Manufacturing Sector Report – Key Facts and Findings

Manufacturing is any process that changes raw materials, substances or components into new products. **For this report it is divided into 7 subsectors**

The manufacturing sector is a vital part of the NZ economy. It is highly diverse – almost everything we eat, wear or touch is manufactured. Manufacturing is important because:

- It is one of the main ways that we add value to our primary products, potentially allowing more productive land use.
- Many of our service industries exist to service the manufacturing sector.
- The manufacturing sector is highly export intensive and accounts for over half of NZ's total exports.

Subsector	% of total manufacturing
Food & beverage	32%
Machinery & equipment	17%
Other manufacturing	14%
Chemicals & refining	12%
Metals	11%
Wood & paper	9%
Plastics & rubber	5%

Total Manufacturing	Today (2017)	Change in 10 years	Change in 5 years
GDP Value	$23 billion (12% of total)	$-0.8 billion (-3%)	+$1.8 billion (+8%)
Number of firms	21,366 (4% of total)	-1,098 (-5%)	+603 (+3%)
Number of employees	241,100 (11% of total)	-16,200 (-6%)	+17,300 (+8%)
Exports	$36 billion (52% of total)	+$8.9 billion (+32%)	+$1.9 billion (+6%)
Revenue	$102 billion (2016)	-	+$5.4 bilion (+6%)
Manufacturing wages	$63,228 (2016)	-	+$8,215 (+15%)
R&D expenditure	$671 million (2016)	+$229 million (+52%) (8 yr change)	-

KEY TRENDS

NZ manufacturing is moving beyond commodities into **value-added products**, which are differentiated through innovation, quality, brand, service and more. These products may offer higher returns and efficiencies for NZ firms. However this shift takes time, as skillsets, capabilities, and institutions must be established or adapt. We've seen a trend of long gestation periods followed by rapid growth across many industries including:

- Medical equipment
- Pharmaceuticals
- Agritech machinery
- Infant formula
- Cosmetics and essential oils
- Chocolate

New technologies mean that the future of manufacturing is increasingly digitised, automated, interconnected and intelligent – a shift to **Industry 4.0**.

This trend will impact on the entire nature of the business. Firms that adopt these new innovations will experience increased productivity and require higher-skilled staff to operate more complex systems. It will make short-run production (that NZ specialises in) more profitable, but also more feasible for large scale firms; potentially increasing competition in this space.

Servicification - Manufacturing and services are becoming closely interwoven. Manufacturers are using more services at every stage of production and also providing more services to enhance their product offering.

Changing global market dynamics (e.g. globalisation) are driving development and change. This has resulted in **increased competition** for local firms and in **outsourcing** of much manufacturing.

It has also increased opportunities for local firms to target valuable niches in **global production networks**.

CHALLENGES

Manufacturers are hindered by NZ's **small domestic market** and **geographic isolation**.

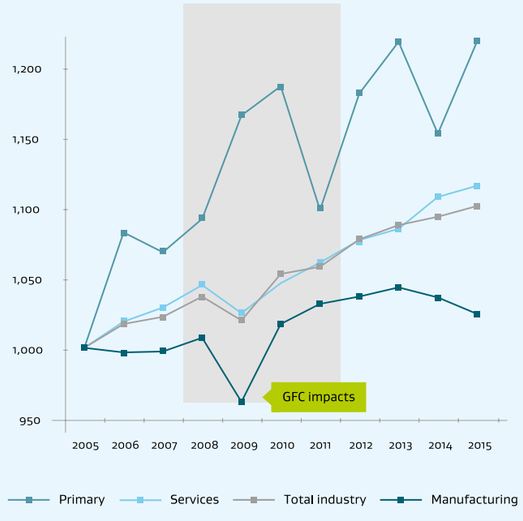
These factors limit the sector's ability to grow and maintain international competitiveness.

The manufacturing sector has experienced average **labour productivity growth** of only 0.2%, below NZ's (already low) average of 1%.

Key causes may be:

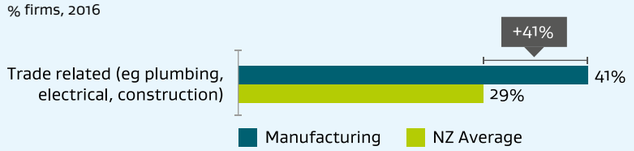
- Small market and isolation
- Capital shallow economy
- Lack of investment
- Lack of technology diffusion

Labour productivity by major sector
Productivity, 2005–2015



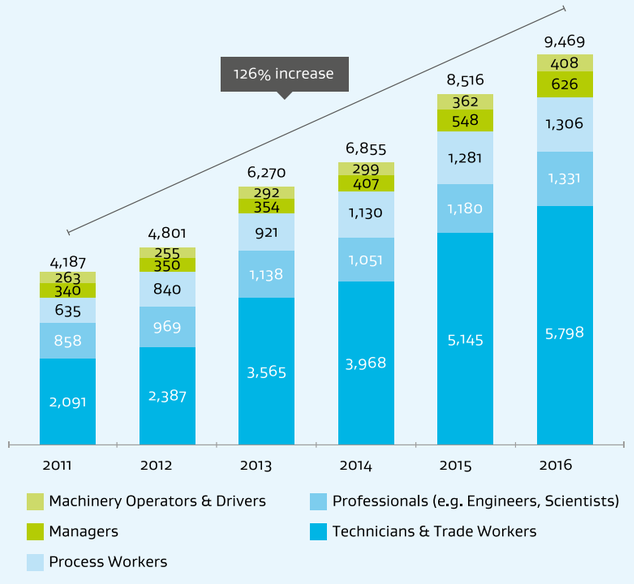
Manufacturers struggle to find skilled tradespeople

Vacancies by hard to find skills
% firms, 2016



So they are increasingly turning to overseas talent

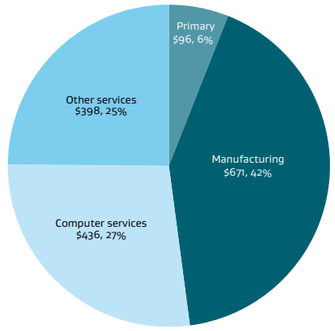
Work visas approved for manufacturing related occupations
Number of approved work visas, 2011–2016



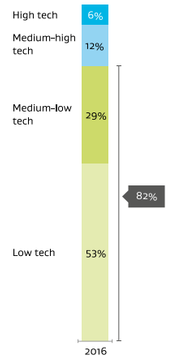
IMPORTANCE OF MANUFACTURING

Manufacturing is a significant investor in **R&D**, making up 42% of business expenditure on R&D. However, NZ's manufacturing sector is relatively heavily weighted towards low and medium-low tech manufacturing, which (by definition) invests less in R&D, but may generate demand for R&D from high-tech firms.

Business expenditure on R&D by major sector
NZ$ millions; % BERD, 2016

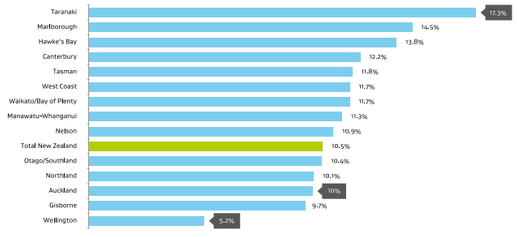


Share of manufacturing GDP by tech level
% manufacturing GDP, 2016



Manufacturing is key for NZ's **regional economies**. Though Auckland has the absolute largest manufacturing activity, manufacturing makes up a higher proportion of employment in smaller regions.

Manufacturing employment as a % of total employment by region
% employment, 2017



Employment by region for manufacturing sector in 2017

Employment compound annual growth rate (2007–2017)