## SECTOR PROFILE

# F&B Full Sector: Auckland



Infometrics

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### **AUCKLAND'S F&B FULL SECTOR SECTOR AT A GLANCE**

This report provides key information about the F&B Full Sector sector in Auckland. The F&B Full Sector sector has been defined by Auckland Council using detailed industry and occupational classifications. The approach used to define the F&B Full Sector sector is provided at the end of this report.

The information in this report is for the F&B Full Sector in Auckland and compares it against employment in the Auckland (total economy).

## **Employment and economic trends**

There were 28,103 people employed in the f&b full sector sector in 2015. This equates to 3.6% of the total workforce in Auckland.

Since 2000, employment growth in the f&b full sector sector has averaged 1.9%pa, compared to growth in the total economy of 2.1%pa. Employment growth in the f&b full sector sector in the five years to 2015 of 2.1%pa was weaker than employment growth in the total economy (2.2%pa).

In the five years to 2020 employment in the f&b full sector sector is expected to grow by an average of 1.2%pa compared to growth in the total economy of 2.3%pa. Over this period, employment in the sector is expected to peak at 29,884 in 2020.

In 2015, 7.9% of the sector was self-employed. This is lower than the total economy's self-employment rate of 16.6%. Over the past five years the self-employment rate in the f&b full sector sector increased while the overall total economy self-employment rate declined.

There were 2,637 business units in the f&b full sector sector in 2015, up from 2,182 five years earlier, an average increase of 3.9%pa. Business unit growth over this period was higher than in the total economy (2.0%pa).

The f&b full sector sector contributed \$3,245 million (in 2010 prices) to Auckland's gross domestic product (GDP) in 2015. This equates to 4.0% of total GDP. In the five years to 2015 GDP in the f&b full sector sector increased by 2.3%pa compared with growth of 3.3%pa in the total economy.

In 2015 GDP per FTE (commonly used as a proxy measure of labour productivity) in the f&b full sector sector was higher than labour productivity in the total economy. Labour productivity in the sector has grown at a slower rate than labour productivity in the total economy since 2010.

Table 1: Summary employment and economic indicators

		F&B Full Secto	r Total Auckland
	2015	28,103	787,506
Filled Jobs	% growth pa 2010-2015	2.1%	2.2%
	% growth pa 2015-2020	1.2%	2.3%
Self-employment rate	2015	7.9%	16.6%
Sell-employment rate	% point growth 2010-2015	0.5	-0.2
Business units	2015	2,637	177,267
Business units	% growth pa 2010-2015	3.9%	2.0%
GDP	2015	\$3,245m	\$80,669m
GDF	% growth pa 2010-2015	2.3%	3.3%
Labour Productivity	2015	\$124,052	\$114,528
Labour Froductivity	% growth pa 2010-2015	-0.2%	0.6%



## **Demographic characteristics**

People in the f&b full sector sector are, compared to people in the total economy:

- Less likely to be female.
- · Less likely to be young.
- · Less likely to identify as Maori.
- · Less likely to identify as Pasifika.
- Less likely to work fewer hours and less likely to work longer hours.
- · Less likely to have higher qualifications.

Table 2: Summary demographic trends

	F&B Full Sector :	F&B Full Sector sector		kland
	2006	2013	2006	2013
% aged 15-24 years	15.1%	13.5%	15.1%	13.5%
% aged 25-54 years	73.5%	71.2%	73.5%	71.2%
% aged 55 years +	11.4%	15.2%	11.4%	15.2%
% female	43.7%	43.4%	46.9%	47.6%
% Maori	11.0%	9.0%	8.6%	8.1%
% Pasifika	20.1%	19.2%	9.0%	9.2%
% working less than 30 hours per week (in all jobs)	12.3%	13.6%	12.3%	13.6%
% working 50 hours or more per week (in all jobs)	21.3%	17.8%	21.3%	17.8%
% with no qualification	21.8%	17.9%	13.3%	9.9%
% with no post-school qualification	56.6%	53.2%	44.2%	39.2%
% with a level 4 or more post school qualification	32.1%	36.5%	32.1%	36.5%

## **Earnings**

Annual average earnings in the f&b full sector sector in 2015 was \$56,827, lower than average earnings in the total economy of \$60,980. Annual average earnings in the f&b full sector sector grew at a slower rate than the total economy over the past decade.

Table 3: Average earnings in the F&B Full Sector sector

Average earnings	F&B Full Sector sector	Total Auckland
2015	\$56,827	\$60,980
% growth pa 2005-2015	3.3%	3.3%



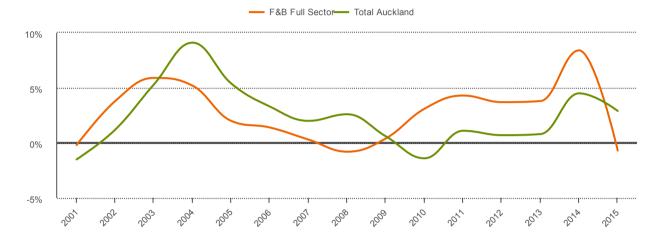
### **BUSINESS UNITS IN THE SECTOR**

## **Business growth**

The number of businesses in a sector is an indicator of the health of the economy. For example, positive growth in the number of businesses in an area reflects increased entrepreneurial activity and economic activity as entrepreneurs are prepared to take risks and start new ventures.

There were 2,637 business units in the f&b full sector sector in 2015. Growth in business unit in the sector over the five years to 2015 has been greater than growth in business units in the total economy.

#### Figure 1:



## **Businesses by region**

The number of business units in a sector can vary from region to region. This variation is largely driven by each region's direct economic exposure and resources available. As well as being a contributor to the economic performance of a region, the size of business units is also considered to be an indicator of innovation with larger firms have the capacity and structures to support innovation.

The Auckland region that had the largest number of business units in the f&b full sector sector in 2015, with 2,637 business units or 40% of all business units in the sector. The Auckland region accounted for 33% of all businesses in the total economy in 2015. This indicates that business units in the f&b full sector sector make up a relatively larger share of all businesses in the Auckland region compared to other areas.

Other regions that accounted for a large proportion of employment in the f&b full sector sector in 2015 include Canterbury, with 824 business units or 12% of all business units in the sector, and Waikato, with 529 business units or 8.0% of all businesses units in the sector.



Table 7: Business units by region in 2015

A 11-2	F&B Full S	Sector	Total Auckla	ınd
Area	Level	% of NZ	Level	% of NZ
Northland Region	144	2.2%	20,118	3.7%
Auckland	2,637	40%	177,267	33%
Waikato Region	529	8.0%	53,187	9.9%
Bay of Plenty Region	314	4.7%	34,209	6.4%
Gisborne Region	84	1.3%	4,995	0.9%
Hawke's Bay Region	315	4.8%	18,237	3.4%
Taranaki Region	127	1.9%	15,153	2.8%
Manawatu-Wanganui Region	240	3.6%	25,449	4.7%
Wellington Region	490	7.4%	53,892	10%
Tasman Region	109	1.6%	6,663	1.2%
Nelson Region	116	1.8%	5,952	1.1%
Marlborough Region	206	3.1%	6,978	1.3%
West Coast Region	44	0.7%	3,858	0.7%
Canterbury Region	824	12%	69,690	13%
Otago Region	318	4.8%	27,621	5.1%
Southland Region	122	1.8%	13,950	2.6%
New Zealand	6,619	100%	537,219	100%

### **Business size**

The majority of businesses in New Zealand are small to medium enterprises (SMEs). The number and size of business units in a sector is largely influenced by both the sector's direct economic exposure as well as the typical size of business units within that sector. As well as being a contributor to the economic performance of a sector, the size of business units is also considered to be an indicator of innovation with large firms having the capacity and structures to support innovation.

On average business units in the f&b full sector sector have a larger number of employees than in the total economy. The average size of employees per business unit in the f&b full sector sector declined from 11.6 employees per business unit in 2010 to 10.7 employees per business unit in 2015. Over the same period the average employees per business unit in the total economy increased from 4.4 to 4.4.

In 2015, 18.6% of business units in the sector had 10 or more employees compared to 7.4% of businesses in the total economy.

Table 8: Business units by number of employees in 2015

Size	F&B Full Sector	F&B Full Sector				
	Business unit count	% of total	% of total			
0	1,190	45.1%	69.8%			
1 to 5	765	29.0%	18.3%			
6 to 9	192	7.3%	4.5%			
10 to 19	198	7.5%	3.8%			
20 to 49	178	6.8%	2.3%			
50 to 99	63	2.4%	0.8%			
100 and over	51	1.9%	0.5%			
Total	2,637	100%	100%			



### **ECONOMIC CONTRIBUTION OF THE SECTOR**

### **Gross Domestic Product**

Gross Domestic Product (GDP) is a fundamental indicator of a country or sector's economic wellbeing. GDP measures the value added in an industry or sector from the production of goods and services. It essentially measures the value of the land, labour, and capital used in the production process.

The f&b full sector sector contributed \$3,245 million to the Auckland economy in 2015 (measured in 2010 prices). This equates to 4.0% of overall GDP in 2015.

Over the five year to 2015 GDP in the sector grew by 2.3%pa compared to 3.3%pa in the economy as a whole. In the two years to 2015 GDP growth in the f&b full sector sector was slower than GDP growth in the overall economy.

Table 11: GDP in the f&b full sector sector

	F&B Full Sector		Total Auckland	
Year	Level	% Change	Level	% Change
2000	\$2,188m		\$51,457m	
2001	\$2,295m	4.9%	\$53,132m	3.3%
2002	\$2,370m	3.2%	\$55,531m	4.5%
2003	\$2,592m	9.4%	\$58,693m	5.7%
2004	\$2,678m	3.3%	\$61,559m	4.9%
2005	\$2,813m	5.0%	\$64,488m	4.8%
2006	\$2,874m	2.2%	\$66,816m	3.6%
2007	\$2,879m	0.2%	\$68,896m	3.1%
2008	\$2,925m	1.6%	\$71,095m	3.2%
2009	\$2,864m	-2.1%	\$69,228m	-2.6%
2010	\$2,898m	1.2%	\$68,574m	-0.9%
2011	\$2,891m	-0.2%	\$70,745m	3.2%
2012	\$3,031m	4.8%	\$73,734m	4.2%
2013	\$3,188m	5.2%	\$75,641m	2.6%
2014	\$3,245m	1.8%	\$77,935m	3.0%
2015	\$3,245m	0.0%	\$80,669m	3.5%

## **Labour productivity**

Labour productivity is a measure of the efficiency of the labour force. Growth in labour productivity implies an increase in the efficiency and competitiveness.

Labour productivity can be difficult to measure, but a commonly used proxy for labour productivity is GDP per FTE. This shows the value add that an average FTE generates.

In 2015, GDP per FTE was \$124,052 (measured in 2010 prices) in the f&b full sector sector. This is higher than GDP per FTE in the total economy (\$114,528).

In the five years to 2015 GDP per FTE grew by -0.2%pa in the f&b full sector sector. This was lower than growth in GDP per FTE in the total economy of 0.6%pa over the same period.

Table 12: GDP per FTE

	F&B Full Sec	tor	Total Auckland	
Year	Level	% Change	Level	% Change
2000	\$114,641		\$103,117	_
2001	\$118,013	2.9%	\$103,866	0.7%
2002	\$117,982	0.0%	\$105,681	1.7%
2003	\$126,076	6.9%	\$107,183	1.4%
2004	\$127,768	1.3%	\$107,657	0.4%
2005	\$129,122	1.1%	\$109,206	1.4%
2006	\$130,766	1.3%	\$109,699	0.5%
2007	\$129,551	-0.9%	\$109,949	0.2%
2008	\$130,865	1.0%	\$111,079	1.0%
2009	\$126,123	-3.6%	\$108,068	-2.7%
2010	\$125,565	-0.4%	\$111,003	2.7%
2011	\$123,769	-1.4%	\$112,112	1.0%
2012	\$125,785	1.6%	\$113,262	1.0%
2013	\$128,473	2.1%	\$113,871	0.5%
2014	\$127,313	-0.9%	\$114,405	0.5%
2015	\$124,052	-2.6%	\$114,528	0.1%

### **DEMOGRAPHIC PROFILE OF WORKERS**

Understanding the demographic composition of people in a sector can provide useful insights into the economic performance of the sector and help identify areas for improvement. It can also be useful in terms of tailoring training packages to suit specific needs. This section looks at the demographic makeup of the F&B Full Sector sector.

### Age

The age profile of a sector can provide valuable insights into the current and future skill needs of a sector. For example, a sector with an older age profile can indicate that the workforce is more likely to have fewer formal qualifications and more on-job experience than a more youthful age profile. An older age profile can also indicate a more immediate need to replace workers who may retire or are more likely to leave the workforce in the coming years.

The f&b full sector sector has a similar age profile compared to the total economy. The average of the people in the sector in 2015 was 0.0 years compared to 0.0 years in the total economy.

Table 13: Employment by age

		F&B Full		Total Auckland			
Age	Employr	ment	% of to	tal	% of total		
	2006	2013	2006	2013	2006	2013	
15-19 Years	1,420	1,094	5.9%	4.0%	5.9%	3.9%	
20-24 Years	2,230	2,560	9.2%	9.5%	9.8%	9.6%	
25-29 Years	2,637	2,945	10.9%	10.9%	10.3%	10.6%	
30-34 Years	3,276	3,230	13.5%	12.0%	11.8%	10.8%	
35-39 Years	3,455	3,191	14.3%	11.8%	12.6%	10.7%	
40-44 Years	3,508	3,517	14.5%	13.0%	13.0%	12.2%	
45-49 Years	2,790	3,528	11.5%	13.1%	11.7%	12.0%	
50-54 Years	2,141	2,828	8.8%	10.5%	9.5%	10.9%	
55-59 Years	1,538	2,036	6.4%	7.5%	7.9%	8.4%	
60-64 Years	801	1,303	3.3%	4.8%	4.7%	6.2%	
65 years and over	417	775	1.7%	2.9%	2.9%	4.8%	
Total	24,213	27,005	100%	100%	100%	100%	
Average Age	39.0	40.8			40.2	41.9	

### Gender

There were fewer female than male workers in the f&b full sector sector in 2015. Females accounted for 44.1% of employment in the sector (47.5% of the total economy). The share of female workers remained relatively unchanged between 2006 and 2013. Over the same period the share of females in the total economy increased from 46.2% to 47.5%.



Table 14: Employment by gender

Gender								Emplo	yment				
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Male	11,913	12,041	12,332	12,553	12,710	13,566	13,640	13,536	13,534	13,685	14,155	14,177	14,776
Female	9,259	9,476	9,840	10,054	10,368	10,514	10,573	10,788	10,896	11,193	11,231	11,299	11,477
Total	21,172	21,517	22,173	22,607	23,078	24,081	24,213	24,324	24,430	24,878	25,387	25,476	26,254

## **Ethnicity**

Understanding the ethnic composition of a workforce can be important in terms of improving innovation and productivity levels. Different ethnic groups can bring diverse perspectives to employment, which when supported, can help support innovation. Similarly, workers from different ethnicities may require different types of in-work support to achieve their productive potential.

The majority (0.0%) of people in the f&b full sector sector in 2015 identified as European. This was also the case with the total economy (0.0%).

People identifying as Maori in the f&b full sector sector accounted for 0.0% of the sector in 2015 (0.0% in 2001). This compares to 0.0% of people in the total economy in 2015 (0.0% in 2001).

Pacific Peoples made up 0.0% of all people in the f&b full sector sector in 2015 (0.0% in 2001). Pacific Peoples accounted for 0.0% of all people employed in 2015 (0.0% in 2001).

Table 15: Employment by ethnicity

		ector		Total Auck	land	
Ethnicity	Employm	ent	% of tot	al	% of total	al
	2006	2013	2006	2013	2006	2013
European	11,385	13,077	47.0%	48.4%	62.2%	65.6%
Maori	2,653	2,427	11.0%	9.0%	8.6%	8.1%
Pasifika	4,871	5,195	20.1%	19.2%	9.0%	9.2%
Asian	4,817	7,364	19.9%	27.3%	15.9%	21.2%
Other	2,337	704	9.7%	2.6%	11.8%	3.2%
Total	24,213	27,005	108%	107%	108%	107%

## Highest qualification (school and post-school)

Higher educational attainment, in terms of forward recognised qualifications, is associated with a range of positive outcomes, including better income and workplace productivity.

In 2015, 0.0% of the people in the f&b full sector sector had no qualification (0.0% in 2001). This was lower than the total economy (0.0% in 2015 and 0.0% in 2001).

In 2015, 0.0% percent of people in the f&b full sector sector had a level 4 qualification or higher compared to 0.0% percent of people in the total economy.



Table 16: Employment by highest qualification

	F&B Full Sector					ckland
Highest Qualification	Employ	/ment	% of t	otal	% of t	otal
	2006	2013	2006	2013	2006	2013
No Qualification	5,289	4,833	21.8%	17.9%	13.3%	9.9%
Level 1 Certificate Gained at School	2,939	2,730	12.1%	10.1%	11.1%	8.9%
Level 2 Certificate Gained at School	2,210	2,386	9.1%	8.8%	9.3%	8.8%
Level 3 or 4 Certificate Gained at School	1,338	2,075	5.5%	7.7%	6.4%	8.0%
Overseas Secondary School Qualification	2,693	3,348	11.1%	12.4%	7.5%	8.4%
Level 1, 2 or 3 Certificate Gained Post-school	915	797	3.8%	3.0%	4.4%	3.2%
Level 4 Certificate Gained Post-school	1,658	1,898	6.8%	7.0%	9.9%	9.2%
Level 5 Diploma	866	1,254	3.6%	4.6%	4.9%	5.5%
Level 6 Diploma	711	750	2.9%	2.8%	5.9%	5.0%
Bachelor Degree or Higher	4,536	5,971	18.7%	22.1%	24.5%	30.7%
Not Elsewhere Included	1,058	964	4.4%	3.6%	2.6%	2.5%
Total	24,213	27,005	100%	100%	100%	100%

## Highest qualification (post-school only)

The context of where a qualification is gained can be extremely useful in terms of understanding how qualifications were gained and where potential skills gaps are. For example, qualifications gained at school and post-school are often taught in very different contexts and teach different things.

Of people in the sector, 0.0% had no post-school qualification in 2015 (0.0% of the total economy). This is down from 0.0% of the sector in 2001 (0.0% of the total economy).

Table 17: Employment by highest post-school qualification

	F&B Full Sector				Total Au	Total Auckland	
Highest post-school qualification	Employment		% of total		% of total		
	2006	2013	2006	2013	2006	2013	
No Post-school Qualification	13,705	14,360	56.6%	53.2%	44.2%	39.2%	
Level 1, 2 or 3 Certificate	917	784	3.8%	2.9%	4.4%	3.1%	
Level 4 Certificate	1,662	1,897	6.9%	7.0%	9.9%	9.2%	
Level 5 Diploma	839	1,221	3.5%	4.5%	4.9%	5.5%	
Level 6 Diploma	719	758	3.0%	2.8%	5.9%	5.0%	
Bachelor Degree and Level 7 Qualification	3,548	4,512	14.7%	16.7%	17.4%	21.0%	
Post-graduate and Honours Degrees and above	999	1,471	4.1%	5.4%	7.1%	9.7%	
Not Elsewhere Included	1,824	2,001	7.5%	7.4%	6.1%	7.2%	
Total	24,213	27,005	100%	100%	100%	100%	

### **Hours worked**

The number of hours worked in a sector can be an indicator of worker attachment to the sector. Hours worked in a sector can provide an indication of how much employers could meet growth by utilising their existing workforce without taking on additional labour.

Understanding the number of hours worked in a sector can also highlight how likely people in employment are likely to undertake training. The higher number of hours worked in a sector, the less likely people are to undertake training, particularly through a provider.

Hours worked data of people in the f&b full sector can be presented in terms of total hours worked (main job and other jobs) and hours worked in main job.

People working in the f&b full sector sector, like people in the total economy, typically work 40-49 hours in total per week (0.0% and 0.0% respectively in 2015). People in the sector are less likely to work a total of less than 30 hours a week (0.0%) than the people in the total economy (0.0%). People in the sector are less likely to work a total of 50 hours or more a week (0.0%) than the people in the total economy (0.0%).

Table 18: Employment by hours worked in all jobs

		F&B F	Total A	Total Auckland				
Hours worked	worked Employment		% of	total	% of	% of total		
	2006	2013	2006	2013	2006	2013		
1-9 Hours Worked	941	962	3.9%	3.6%	4.4%	4.7%		
10-19 Hours Worked	913	1,204	3.8%	4.5%	6.5%	6.3%		
20-29 Hours Worked	1,115	1,502	4.6%	5.6%	7.7%	8.4%		
30-39 Hours Worked	1,602	2,428	6.6%	9.0%	11.1%	13.0%		
40-49 Hours Worked	13,255	15,276	54.7%	56.6%	45.0%	47.8%		
50-59 Hours Worked	3,294	3,249	13.6%	12.0%	12.4%	11.2%		
60 Hours or More Worked	1,864	1,555	7.7%	5.8%	8.2%	6.6%		
Not Elsewhere Included	1,228	828	5.1%	3.1%	4.6%	2.1%		
Total	24,213	27,005	100%	100%	100%	100%		

People in the f&b full sector sector are less likely to work less than 30 hours a week in their main job than people in the total economy. People in the sector are less likely to work more than 50 hours a week in their main job than people in the total economy.

Table 19: Employment by hours worked in main job

	F&B Full Sector				Total Auckland	
Hours worked in main job	Employment		% of total		% of total	
	2006	2013	2006	2013	2006	2013
1-9 Hours Worked	1,029	1,001	4.2%	3.7%	5.1%	5.1%
10-19 Hours Worked	990	1,261	4.1%	4.7%	7.1%	6.7%
20-29 Hours Worked	1,179	1,525	4.9%	5.6%	8.1%	8.8%
30-39 Hours Worked	1,644	2,513	6.8%	9.3%	11.6%	13.2%
40-49 Hours Worked	13,782	15,486	56.9%	57.3%	46.9%	48.5%
50-59 Hours Worked	3,232	3,119	13.3%	11.6%	12.0%	10.5%
60 Hours or More Worked	1,571	1,272	6.5%	4.7%	6.8%	5.1%
Not Elsewhere Included	787	827	3.2%	3.1%	2.4%	2.1%
Total	24,213	27,005	100%	100%	100%	100%

### **Country of birth**

Migrant workers can bring valuable skills and experience to a sector. Migrant workers, however, may also require higher levels of support in the workplace, such as literacy training and cultural integration, to help improve areas such as productivity, feeling of self-worth and belonging, which in turn has an impact on the probability of migrants remaining in the sector. The migrant profile of the workforce is therefore important to consider.

People in the f&b full sector sector, like the total economy are predominantly born in New Zealand. The second most common broad country of birth of people in the f&b full sector sector in 2015 was New Zealand with 0.0% of workers (0.0% in the total economy). The third most common broad country of birth of people in the sector in 2015 was Rest of Oceania with 0.0% of workers (0.0% in the total economy).

Between 2013 and 2015, the share of people in the f&b full sector sector born in New Zealand declined by 48.2% (56.7% in the total economy). Over the same period employment of people in the sector born in North Africa and the Middle East grew by -0.6% (-0.7% in the total economy).

Table 20: Country of birth

	F&B Full Sector				Total Auckland		
Country of birth	Employ	Employment		% of total		% of total	
	2006	2013	2006	2013	2006	2013	
Australia	349	329	1.4%	1.2%	1.8%	1.6%	
New Zealand	13,099	13,017	54.1%	48.2%	61.7%	56.7%	
Rest of Oceania	4,047	4,418	16.7%	16.4%	7.5%	7.8%	
Europe	1,806	1,800	7.5%	6.7%	11.0%	10.8%	
Asia	3,749	5,950	15.5%	22.0%	12.1%	16.2%	
Northern America	120	185	0.5%	0.7%	0.9%	1.0%	
North Africa and the Middle East	126	149	0.5%	0.6%	0.6%	0.7%	
Sub-Saharan Africa	613	787	2.5%	2.9%	3.4%	4.0%	
Other	104	153	0.4%	0.6%	0.3%	0.5%	
Not Elsewhere Included	199	217	0.8%	0.8%	0.6%	0.8%	
Total	24,213	27,005	100%	100%	100%	100%	

## **DEFINING THE SECTOR**

This profile uses industry classifications to define the F&B Full Sector sector.

For information about the classifications used in defining the f&b full sector sector, please contact Auckland Council.

### **TECHNICAL NOTES**

#### **Employment**

Industry employment numbers are from Infometrics' Regional Industry Occupation Employment Model (RIOEM). The model draws heavily on quarterly and annual Linked Employer Employee Data (LEED) published by Statistics New Zealand. RIEM differs from data from Business Demography in that it is a quarterly series (BD is annual) and it includes both employees and self-employed, whereas BD only includes employees.

Employment is measured as an average of the four quarters making up each year. The unit of measurement is filled jobs.

#### **Demographics**

The demographic characteristics of employees in each sector are sourced from the 2013 and 2006 Population Censuses.

Employment in each sector is defined in terms of both industry and occupations using an industry-occupation employment matrix. After defining the sector on the matrix we sum employment across all occupations in each industry to arrive at employment by 500 industries. We measure the demographic characteristics of employees in these industries using data from the 2006 and 2013 Population Census and aggregate across industries to arrive at an estimate for the sector as a whole.

#### Occupation

Occupation employment numbers are from Infometrics' Regional Industry Occupation Employment Model (RIOEM). Employment in each industry is converted to occupational employment using the relationship between industry and occupational employment observed in various Population Censuses. The Population Census measures the occupational composition of employment in each industry and how this changes over time. Occupations conform to the categories used in the Australian New Zealand Standard Classification of Occupations (ANZSCO).

#### **GDP**

In this profile Gross Domestic Product for each sector is estimated by Infometrics. A top down approach breaks national production-based GDP, published by Statistics New Zealand at 32 industries, down to 54 industries using nominal GDP data published in the national accounts and further to 500 industries using earnings and employment data from LEED. GDP is measured in constant 2010 prices.



#### **Business units**

Data on the number of businesses is sourced from the Business Demography statistics from Statistics New Zealand. Data published by Statistics New Zealand is confidentialised. Infometrics use a Bayesian imputation method to estimate values for confidentialised cells. Businesses are measured by geographic units, which represent a business location engaged in one, or predominantly one, kind of economic activity at a single physical site or base (eg. a factory, a farm, a shop, an office, etc). All non-trading or dormant enterprises, as well as enterprises outside of New Zealand, are excluded from business demography statistics.

A significant number of enterprises are recorded as having zero employment. Enterprises in the zero employee count size category may have:

- working owners who don't draw a wage from their business
- labour provided by other businesses or contractors
- business activity that requires no labour (eg. holding company).

Only business units that are economically significant enterprises are included. To be regarded as economically significant they must meet at least one of the following criteria:

- annual expenses or sales subject to GST of more than \$30,000
- 12-month rolling mean employee count of greater than three
- part of a group of enterprises
- registered for GST and involved in agriculture or forestry
- over \$40,000 of income recorded in the IR10 annual tax return (this includes some units in residential property leasing and rental).

#### Industrial classification

This profile uses industry categories from the 2006 Australia New Zealand Standard Industrial Classification (ANZSIC). The ANZSIC is a hierarchical classification with four levels, namely divisions (the broadest level also referred to as 1-digit categories), subdivisions (3-digit), groups (4-digit) and classes (7-digit). There are approximately 500 7-digit industries.

This profile also uses a grouping of 54 industries. These are the industries used by Statistics New Zealand in the national accounts.



#### Broad skill levels

Highly skilled occupations typically require a bachelor degree or higher qualification and include professionals such as accountants, teachers, and engineers, as well as most managers such as chief executives. This category is consistent with skill level one of the Australia New Zealand Standard Classification of Occupations (ANZSCO).

Medium-high skilled occupations typically require an NZ Register Diploma, an Associate Degree or Advanced Diploma. The category includes some managers (such as retail managers) and technicians (such as architectural draftspersons, ICT support technicians and dental hygienists). This category is consistent with skill level two of the ANZSCO classification.

Medium skilled occupations typically require an NZ Register Level 4 qualification. The category includes tradespersons (such as motor mechanics), skilled service workers (such as firefighters), as well as skilled clerical and sales workers (such as legal secretaries and estate agents). This category is consistent with skill level three of the ANZSCO classification.

Low skilled occupations typically require an NZ Register Level 3 qualification or lower. It includes a range of lower skilled occupations from general clerks, caregivers, and sales assistants, through to cleaners and labourers. This category is consistent with skill level three and four of the ANZSCO classification.

#### **Earnings**

Earnings data are from the quarterly Linked Employer Employee Data published by Statistics New Zealand. LEED publishes the mean earnings of full quarter jobs for each quarter. We sum the mean earnings for the four quarters making up the year to arrive at an estimate of average annual earnings.

#### **Prices**

In this profile, we present all GDP estimates in constant 2010 prices. GDP presented in constant prices is sometimes referred to as real GDP. By using constant prices we remove the distractionary effect of inflation. It enables us to meaningfully compare GDP from one year to the next.

#### Business unit births and deaths

Business birth and death data in this profile are at the geographic unit level. Data is presented on an annual basis (start of March to the end of February). For a birth or death to be counted in the period, it must have occurred at some stage during the year and not have changed status by the end of the period. For example, a business that ceased operation at some stage during the year, and the recommenced operation before February, will not be counted as a death.



#### **Employment Forecasts**

The employment forecasts in this profile have been generated from the Infometrics Industry Model. This model produces forecasts of employment for 54 industries using a mix of principal component and regression techniques to link macroeconomic key indicators (e.g., inflation, interest rates, unemployment, the exchange rate, business profitability etc.) to prospects for each industry. A key aspect of this approach is that it produces an outlook for an industry that takes into account the recent performance of that industry, the impact of key influences on business performance in that industry, and is also constrained to ensure that the sum of production in all industries equals our forecasts of overall economic activity. That is, an industry can only grow faster than overall economic growth if past industrial performance and business conditions indicate that it will increase its share of national output.

Infometrics then decomposes these forecasts to a detailed industry level and uses industry-occupation employment matrices for New Zealand in order to measure total employment in a defined sector.

#### Full-time equivalent (FTE) employment

Full-time equivalent (FTE) employment is a way of looking at employment that takes into account the work-load of people into employment. FTE employment measures the number of people in employment for 40 hours or more per week. Two people who are employed part-time are measured as one FTE.

