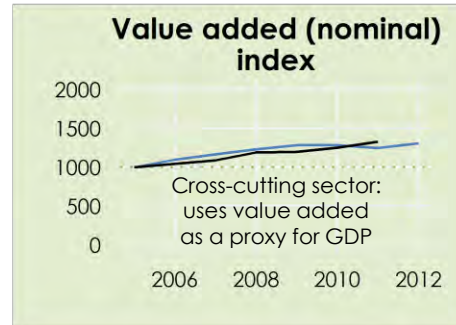
Cross-cutting sector

Performance

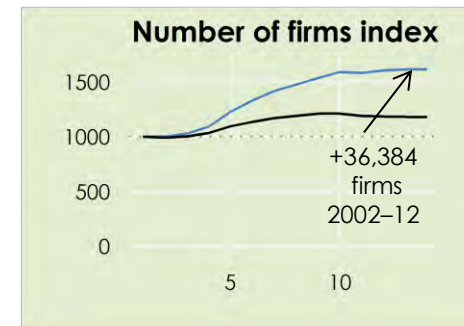
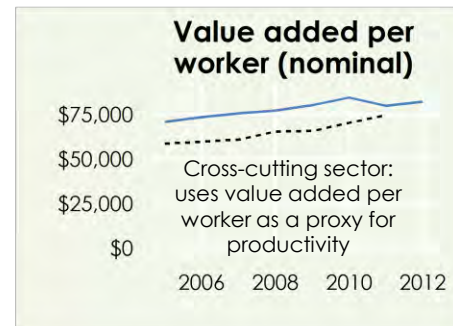
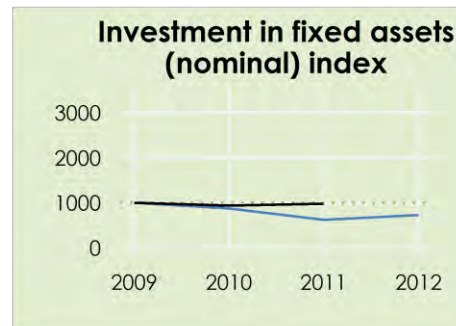
Index of key trends, various timeframes: (base =1000), this sector vs all other sectors (except productivity is \$ values)

Comment

- Value add growth at average
- Large employer: 431,844 employees
- Created jobs overall: +124,649 (2000–12)
- Lost jobs: --21,177(2009-10)
- Created jobs: +19,638 (2010–12)
- Large increase in number of firms
- Gained firms: +36,529 (2002-2009)
- Fall in Investment in fixed assets 2010–11
- Above average R&D rate (13% of firms) and innovation rate (54% of firms)
- See separate reports on Knowledge Intensive Services and ICT for a more granular analysis, available from www.mbie.govt.nz



No goods exports



Key

- Knowledge-intensive services
- Other employing sectors
- - - Starting point = 1000
- - - Average for all measured sectors

R&D & innovation rates	Export barriers: Current exporters	% firms	Export barriers: Future exporters	% firms	Internationalisation	%
R&D rate (% of firms)	1. Distance from markets		1. Limited experience in expanding beyond NZ		% of knowledge intensive service firms exporting	24% (2011)
Innovation rate (% of firms)	2. Low market demand or increased competition in overseas markets		2. Limited knowledge about specific markets		% of knowledge intensive service firms with overseas holdings	7%
	3. Other		3. Limited access to finance		% of knowledge intensive service firms >50% foreign owned	13%

- High
- ◐ Medium
- Low



Cross-cutting sector

TOURISM

150 PAGE IN-DEPTH REPORT AVAILABLE
FROM WWW.MBIE.GOV.T.NZ

See pages 92–94 for guide to reading snapshot pages.

International definition of tourism

- *Tourism is defined internationally as the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes. This definition recognises tourism as comprising a broad range of activities, and goes beyond the common perception of tourism as being limited to holiday activity.*
 - UNWTO technical manual: Collection of Tourism Expenditure Statistics. World Tourism Organization; 1995
- The definition includes domestic visitors (New Zealanders travelling to and staying in other parts of New Zealand) and international visitors (people from other countries, including New Zealand citizens living overseas, travelling to and staying in New Zealand for less than a year).
- Conventional industries such as construction and manufacturing are defined according to the goods and services they produce. By contrast, tourism is defined by the characteristics of the customer demanding the goods and services:
 - A restaurant meal bought by an Australian visiting New Zealand is a tourism export
 - The same meal bought by a New Zealand resident living down the road is not
 - The same meal bought by a New Zealander who resides in another part of the country is domestic tourism expenditure.
- Thus the tourism sector cuts across Australia and New Zealand Standard Industrial Classification (ANZSIC) codes. It requires a different approach to classification and analysis.
- A full analysis of New Zealand's tourism industry is provided in the Tourism Sector Report, available from www.mbie.govt.nz

Who is in the tourism industry?

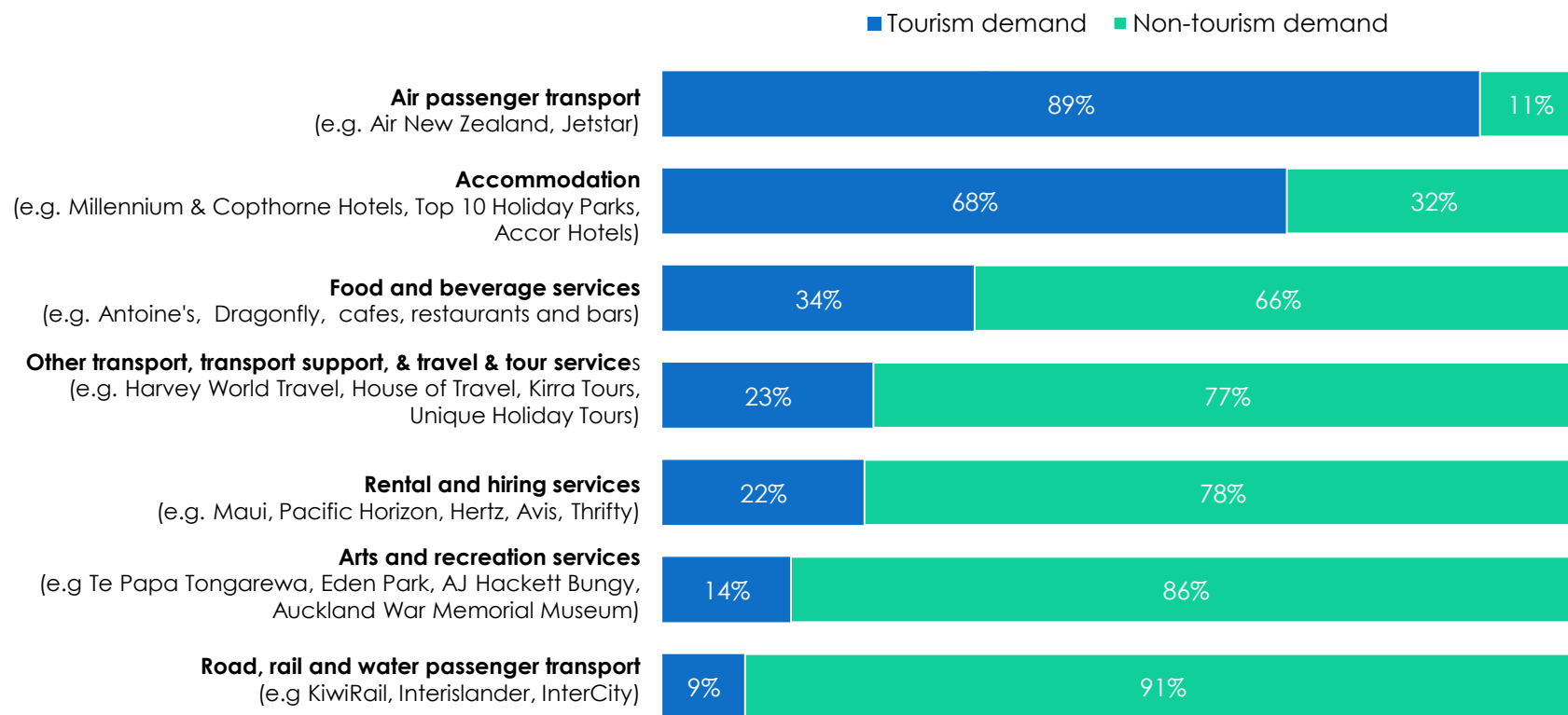
A number of key services sectors in New Zealand are significantly dependent on tourism demand (domestic and international)

Example chart from the Tourism in-depth report

Percentage of direct tourism demand for tourism-characteristic industries' output

% total demand; 2010^a (year ended March)

Definition: A tourism-characteristic industry is one where (1) at least 25 per cent of the industry's output is purchased by visitors; or (2) industry output includes a tourism-characteristic product.



Source: Statistics New Zealand, Tourism Satellite Account (2013). ^a Latest year available.

Tourism, unlike 'conventional' industries, is defined by the characteristics of the customer demanding tourism products. A 'tourism-characteristic product' is defined as one that would cease to exist in a meaningful quantity, or for which the level of consumption would be significantly reduced, in the absence of visitors. A product is classified as a tourism-characteristic product if at least 25 per cent of its production is purchased by visitors.

Scorecard ^a					
Measure	Total	% of NZ ^b	Growth (1 year)	Growth (5 yr CAGR ^c)	Growth (10 yr CAGR ^c)
GDP contribution 2013 (nominal)	\$7,250m	3.7%	4.3%	0.5%	2.5%
Total exports 2013 ^e (nominal)	\$9,805m	16.1%	2.2%	0.8%	2.4%
Tourism employment (FTE) 2013	110,800	5.7%	1.8%	2.3%	2.0%
GDP/employment (FTE) 2010 (nominal)	\$49,058	67.8%	-6.7%	-1.9%	1.2%
Investment in fixed assets 2010	\$5,904m	16.3%	-1.2%	-1.2%	6.3%
No. of 'tourism-characteristic' firms 2012 ^d	25,833	5.5%	-0.7%	0.2%	2.1%

- Reports latest available tourism data. It does not necessarily align with all sector scorecards, which have been prepared on a common basis to allow comparison across sectors.
- NZ is total employing sectors (excludes owner-occupied dwellings).
- CAGR = compound annual growth rate.
- Indicative data, based on applying tourism industry ratios to Statistics New Zealand Business Demography (2012) firm counts. Treat as directional.
- Visitor spending is direct spending by international visitors in New Zealand. Excludes non-visitor expenditure (plus GST), notably Air New Zealand's overseas earnings and foreign carrier landing fees, refuelling and catering costs.

Example firms			
Firm	Turnover (\$m)	Employees	Ownership
Air New Zealand	\$4,500m (est)	10,453	Public – NZX; 75% NZG
SKYCITY Entertainment Group Ltd	\$861m (est)	3,684	Public – NZX and ASX
Tourism Holdings Ltd	\$209m (est)	431	Public – NZX
Small backpacker hostel	\$1m (est)	5 (est)	Limited liability company
Small jet boat tour operator	\$500,000 (est)	Zero	Partnership

Key tourism exports by type of export		Visitor spending by country ^e	
Service	Exports (\$m; 2013)	Country	Visitor spend (\$m; 2012)
Air passenger transport	\$2,290	Australia	\$1,660
Food & beverage	\$1,688	China	\$555
Retail (other than fuel)	\$1,480	UK	\$545
Accommodation	\$1,137	US	\$430
Other passenger transport	\$871	Japan	\$285
Other	\$2,312	Other	\$2,018
TOTAL all exports	\$9,778^e	TOTAL all countries	\$5,493^e

Tourism

Cross-cutting sector

Performance

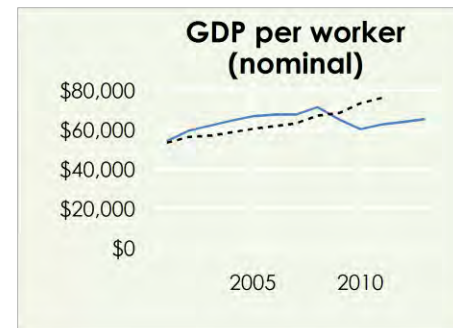
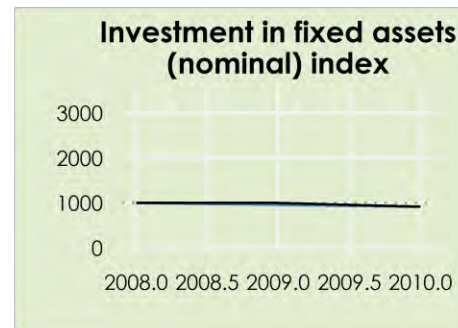
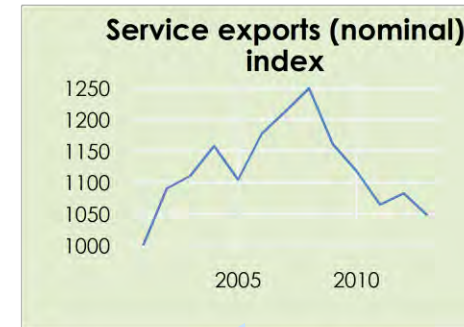
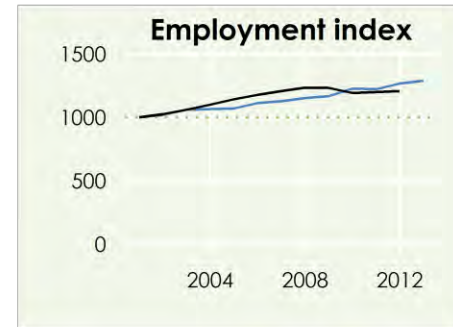
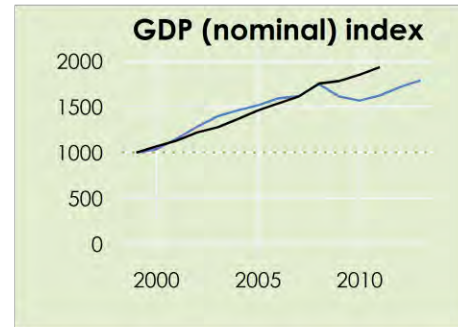
Key trends, various timeframes: 10 year index (base =1000) except productivity is \$ values — this sector vs all other sectors

Comment

- Nominal GDP flat to declining from 2008
- Large employer: 120,700
- Created jobs overall +15,900 (2001–11)
- Lost jobs: -3600 (2009–2011)
- Created jobs: +1,455 (2011)
- Productivity (GDP per hour worked) declining
- Exports flat
- In 2009, the tourism sector was the largest investor in fixed assets due to significant airport infrastructure investment. *Note: 2008 & 09 investment data not directly comparable to earlier years due to classification changes.
- 1 in 20 firms are tourism characteristic

Key

- Tourism
- Other employing sectors
- Starting point = 1000
- - - Average for all measured sectors



Goods exports for other sectors, so not directly comparable to tourism.

No data

Results from Survey 2011: R&D & innovation rates		Export barriers: Current exporters	Degree	Export barriers: Future exporters	Degree	Internationalisation	%
R&D rate	Medium	1. Exchange rate level	High	1. Limited access to distribution networks	High	% of tourism related firms reporting overseas income	100%
Innovation rate	Medium	2. Exchange rate volatility	High	2. Limited experience in expanding beyond NZ	Medium	% of tourism firms with off-shore direct investment	11%
		3. Low market demand or increased competition	High	Overseas government regulation or tariffs	Medium	% of tourism firms >50% foreign owned	19%

High Medium Low



APPENDIX

glossary, definitions, sources,
methodology and limitations

Glossary of terms

This report uses the following acronyms and abbreviations

A\$/AUD	Australian dollar	NZ	New Zealand
ABS	Absolute	n/a	Not available/not applicable/no data
ANZSIC	Australia and New Zealand Standard Industry Classification	NZ\$/NZD	New Zealand dollar
AR	Annual report	Oceania	NZ, Australia & Pacific Islands
ASEAN	Association of Southeast Asian Nations	RoE	Return on equity
AU	Australia	R&D	Research & Development
Australasia	Australia and New Zealand	S Asia	South Asia (Indian sub-continent)
b	Billion	SE Asia	South East Asia
CAGR	Compound annual growth rate	SOE	State Owned Enterprise
C/S America	Central and South America (Latin America)	T/O	Turnover
CRI	Crown Research Institute	US/USA	United States of America
CY	Calendar years	US\$/USD	United States Dollar
E Asia	East Asia	UK	United Kingdom
EBITDA	Earnings before interest, tax, depreciation and amortization	YE	Year ending
FTE	Full time equivalent	YTD	Year to date
FY	Financial year		
GFC	Global financial crisis		
JV	Joint venture		
m	Million		

Terms and definitions

The report uses the following economic metrics

Term	Definition	Comment
Nominal GDP (gross domestic product)	The value of goods and services produced in New Zealand, after deducting the cost of goods and services used in the production process. 'Nominal' means not adjusted for inflation.	Cross-cutting sectors (excluding tourism) Value added has been used to provide indicative estimates. These have not been verified through the System of National Accounts.
Real GDP (gross domestic product)	GDP adjusted to remove the effect of price changes/inflation to show the change in the volume of goods and services produced in New Zealand. In this report, it is expressed in constant 2010 prices.	Cross-cutting sectors (excluding tourism) Data not available.
Goods exports	The value of goods of domestic origin (excluding re-exports) exported from New Zealand to another country. Note: sector exports values will exclude items suppressed in accordance with Statistics NZ's confidentiality policy. Exclusions are noted where applicable.	All sectors: Merchandise (goods) exports have been obtained by matching commodities to the ANZSIC06 industry that characteristically produces them (Statistics NZ custom job).
Employment	The number of people who earned money from employment (wages and salary earners) and/or self-employment. For tourism it is full-time equivalent (FTE) employees producing goods and services sold directly to tourists.	Cross-cutting sectors (excluding tourism) Statistics NZ, Linked Employee Employer Database, LEED, custom job. Tourism Direct employment in tourism (FTEs) and employment (FTEs) in tourism as a % of total.
Productivity	A measure of how efficiently inputs are used within the economy to produce outputs. Productivity is calculated by dividing the sector's real GDP by the number of hours paid. Real GDP per hour paid is used. For the cross-cutting sectors nominal GDP per employee is substituted.	Cross-cutting sectors (excluding tourism) For cross-cutting sectors real GDP is replaced by nominal GDP, and hours paid is replaced by number of employees; hence calculation is nominal GDP by number of employees.
Investment in fixed assets (gross fixed capital formation)	A measure of the outlays of producers on durable fixed assets (e.g. buildings, vehicles, plant and machinery, hydro-electric construction, roading and improvements to land). 'Gross' indicates that consumption of fixed capital is not deducted from the value of the outlays.	Cross-cutting sectors (excluding tourism) Uses additions less disposals of fixed assets, (custom job). Note: this data has not been through the System of National Accounts, so is indicative only.
Number of firms (number of enterprises)	The number of businesses or service entities operating in the sector in New Zealand. It covers all types of business or service entities, including companies, self-employed individuals, voluntary organisations and government departments.	Cross-cutting sectors (excluding tourism) Uses customised Business Demography Statistics, number of enterprises.

Terms and definitions

The report uses the following financial metrics

Term	Definition	Comment
Total income per firm	Total income of all firms in sector divided by the number of firms in the sector. Income includes sales, interest, dividends, donations, government funding, grants and subsidies, and non-operating income.	Cross-cutting sectors (excluding tourism) Statistics NZ, Annual Enterprise Survey statistics, custom job.
Total income per employee	Total income of all firms in sector divided by rolling mean employment. Total income includes sales, interest, dividends, donations, government funding, grants and subsidies, and non-operating income.	Cross-cutting sectors (excluding tourism) Statistics NZ, Annual Enterprise Survey statistics, custom job.
Surplus per employee	Surplus before income tax of all firms in sector divided by rolling mean employment.	Cross-cutting sectors (excluding tourism) Statistics NZ, Annual Enterprise Survey statistics, custom job.
Return on equity	Surplus before income tax divided by shareholders' funds.	Cross-cutting sectors (excluding tourism) Statistics NZ, Annual Enterprise Survey statistics, custom job.
Capital stock per worker	Indicates capital intensity. The capital stock includes fixed assets such as buildings, roads and machinery, and intangible items such as software and exploration expenditure, less accumulated depreciation.	Cross-cutting sectors (excluding tourism) Statistics NZ, Annual Enterprise Survey statistics, custom job. Tourism: Capital stock, divided by employment.
Debt ratio	Debt ratio equals total liabilities of all firms in sector divided by total assets of all firms in sector.	Cross-cutting sectors (excluding tourism) Statistics NZ, Annual Enterprise Survey statistics, custom job.

Sources: economic data

The following sources were used for economic data

Metric	Source Standard ANZSIC sectors	Source tourism	Source High technology manufacturing, knowledge intensive services and ICT
Nominal GDP	Statistics NZ, Infoshare Database, System of National Accounts 1993, SND, GDP(P), Nominal, Actual, ANZSIC06 industry groups (Annual-Mar).	Statistics NZ, Tourism Satellite Account: 2012, Table 1 Tourism expenditure by component, Direct tourism value added.	Statistics NZ, Value added estimates from customised Annual Enterprise Survey tables. Note: this data has not been through the System of National Accounts, so is indicative only.
Real GDP	Statistics NZ, Infoshare Database, National Accounts, System of National Accounts 1993, SND, GDP(P), Chain-volume, Actual, ANZSIC06 industry groups (Annual- k Mar). Adjusted so that 2010 real GDP = 2010 Nominal GDP. Does not incorporate revisions published by Statistics NZ in December 2012.	n/a	
Goods exports	Statistics NZ, merchandise exports, obtained by matching commodities to the ANZSIC06 industry that characteristically produces them. Note: sector exports values will exclude items suppressed in accordance with Statistics NZ's confidentiality policy. For more information, see http://www.stats.govt.nz/about_us/policies-and-protocols/trade-confidentiality.aspx		Statistics NZ, merchandise exports, obtained by matching commodities to the ANZSIC06 industry that characteristically produces them.

Sources: economic data *continued*

Metric	Source standard ANZSIC sectors	Source tourism	Source High technology manufacturing, knowledge intensive services and ICT
Employment	Statistics NZ, Table Builder, Linked Employer-Employee Data (LEED) Tables (annual), Table 1.6: Main Earnings Source by Industry (NZSIOC).	Statistics NZ, Tourism Satellite Account: 2012, Table 4, Direct employment in tourism (FTEs) and Employment (FTEs) in tourism as a percentage of total. See http://www.stats.govt.nz/browse_for_stats/industry_sectors/Tourism/tourism-satellite-account-2012/tourism-employment.aspx for more information on the tourism FTE measure.	Statistics NZ, LEED custom job.
Productivity	Real GDP divided by hours paid. Hours paid data from Statistics NZ, Infoshare Database, Productivity Input Series – Industry Level (ANZSIC06) (Annual–Mar), Hours, Gross. Manufacturing hours paid for 2010 split into manufacturing sub-sectors using QES hours paid and rated back using productivity indexes from Statistics NZ.	Substituted nominal GDP per employee.	Substituted nominal value added/employment.
Investment in fixed assets	Statistics NZ, Infoshare database, System of National Accounts 1993 - SND, Series, GDP(E), Nominal, Actual, Asset type (Annual–Mar), Gross Fixed Capital Formation.	Statistics NZ, Tourism Satellite Account - TSA, Table: Gross Fixed Capital Formation by Asset Type and by Industry (ANZSIC06) (Annual-Mar). NB data only available for certain years up to 2009.	Statistics NZ, Additions less disposals of fixed assets from customised Annual Enterprise Survey tables. Note: this data has not been through the System of National Accounts, so is indicative only. The all sector total excludes some industries – see note page following.
Number of firms	Statistics NZ Table Builder, Business Demography Statistics, Detailed Industry for Enterprises, number of enterprises.	n/a	Customised Business Demography Statistics, number of enterprises.

Sources: financial data

The following sources were used for financial data

Metric	Source standard ANZSIC sectors	Source Tourism	Source High technology manufacturing, knowledge intensive services and ICT
Surplus per employee	Statistics NZ, Annual Enterprise Survey release, surplus per employee count. The all sector total excludes some industries. See note below.	n/a	Statistics NZ, Customised Annual Enterprise Survey data, surplus per employee count.
Return on equity	Statistics NZ, Annual Enterprise Survey release, return on equity. Total excludes some industries – see note below.	n/a	Statistics NZ, Customised Annual Enterprise Survey data, return on equity.
Debt ratio	Statistics NZ, Annual Enterprise Survey release, total liabilities (current and other) divided by total assets. The all sector total excludes some industries. See note below.	n/a	Statistics NZ, customised Annual Enterprise Survey data, total liabilities (current and other) divided by total assets.
Capital stock per worker	Statistics NZ, National Accounts (Industry Benchmarks): Year ended March 2010, Table 14 Net capital stock by industry, current prices (replacement cost), 1987–2010, divided by employment.	Statistics NZ, Tourism Satellite Account, capital stock, divided by employment. Note: capital stock data is only available for some years up to 2009 and does not incorporate the National Accounts revisions published in November 2012.	Substituted with fixed assets per worker from Statistics NZ, Customised Annual Enterprise Survey data, fixed tangible assets divided by employment. Note: the fixed assets data has not been through the system of National Accounts, so is indicative only. The all sector total excludes some industries - see note below.

Note: AES data excludes residential property operators, foreign government representation, religious services, private households employing staff and superannuation funds.

Business Operations Survey, 'example' firms and other sources

Business Operations Survey

The Business Operations Survey collects information on the operations of New Zealand businesses. This information is used to quantify business behaviour, capacity, and performance. The survey gives insights into business activities, barriers and motivations behind New Zealand business operations.

Data from the Business Operations Survey was used to calculate:

- barriers to innovation and exporting
- rates of innovation and R&D by sector
- the rate of outward direct investment and foreign direct investment by sector
- percentage of firms in a sector reporting overseas income

Size of business operations survey

The survey is run annually and typically information is collected from approximately 36,000 firms operating in New Zealand with six employees or more.

Customised data for the New Zealand Sectors Report

Data for the cross-cutting sectors, information and communications technology, high technology manufacturing, tourism, knowledge intensive services and some of the manufacturing sectors was provided by Statistics NZ as a custom job. This data may be below the level the survey is designed for and so should be treated with caution.

Detailed information on the Business Operations Survey is available from the www.stats.govt.nz

Example firms: sources and limitations

The example firms are sourced from the Kompass database (quoted with permission) Management Magazine's top 200 firms (2012) plus various websites, annual reports and the TIN 100 publication (2012).

Firms allocated to sectors in this report may not match firms included in official statistics. Statistics NZ does not release firm level data. In most cases numbers employed and turnover quoted for example firms are estimates.

MBIE welcomes corrections to the example firms' data.

Other sources

Other data sources, such as the Comtrade database, are noted on the page on which they occur.

Exports by sector limitations

This report attributes exports to sectors by mapping products and services to the sector most likely to produce them

Classifying exports by sector

Statistics on exports are collected according to product or service type and not according to the sector that generates the exports.

Statistics New Zealand collects goods trade statistics using the New Zealand Harmonised System Classification 2012 (NZHSC). This is based on the World Customs Organization's (WCO) Harmonized Commodity Description and Coding System (HS).

Firms are classified into sectors using the Australia and New Zealand Industrial Classification (ANZSIC) system.

To obtain insight into the export performance of sectors for this report, Statistics New Zealand prepared a concordance that maps HS codes (how goods exports are classified) to ANZSIC codes (how sectors are classified).

This concordance allocates exports to sectors based on the **type of product the sector is most likely to produce**. Hence logs and fruit are attributed to the agriculture, forestry & fishing sector, while sawn wood products are attributed to the wood & paper sector, and milk powder and frozen beef are attributed to food & beverage manufacturing.

Treat with caution

The export data for sectors provided in this report is believed to be broadly correct, but should be treated with caution. The method used means that some sectors which clearly do export, have no or few exports allocated.

The clearest example is the wholesaling sector. Many wholesalers operating in New Zealand export products on behalf of the producers of those products, or purchase and on-sell them overseas. These exports are attributed to the sector that manufactured, grew, harvested or mined them, rather than to the wholesaling sector. Experimental data from Statistics New Zealand indicates that the value of goods exports by wholesale trade firms was around \$8b in 2011.

Services exports

Statistics New Zealand publishes services exports data by service type as part of its balance of payments statistics every quarter. These are calculated using a variety of different surveys and administrative data sources.

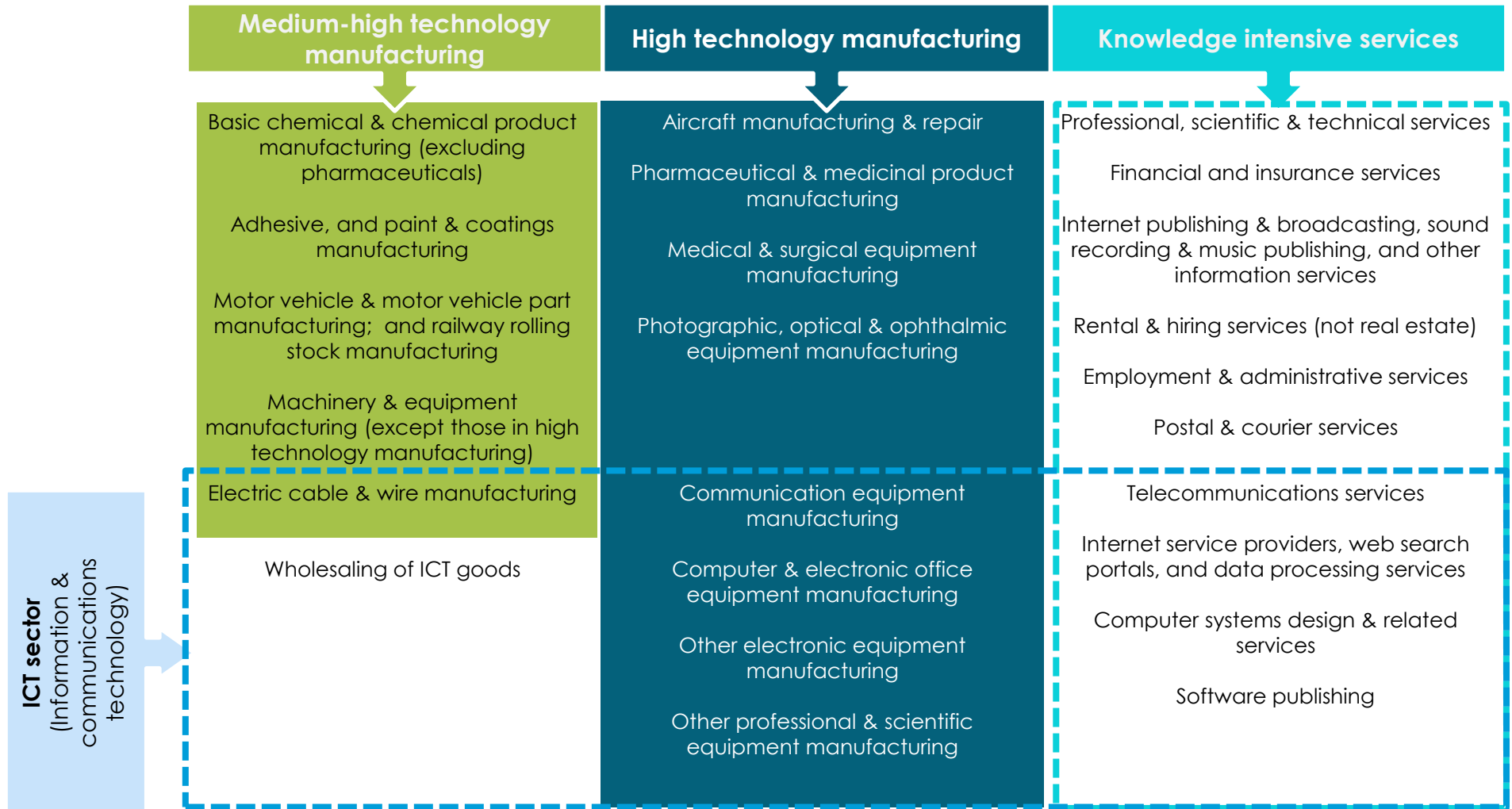
In this report, we have allocated exports of transportation, insurance and government services not included elsewhere to the logistics, finance & insurance, and government sectors respectively.

Commercial services by sector came from an industry breakdown from the Census of International Trade in Services and Royalties: Year ended June 2011 (not available for 2012).

There is no breakdown of travel exports by sector. Travel exports includes all spending on goods and services by non-resident visitors to New Zealand. It overlaps considerably with tourism exports (see below), but includes spending by international students here for more than a year as well as those here for up to a year (whereas tourism only includes those here for up to a year) and excludes tourists' international airfares (which are included in tourism, but are part of transportation exports in the Balance of Payments).

High level definitions: high and medium-high technology manufacturing*

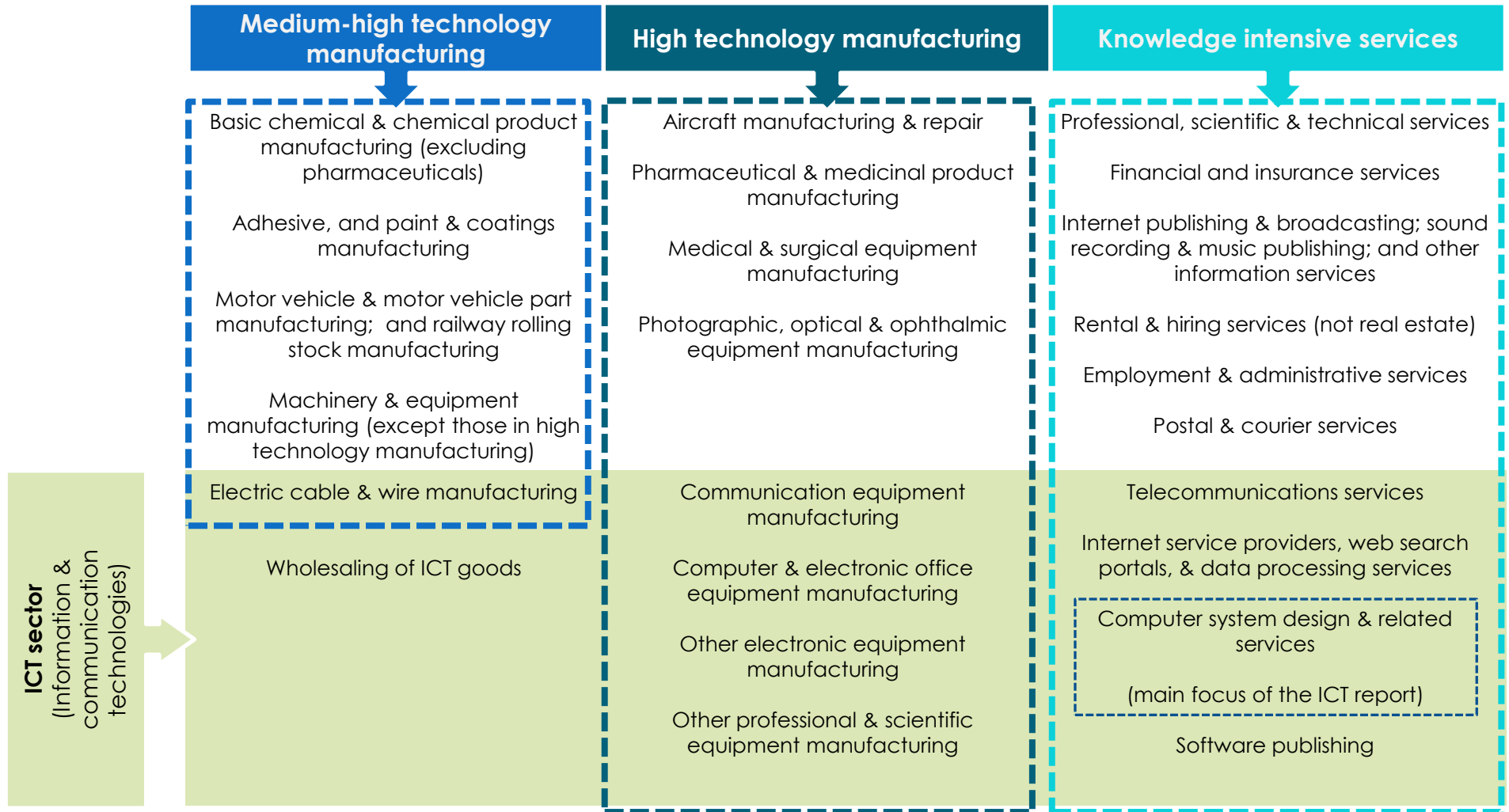
High technology manufacturing includes manufacturing industries that are also classified as part of the ICT sector



*The full definition of the high and medium-high technology manufacturing sectors is provided in the Appendix

OECD definition for ICT*

The ICT sector includes activities which are also classified as part of high technology manufacturing and knowledge intensive services



*The full definition of the ICT sector, including Australia and New Zealand Industrial Classification (ANZSIC) codes, is provided in the Appendix



FURTHER READING

Further reading: information on the New Zealand economy

Publication	Available from
The Regional Economic Activity Report 2013 The Regional Economic Activity Report presents available official economic data on New Zealand's 16 regions. The report, which will be annual, provides regional economic information sourced from a number of government agencies.	www.mbie.govt.nz
Regional Government Expenditure Report The Regional Government Expenditure Report provides the first ever snapshot and analysis of estimated central government spending for each region in New Zealand.	www.mbie.govt.nz
Situation and Outlook for Primary Industries (SOPI) 2013 Published annually, this report provides up-to-date information about the performance of New Zealand's primary sectors – dairy, meat and wool, forestry, horticulture, arable and, for the first time, seafood – and gives independent forecasts of future prospects.	www.mpi.govt.nz
The Food and Beverage Information Project reports The project pulls together all the available information on the food and beverage industry into one place, in a form which is familiar and useful to business. Over 20 reports are available on every aspect of New Zealand's food industry, including information on export market and investment opportunities. New and updated reports are released annually.	www.foodandbeverage.govt.nz
Tourism Satellite Account (2013). Published annually, the Tourism Satellite Account provides a picture of the role tourism plays in New Zealand, including the changing levels and impact of tourism activity, and the industry's contribution to the economy.	www.stats.govt.nz



Further reading: The Government's Business Growth Agenda reports

Publication	Available from:
<p>Building innovation The building innovation work stream of the Business Growth Agenda aims to grow New Zealand's economy by encouraging and enabling investment in research and development, and lifting the value of public investments in science and research.</p>	<p>www.mbie.govt.nz</p>
<p>Export markets The export markets work stream of the Business Growth Agenda aims to increase exports by New Zealand businesses, which is necessary to lift New Zealand's economic growth and living standards.</p>	<p>www.mbie.govt.nz</p>
<p>Building infrastructure The building infrastructure work stream of the Business Growth Agenda aims to provide the physical platform that will support sustained economic growth.</p>	<p>www.mbie.govt.nz</p>
<p>Natural resources The building natural resources work stream of the Business Growth Agenda aims to make better use of New Zealand's abundant natural resources, so we can continue to grow our economy and look after our environment.</p>	<p>www.mbie.govt.nz</p>
<p>Skilled and safe workplaces The skilled and safe workplaces work stream of the Business Growth Agenda aims to improve the safety of the workforce and build sustained economic growth through a skilled and responsive labour market.</p>	<p>www.mbie.govt.nz</p>
<p>Building capital markets The building capital markets work stream of the Business Growth Agenda aims to ensure New Zealand has high performing capital markets that support investment, growth and jobs.</p>	<p>www.mbie.govt.nz</p>
<p>Business Growth Agenda Progress Report 2013 The Business Growth Agenda Progress Report 2013 shows the significant progress the Government has made across each of the six areas that are critical to business success and growth: Export Markets, Capital Markets, Innovation, Skilled and Safe Workplaces, Natural Resources and Infrastructure.</p>	<p>www.mbie.govt.nz</p>

The Ministry of Business, Innovation & Employment (MBIE) welcomes comment and feedback on this report, and on the measures the Government is taking to facilitate the development of a competitive and successful economy.
Email sectors.reports@mbie.govt.nz

