Analysis of Bay of Plenty employment and skills

Revised report

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Background

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Executive Summary

This report paints a picture of a region that has a three-tier labour market, with the Western Bay of Plenty and Tauranga in the top tier, Rotorua and Whakatane in the second tier, and Kawerau and Opotiki in the third tier. The top tier districts have had relatively buoyant labour markets, even during the prolonged recession. They face the possibility of labour and skills shortages in the future. At the other end of the scale, the third tier districts have suffered population loss and have low skilled and poorly qualified labour forces. They face the possibility of ongoing decline.

The tiers also reflect significant inequalities between younger workers and older workers; Māori and non-Māori; and, unqualified/lowly qualified and highly qualified people.

In terms of strategic implications for the Bay of Plenty Regional Council, the salient features of this report are that:

Employed labour

1. The region has a relatively old employed labour force.
2. The largest occupational groups are Managers and Professionals, but half of the labour force has no qualifications or school qualifications only.
3. Kawerau and Opotiki stand out from the other districts in the region because their respective employed workforces include relatively large numbers of:
   a. Māori;
   b. people who work as Labourers; and
   c. people who have no or low educational qualifications.

Unemployed labour

4. Unemployment rates are very high:
   a. in Kawerau; and
   b. among younger people, Māori and people with no or low qualifications.

Comparisons between employed and unemployed people

5. Compared to employed people, unemployed people are more likely to be:
   a. young;
   b. Māori; and
   c. having no or low educational qualifications.

Changes in employment

6. Between 2006 and 2013 employment decreased:
   a. in the Bay of Plenty as a whole, but it increased in the Western Bay of Plenty and Tauranga;
   b. among people aged less than 50, but it increased amongst older workers, except in Kawerau;
   c. more among Māori than among non-Māori;
   d. more in the Bay of Plenty's key sectors than in the non-key sectors;
   e. in all major occupational groups, apart from Professionals and Community & personal service workers; and

f. among people with no or low qualifications, but it increased among people with higher qualifications.

Changes in unemployment

7. Between 2006 and 2013:
   a. the number of unemployed people increased in every district in the region, in all age groups, among both Māori and non-Māori, and regardless of qualification level; and
   b. the percentage increases in the number of unemployed people tended to be greatest in the categories (i.e. district, age group, ethnicity, qualifications) where unemployment rates were lowest in 2006.

Comparing New Zealand and the Bay of Plenty

8. Between 2006 and 2013:
   a. employment increased nationally, but decreased in the Bay of Plenty;
   b. employment of people aged 65 years and over increased more rapidly in the Bay of Plenty than it did nationally;
   c. Māori employment in the Bay of Plenty decreased by more than it did nationally; and
   d. Employment in the Bay of Plenty's key sectors decreased more within the region than it did nationally.

Looking to the future

9. Future labour market prospects are much brighter. Employment in the region is projected to increase in virtually all industries.
10. Employment in the highly skilled and skilled occupations is projected to increase especially fast, but employment in lower skilled occupations will also increase.
11. NIDEA's labour force projections, combined with BERL's employment projections imply that unemployment will decrease.
12. If strategy boosts economic growth and participation rates amongst women and older workers do not increase, the region is likely to experience labour shortages.

Actions to address these inequalities are justifiable on grounds of efficiency, as well as on grounds of equity. As point 12 above indicates, the region is likely to experience labour shortages, if strategy boosts economic growth. Economic growth could be constrained, if nothing is done to avoid labour shortages. At the same time, parts of the regions and certain population groups could suffer enduring unemployment.

In order to be effective, action will need to be tailored according to the needs and circumstances of the districts in the three tiers.

Western Bay of Plenty and Tauranga are likely to need action in order to ensure that labour shortages do not hold back their growth during a period of relatively rapid economic growth nationally. These districts could attract labour from elsewhere in the region, but there are indications that this has been happening anyway. In any case, if the top tier districts were to meet their increased labour needs by means of intra-regional migration, it would probably diminish the ability of the lower tier districts to improve, or turn around, their fortunes.

It will be preferable to increase the capacity and capability of their respective labour forces through a combination of immigration from outside the region and increased productivity. Immigration into the region would probably reduce the reliance, especially in the Western Bay of Plenty, on older workers; and it will probably boost productivity because migrants tend to be more skilled than average. There is also scope to increase the productivity of the existing labour force because more than half of employed people in both Western Bay of Plenty and Tauranga have no qualifications or low qualifications.

Rotorua and Whakatane both experienced slight population decline and moderate employment decrease between 2006 and 2013. Because of the generally more favourable economic outlook, they will probably see these trends reversed in the next 10 years or so, but this is by no means guaranteed.

If employment growth fails to occur, young and capable residents of these districts will tend to leave to seek opportunities elsewhere. It is essential, therefore, that businesses and industries prosper. The Bay of Connections strategy already recognises this, but it will be important to keep the strategy under review and to revise it if necessary. Initiatives led by central government, such as the recently announced Bay of Plenty Regional Growth Study, may also help, but it will be necessary to ensure that regionally-led and nationally-inspired initiatives do not impede one another.

As is the case with other districts, both Rotorua and Whakatane have a labour force in which more than half of employed people have no qualifications or low qualifications. Education and skills development will, therefore, need to go hand-in-hand with industry and enterprise development.

Kawerau and Opotiki are similar in terms of the population decline they have experienced, and the ethnicity, skills and qualifications of their labour forces.

Although the generally more benign economic climate is expected to lead to an increase in employment and a reduction in unemployment in both these districts, there is still a risk that growth could pass them by, and that they could decline irrecoverably. If centres of population lose employment, the population can drift away, leading to difficulties in maintaining public service delivery and a weakening of the social fabric. A downward spiral becomes possible.

In the case of these two districts, a multi-faceted approach seems necessary. This would combine action to: encourage industry development (e.g. through inward investment); improve the qualifications and skills of the workforce; and, maintain public service delivery and the social fabric.

In general, the actions should focus on involving the relatively disadvantaged groups in the workforce (i.e. younger people, Māori and those with no/low qualifications) across the region in skills development; and on enterprise development in the relatively deprived localities. However, in the areas that face the prospect of skills and labour shortages, it will also be necessary to encourage older workers to remain in the workforce and to encourage women to return to the workforce.

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1 Introduction

1.1 Purpose

The purpose of this report is to assist decision-makers and planners in the Bay of Plenty Region to understand where people live and work in relation to where the jobs are. The rationale for the work is that economic growth and wellbeing of the Region and its Territorial Local Authority areas will be diminished, if there are mismatches, now and in the future, between the skills required by employers and the skills possessed by people in the workforce. It will only be possible to mount effective strategic responses when the nature and extent of any mismatches are revealed and fully understood.

The report is designed to build upon work by BERL in 2013 to establish a baseline of knowledge about the Bay of Plenty's economic situation and to develop alternative scenarios about how the Region's economy might develop. It is also designed to align with work by the National Institute of Demographic and Economic Analysis (NIDEA) to project the Region's population and labour force.

1.2 Approach

In undertaking the analysis our aim has been to reveal, highlight and consider the implications of any mismatches between labour demand and labour supply in the Bay of Plenty. To seek the mismatches we used Census data on resident's labour market status (i.e. employed or unemployed), broken down by:

- District
- Age group
- Ethnicity
- Industry (if employed)
- Occupation (if employed)
- Highest educational qualification.

The mismatches were revealed by comparing the attributes of employed people with the attributes of unemployed people, and by showing the changes in the patterns of employment and unemployment between the 2006 and 2013 Censuses. Changes in the patterns of employment and unemployment in the Bay of Plenty were also compared with the patterns at national level.

The analysis also used BERL's scenarios, NIDEA's projections and published reports by the Ministry of Business, Innovation and Employment (MBIE) to consider what mismatches there might be in the future.

1.3 Alternative measures of employment and unemployment

Our analysis was based on Census results, rather than on labour market data from other sources, for two main reasons. First, the Census has near complete coverage (i.e. around 97%) of the population; and, secondly, the Census provides more information than other sources about the attributes of individuals. Census data can be used to examine patterns of employment by place of work or place of residence, although the data on employment by place of residence is more comprehensive and reliable than the data on employment by place of work.

Analyses of labour markets sometimes use data from the Household Labour Force Survey (HLFS) or the Quarterly Employment Survey (QES), but the main problem with these surveys is that they have small sample sizes at regional level and do not produce reliable data at sub-regional level. Nor do they reveal much about the skills and qualifications of employees. The QES also says nothing about unemployed people.

Analyses are also sometimes based on data from the Linked Employer-Employee Database (LEED) or Business Demography Database (BDD). These use administrative data and the results sometimes appear only after a long time delay. The databases also say relatively little about the attributes of the employees they cover. And, like the QES, they say nothing about unemployed people.

1.4 Profile of the region's population

The focus of this report is on the labour force, but it is useful to provide a context for the analysis by briefly examining the region's population and how the population has changed in recent years.

Table 1.1 Population totals for the Bay of Plenty, 2006 and 2013

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		Bay of Plenty Region		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
2006 Population	**42,075**		**103,632**		**65,901**		**33,300**		**6,924**		**8,976**		**260,808**		**22,641**		**32,418**	
Under 15	9,105	22%	21,588	21%	16,659	25%	8,499	26%	1,947	28%	2,469	28%	**60,267**	**23%**	6,036	27%	7,200	30%
15 - 19 Years	2,862	7%	6,852	7%	4,983	8%	2,514	8%	540	8%	633	7%	**18,384**	**7%**	1,746	8%	2,133	9%
20 - 34 years	5,145	12%	17,619	17%	11,748	18%	5,187	16%	1,065	15%	1,179	13%	**41,943**	**16%**	3,549	16%	5,622	24%
35 - 49 years	9,807	23%	21,975	21%	14,619	22%	7,116	21%	1,353	20%	1,854	21%	**56,724**	**22%**	4,782	21%	7,272	30%
50 - 64 years	8,616	20%	17,547	17%	10,596	16%	5,784	17%	1,158	17%	1,593	18%	**45,294**	**17%**	3,681	16%	5,778	24%
65 years and over	6,537	16%	18,054	17%	7,296	11%	4,200	13%	861	12%	1,245	14%	**38,193**	**15%**	2,853	13%	4,410	18%
Mäori	6,927	16%	16,569	16%	22,734	34%	13,203	40%	4,050	58%	4,881	54%	**68,364**	**26%**	6,711	30%	8,646	36%
Non-Maori	35,148	84%	87,063	84%	43,167	66%	20,097	60%	2,874	42%	4,095	46%	**192,444**	**74%**	15,930	70%	23,772	100%
2013 Population	**43,692**		**114,789**		**65,280**		**32,691**		**6,363**		**8,436**		**271,251**		**22,074**		**32,907**	
Under 15	8,739	20%	23,625	21%	15,132	23%	7,581	23%	1,647	26%	1,923	23%	**58,647**	**22%**	5,220	24%	7,047	21%
15 - 19 Years	2,748	6%	6,972	6%	4,632	7%	2,256	7%	444	7%	573	7%	**17,625**	**6%**	1,575	7%	1,959	6%
20 - 34 years	5,325	12%	18,213	16%	11,088	17%	4,779	15%	981	15%	1,194	14%	**41,580**	**15%**	3,474	16%	5,235	16%
35 - 49 years	8,475	19%	22,749	20%	13,119	20%	6,324	19%	1,035	16%	1,440	17%	**53,142**	**20%**	4,203	19%	6,591	20%
50 - 64 years	9,960	23%	21,111	18%	12,342	19%	6,738	21%	1,152	18%	1,863	22%	**53,166**	**20%**	4,143	19%	6,495	20%
65 years and over	8,439	19%	22,122	19%	8,973	14%	5,016	15%	1,113	17%	1,449	17%	**47,112**	**17%**	3,474	16%	5,589	17%
Mäori	7,560	17%	18,675	16%	22,410	34%	13,032	40%	3,474	55%	4,521	54%	**69,672**	**26%**	6,762	31%	9,030	27%
Non-Maori	36,132	83%	96,114	84%	42,870	66%	19,659	60%	2,889	45%	3,915	46%	**201,579**	**74%**	15,312	69%	23,877	73%
Population (Change between 2006-2013)	**1,617**	**4%**	**11,157**	**11%**	**-621**	**-1%**	**-609**	**-2%**	**-561**	**-8%**	**-540**	**-6%**	10,443	4%	**-567**	**-3%**	**489**	**2%**
Under 15	-366	-4%	2,037	9%	-1,527	-9%	-918	-11%	-300	-15%	-546	-22%	**-1,620**	**-3%**	-816	-14%	-153	-2%
15 - 19 Years	-114	-4%	120	2%	-351	-7%	-258	-10%	-96	-18%	-60	-9%	**-759**	**-4%**	-171	-10%	-174	-8%
20 - 34 years	180	3%	594	3%	-660	-6%	-408	-8%	-84	-8%	15	1%	**-363**	**-1%**	-75	-2%	-387	-7%
35 - 49 years	-1,332	-14%	774	4%	-1,500	-10%	-792	-11%	-318	-24%	-414	-22%	**-3,582**	**-6%**	-579	-12%	-681	-9%
50 - 64 years	1,344	16%	3,564	20%	1,746	16%	954	16%	-6	-1%	270	17%	**7,872**	**17%**	462	13%	717	12%
65 years and over	1,902	29%	4,068	23%	1,677	23%	816	19%	252	29%	204	16%	**8,919**	**23%**	621	22%	1,179	27%
Mäori	633	9%	2,106	13%	-324	-1%	-171	-1%	-576	-14%	-360	-7%	**1,308**	**2%**	51	1%	384	4%
Non-Maori	984	3%	9,051	10%	-297	-1%	-438	-2%	15	1%	-180	-4%	**9,135**	**5%**	-618	-4%	105	0%

Source: Statistics New Zealand Census 2013, BERL

Table 1 shows that the region's population increased by 4% between 2006 and 2013, but that the only two districts where population grew were Tauranga and the Western Bay of Plenty. The population decreased slightly in Rotorua and Whakatane, and it decreased significantly in Kawerau and Opotiki.

There were some important changes in the region's Māori population between the two Censuses. The region's Māori population increased, but somewhat more slowly than the non- Māori population. It is also noteworthy that the Māori population of Kawerau and Opotiki decreased significantly, while the Māori population of Tauranga and the Western Bay of Plenty increased significantly.

The table also shows that the region's population aged between 2006 and 2013. The population in the two older age groups increased, but it decreased in all other age groups.

1.5 Relationship with previous work

This report builds on previous work by BERL for the Bay of Plenty Regional Council. In particular, it is intended to complement the October 2013 Report: *Bay of Plenty economic scenarios – Exploring alternative futures*.

However, the two reports are different in two important respects. Firstly, the previous report was forward looking, examining what how the Bay of Plenty economy might develop under different sets of assumptions. By contrast, this report is largely backward looking, with a view to examining past trends in labour and skills, in order to understand what issues might arise as the economy grows and changes. Despite this key difference, both reports were intended to inform strategic decisions by the Council to foster growth.

Secondly, the two reports measure employment in different ways. The previous report measured employment in terms of full-time equivalents (FTEs), using input data from the Business Demography Database (BDD), because that is the best way of assessing the volume of labour demand in a computable general equilibrium (CGE) model and because new data becomes available every year. By contrast this report focuses on the number of people employed, using Census data, regardless of how many jobs they may have and how many hours they work. Census data was chosen as the basis for analysis because it enables a range of attributes of employed people to be analysed, including age, ethnic group, industry, occupation and qualifications. Census data also enables the attributes of unemployed people to be analysed, whereas the BDD does not count them at all. In other words, Census data is more useful in terms of examining how attributes of employed and unemployed people influence their ability to compete in the labour market. Nonetheless, the Census dataset is not always superior to the BDD dataset. They are simply different; and they serve different purposes.

2 Snapshot of current labour demand and supply in 2013

Key points: Labour demand

- At the time of Census 2013, around 118,000 people were in employment in the Bay of Plenty.
- The Bay of Plenty has a relatively old employed labour force, with 40% of people in employment aged 50 years or older. In Opotiki and Western Bay of Plenty, nearly half of the people in employment are aged 50 years or older.
- Just over one fifth of people in employment in the Bay of Plenty Region, but around half of people in employment in Opotiki and Kawerau, are Māori.
- A quarter of people in employment in the Region are in the industries identified as key in the Bay of Connections strategy framework. The key industries employ more than one-third of all people in employment in Opotiki and Western Bay of Plenty, but less than one-fifth in Tauranga.
- Managers and Professionals represent the largest major occupational groups in employment in the Bay of Plenty Region. One or other of these two is the largest occupational group in most of the Districts. The exceptions are Kawerau and Opotiki, where Labourers account for the largest share of employment.
- Nearly one-fifth of employed people in the Bay of Plenty Region have a degree or post-graduate qualification. However, the proportion of the employed workforce in both Kawerau and Opotiki who have these qualifications is much lower.
- At the other end of the scale, half of employed people in the region have no qualifications or school qualifications only. Again, Kawerau and Opotiki stand out as having large proportions of their employed labour force without qualifications.

Labour demand is represented by the number of people in employment at the time of the Census. Using Census data, labour demand can be broken down by:

- District
- Age group
- Ethnicity
- Industry
- Occupation
- Highest educational qualification.

Labour supply is the sum of the number of people employed and the number of people unemployed at the time of the Census, where the unemployed were those people who indicated in the Census that they were both seeking and available for work. The number of unemployed can be broken down by:

- District
- Age group
- Ethnicity
- Highest educational qualification.

2.1 Labour demand

- At the time of the Census, there were 118,136 people in employment in the Bay of Plenty region.
- The number in employment varied significantly from District to District, with 50,904 people in employment in Tauranga and just 1,767 in employment in Kawerau.

Table 2.1 Labour demand in the Bay of Plenty in 2013, by age group[1]

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
15 - 19 Years	894	4%	2,376	5%	1,428	5%	636	5%	69	4%	126	4%	**5,529**	**5%**	417	5%	873	5%
20 - 34 years	3,363	17%	12,117	24%	6,645	23%	2,730	20%	357	21%	603	19%	**25,816**	**22%**	1,980	23%	3,687	23%
35 - 49 years	6,420	32%	17,274	34%	9,555	33%	4,383	32%	564	32%	906	28%	**39,104**	**33%**	2,889	33%	5,211	32%
50 - 64 years	7,191	36%	15,258	30%	8,787	31%	4,698	35%	600	34%	1,227	38%	**37,763**	**32%**	2,808	32%	4,980	31%
65 years and over	2,187	11%	3,588	7%	2,124	7%	1,071	8%	150	9%	339	11%	**9,459**	**8%**	699	8%	1,359	8%
Total	**20,058**	**100%**	**50,610**	**100%**	**28,545**	**100%**	**13,518**	**100%**	**1,740**	**100%**	**3,207**	**100%**	**117,683**	**100%**	**8,796**	**100%**	**16,113**	**100%**

Source: Statistics New Zealand Census 2013, BERL

- The Bay of Plenty has a relatively old employed labour force, with 40% of people in employment aged 50 years or older. In Opotiki (49%) and Western Bay of Plenty (47%), nearly half of the people in employment are aged 50 years or older.
- One employed person in 12 in the Bay of Plenty is aged 65 or older. Nationally, roughly one employed person in 20 is aged 65 or older.
- In every Bay of Plenty district, the share of employment accounted for by people aged 65 or older is greater than the share nationally.
- By contrast, only 27% of employed people in the Bay of Plenty are aged less than 35 years.
- Tauranga (29%) has the largest proportion of people in employment who are aged less than 35 years.
- Nationally, employment of people aged 65 plus is growing rapidly. In the past five years almost half of the increase in employment has been amongst people in this age group.
- The comparison Districts of South Waikato and Taupo are very similar to the Bay of Plenty Region, in terms of the age structure of the employed labour force.

[1] About 500 people in the Bay of Plenty did not state their age in Census 2013, or did not have their age recorded.

Table 2.2 Labour demand in the Bay of Plenty in 2013, by ethnicity

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
Maori	2,700	13%	6,789	13%	8,136	29%	4,476	33%	948	54%	1,596	50%	**24,646**	**21%**	2,166	24%	3,558	23%
Non-Maori	17,637	87%	44,115	87%	20,220	71%	9,117	67%	819	46%	1,578	50%	**93,490**	**79%**	6,684	76%	12,138	77%
Total	**20,337**	**100%**	**50,904**	**100%**	**28,356**	**100%**	**13,593**	**100%**	**1,767**	**100%**	**3,174**	**100%**	**118,136**	**100%**	**8,850**	**100%**	**15,696**	**100%**

Source: Statistics New Zealand Census 2013, BERL

- Just over one fifth of people in employment in the Bay of Plenty Region are Māori.
- This proportion ranges from half or more in Opotiki and Kawerau, to just less than one in eight in Western Bay of Plenty and Tauranga.
- Again, the comparison Districts are similar to the Bay of Plenty Region, in terms of the ethnic make-up of the employed labour force.

Table 2.3 Labour demand in the Bay of Plenty in 2013, by industry

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
Aquaculture	20	0%	158	0%	5	0%	0	0%	0	0%	2	0%	**183**	**0%**	3	0%	0	0%
Forestry	404	2%	598	1%	1,525	5%	928	7%	309	17%	123	4%	**3,886**	**3%**	865	10%	779	5%
Kiwifruit	1,770	9%	701	1%	108	0%	261	2%	12	1%	296	9%	**3,147**	**3%**	46	1%	88	1%
Dairy	1,010	5%	431	1%	1,076	4%	1,095	8%	24	1%	236	7%	**3,870**	**3%**	1,299	15%	759	5%
Other food cultivation & processing	1,055	5%	1,140	2%	370	1%	290	2%	36	2%	116	4%	**3,007**	**3%**	301	3%	195	1%
Energy	27	0%	105	0%	93	0%	156	1%	6	0%	9	0%	**396**	**0%**	18	0%	267	2%
Transport & logistics	554	3%	1,925	4%	664	2%	210	2%	37	2%	50	2%	**3,440**	**3%**	249	3%	401	3%
ICT	237	1%	882	2%	208	1%	74	1%	5	0%	9	0%	**1,413**	**1%**	32	0%	96	1%
Marine	57	0%	204	0%	57	0%	49	0%	7	0%	1	0%	**375**	**0%**	8	0%	51	0%
Sport & recreation	191	1%	715	1%	533	2%	128	1%	9	0%	17	1%	**1,593**	**1%**	60	1%	347	2%
Emerging techs	640	3%	2,422	5%	1,914	7%	547	4%	49	3%	123	4%	**5,695**	**5%**	275	3%	1,261	8%
Meat	164	1%	452	1%	170	1%	61	0%	0	0%	3	0%	**850**	**1%**	54	1%	87	1%
Tourism	783	4%	192	0%	522	2%	282	2%	12	1%	141	4%	**1,932**	**2%**	213	2%	438	3%
Key sectors	**6,912**	**34%**	**9,923**	**19%**	**7,243**	**26%**	**4,081**	**30%**	**505**	**29%**	**1,124**	**35%**	**29,787**	**25%**	**3,422**	**39%**	**4,770**	**30%**
Other	**13,425**	**66%**	**40,981**	**81%**	**21,113**	**74%**	**9,509**	**70%**	**1,262**	**71%**	**2,050**	**65%**	**88,341**	**75%**	**5,428**	**61%**	**10,926**	**70%**
Total	**20,337**	**100%**	**50,904**	**100%**	**28,356**	**100%**	**13,590**	**100%**	**1,767**	**100%**	**3,174**	**100%**	**118,128**	**100%**	**8,850**	**100%**	**15,696**	**100%**

Source: Statistics New Zealand Census 2013, BERL

- One quarter of people in employment in the Region are in the industries identified as key in the Bay of Connections strategy framework.
- At the regional level, the largest key industry is Emerging Technologies.
- The key industries employ more than one-third of all people in employment in Opotiki (35%) and Western Bay of Plenty (34%), but less than one-fifth in Tauranga (19%).
- Amongst the key industries, the largest industry varies from district to district. Well over half of key industry employment in Kawerau is in Forestry. Kiwifruit is the largest key industry in Western Bay of Plenty and Opotiki. Dairy is the most important key industry in Whakatane, and Emerging technologies is the most important in both Tauranga and Rotorua.
- The industries identified as key in the Bay of Connections strategic framework employ a greater proportion of the employed labour force in the comparison districts than they do in the Bay of Plenty Region itself.

- The largest industries included under “Other” are shown in Appendix A. Most of them are in the public services, e.g. education, health and public administration.

Table 2.4 Labour demand in the Bay of Plenty in 2013, by occupation

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		Bay of Plenty Region		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Managers	4,827	24%	8,382	16%	4,827	17%	2,484	18%	144	8%	666	21%	**21,331**	**18%**	1,761	20%	3,003	19%
Professionals	3,000	15%	10,269	20%	5,331	19%	2,535	19%	225	13%	435	14%	**21,796**	**18%**	1,059	12%	2,352	15%
Technicians and trade workers	2,277	11%	6,192	12%	3,306	12%	1,536	11%	225	13%	249	8%	**13,786**	**12%**	978	11%	1,980	13%
Community and personal service workers	1,443	7%	4,701	9%	2,745	10%	1,203	9%	186	11%	258	8%	**10,536**	**9%**	681	8%	1,617	10%
Clerical and admin workers	1,989	10%	6,018	12%	3,039	11%	1,347	10%	183	10%	285	9%	**12,862**	**11%**	816	9%	1,488	9%
Sales workers	1,272	6%	5,307	10%	2,400	8%	978	7%	126	7%	183	6%	**10,266**	**9%**	621	7%	1,302	8%
Machinery operators and drivers	1,158	6%	2,721	5%	1,797	6%	885	7%	222	13%	159	5%	**6,942**	**6%**	780	9%	912	6%
Labourers	3,294	16%	5,226	10%	3,351	12%	1,869	14%	327	19%	696	22%	**14,764**	**12%**	1,590	18%	2,265	14%
Other	1,077	5%	2,082	4%	1,551	5%	750	6%	123	7%	249	8%	**5,832**	**5%**	561	6%	771	5%
Total	**20,337**	**100%**	**50,904**	**100%**	**28,356**	**100%**	**13,593**	**100%**	**1,767**	**100%**	**3,174**	**100%**	**118,136**	**100%**	**8,850**	**100%**	**15,696**	**100%**

Source: Statistics New Zealand Census 2013, BERL

- Managers and Professionals represent the largest major occupational groups in employment in the Bay of Plenty Region.
- One or other of these two is the largest occupational group in most of the Districts. The exceptions are Kawerau and Opotiki, where Labourers account for the largest share of employment.
- Nearly four in ten people in employment in Western Bay of Plenty (39%), Whakatane (37%) and Tauranga (36%) are Managers or Professionals.
- Kawerau stands out as having a very small proportion of Managers and Professionals (21%) in its employed labour force.
- The Bay of Plenty has a larger proportion of Professionals in its employed workforce than is the case in the comparison districts. By contrast, it has a smaller proportion of Labourers.

Table 2.5 Labour demand in the Bay of Plenty in 2013, by highest educational qualification

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		Bay of Plenty Region		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No Qualification	3,414	17%	6,936	14%	4,830	17%	2,379	18%	432	24%	762	24%	**18,754**	**16%**	2,127	24%	2,820	18%
Level 1 to 4 Certificate Gained at School	7,005	34%	17,352	34%	9,279	33%	4,389	32%	540	31%	1,059	33%	**39,626**	**34%**	2,883	33%	5,451	35%
Level 1, 2 or 3 Certificate Gained Post-school	747	4%	2,079	4%	1,086	4%	528	4%	69	4%	111	3%	**4,620**	**4%**	405	5%	702	4%
Level 4 Certificate Gained Post-school	2,781	14%	6,717	13%	3,669	13%	1,926	14%	270	15%	366	12%	**15,730**	**13%**	1,194	13%	2,184	14%
Level 5 or 6 Diploma	2,397	12%	5,805	11%	2,853	10%	1,377	10%	138	8%	309	10%	**12,880**	**11%**	726	8%	1,548	10%
Bachelor Degree and Level 7 Qualifications	2,220	11%	7,266	14%	3,528	12%	1,632	12%	144	8%	249	8%	**15,040**	**13%**	738	8%	1,572	10%
Post-Graduate Qualifications	876	4%	2,763	5%	1,548	5%	600	4%	27	2%	93	3%	**5,907**	**5%**	216	2%	603	4%
Other	897	4%	1,986	4%	1,566	6%	750	6%	144	8%	222	7%	**5,565**	**5%**	561	6%	816	5%
Total	**20,337**	**100%**	**50,904**	**100%**	**28,356**	**100%**	**13,593**	**100%**	**1,767**	**100%**	**3,174**	**100%**	**118,136**	**100%**	**8,850**	**100%**	**15,696**	**100%**

Source: Statistics New Zealand Census 2013, BERL

- Nearly one-fifth of employed people in the Bay of Plenty Region (18%) have a degree or post-graduate qualification. However, the proportion of the employed workforce in both Kawerau (10%) and Opotiki (11%) who have these qualifications is low.
- At the other end of the scale, half of employed people in the region have no qualifications (16%) or school qualifications only (34%).
- Again, Kawerau and Opotiki stand out as having large proportions of their employed labour force without qualifications.
- Of the two comparison districts, Taupo is similar to the Bay of Plenty Region, in terms of the qualifications of its employed labour force, while South Waikato is similar to Kawerau and Opotiki.

2.2 Labour demand summary

The following tables and figures present summary views of labour demand in the Bay of Plenty as a whole.

Figure 2.1 Labour demand in the Bay of Plenty in 2013, by age group

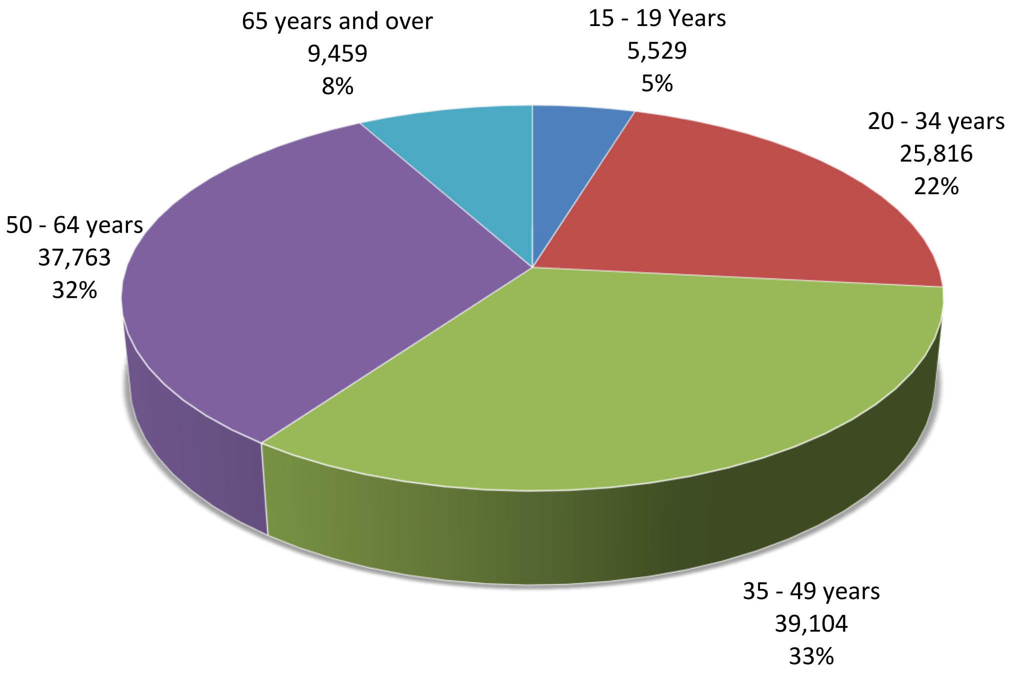


Figure 2.2 Labour demand in the Bay of Plenty in 2013, by ethnicity

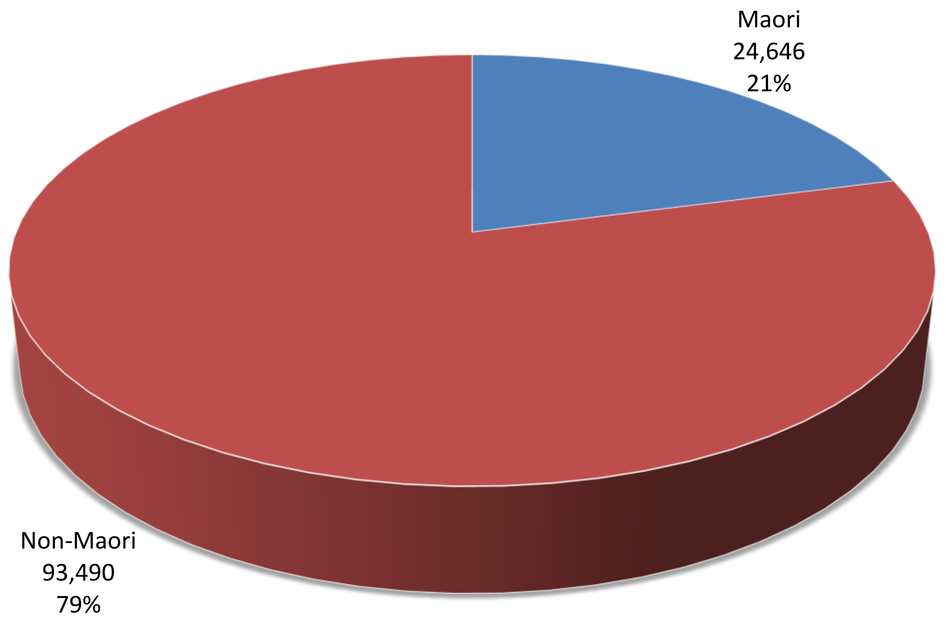


Figure 2.3 Labour demand in the Bay of Plenty in 2013, by sector

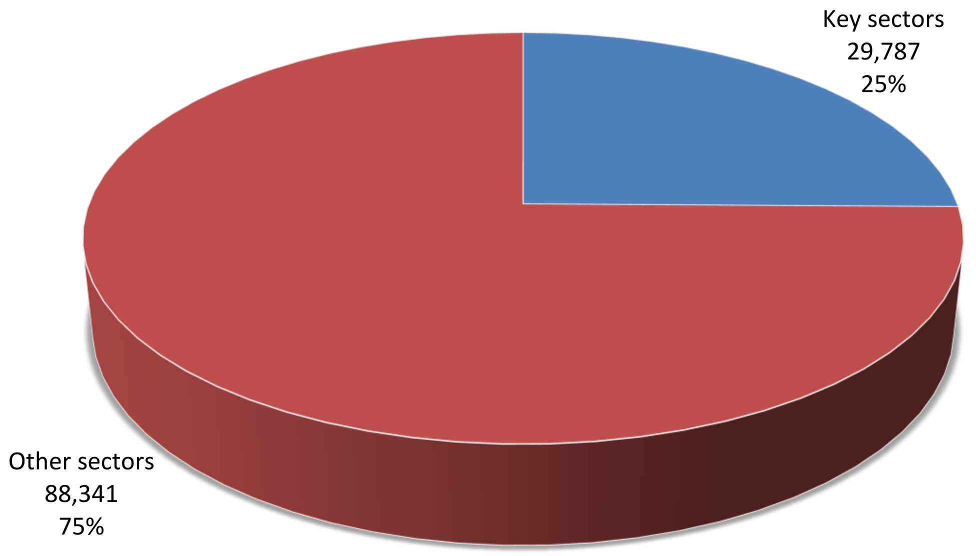


Figure 2.4 Labour demand in the Bay of Plenty in 2013, by occupation

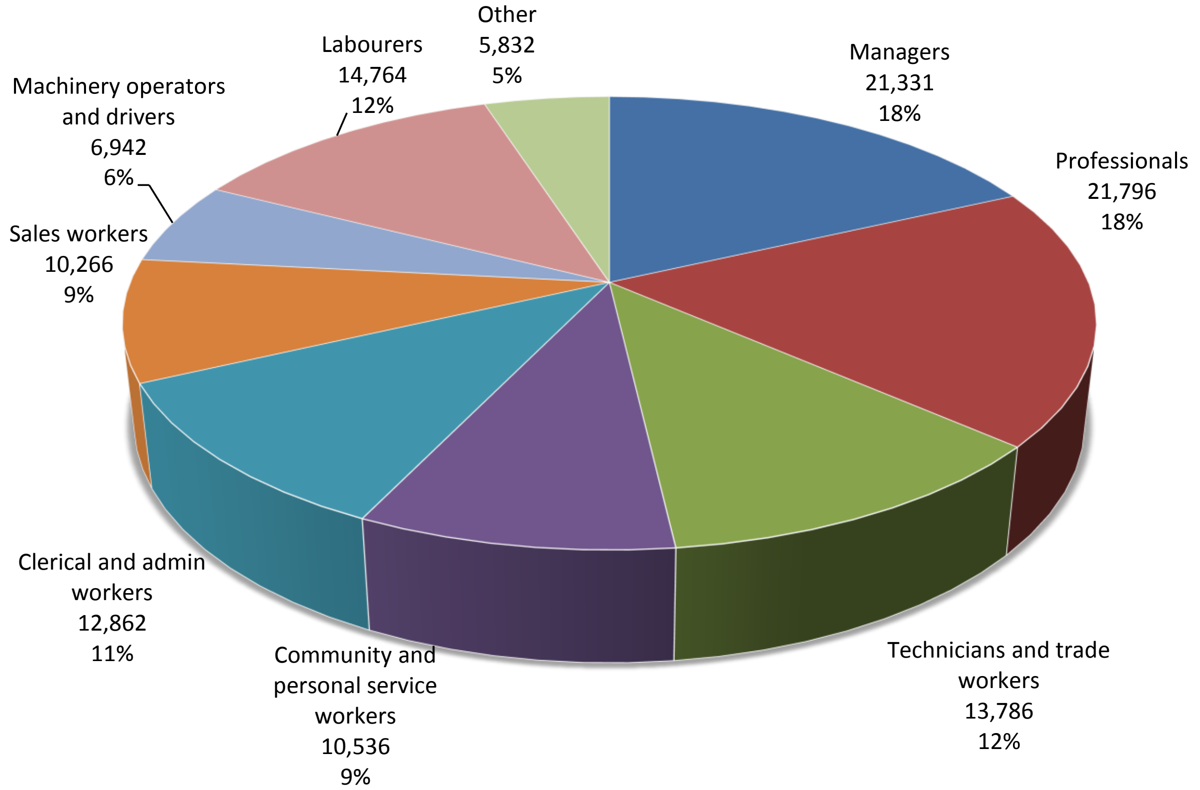
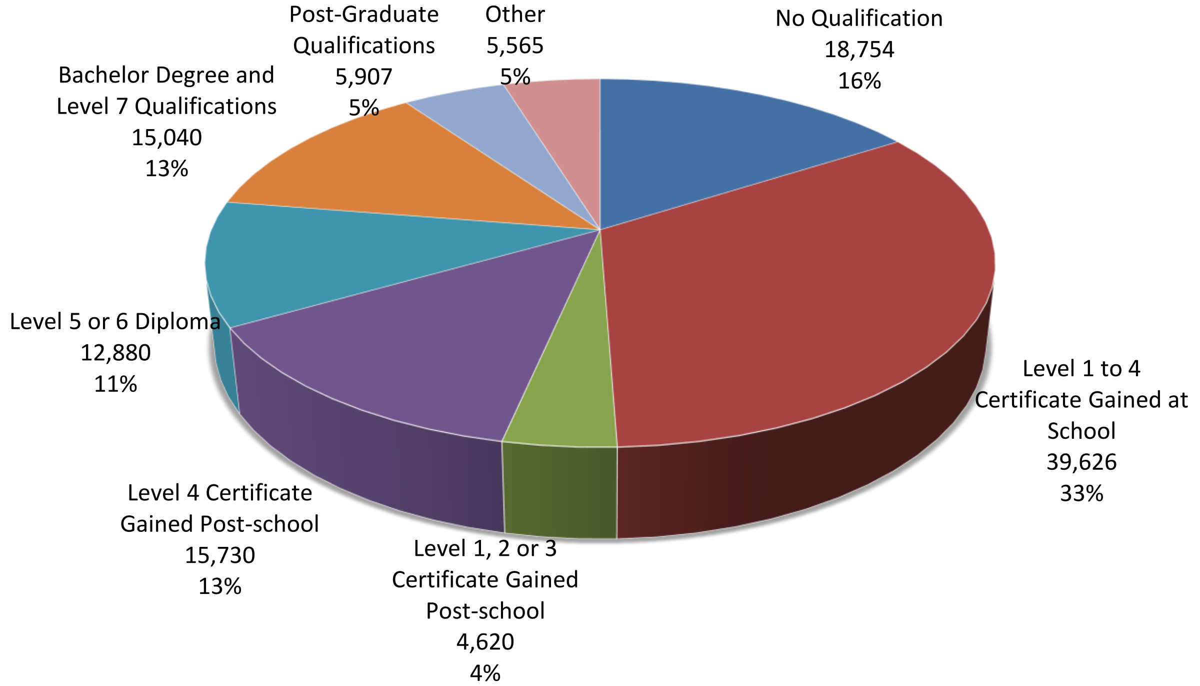


Figure 2.5 Labour demand in the Bay of Plenty in 2013, by highest qualification



2.3 Unemployed labour

Key points: Unemployed labour

- At the time of Census 2013, there were 11,600 unemployed people in the Bay of Plenty. The unemployment rate was 8.9%.
- The unemployment rate ranged from 7.2% in the Western Bay of Plenty, to 24.9% in Kawerau.
- The unemployment rate decreased with age, from 30.8% amongst 15-19 year olds, to 2.1% amongst over 65 year olds who were still in the labour force.
- The unemployment rate was 19.0% amongst Māori and 5.9% amongst non-Māori.
- Nearly two-thirds of unemployed had no qualifications, or school-only qualifications.

As was indicated earlier, for the purposes of this analysis, an unemployed person is someone who was both seeking and available for work at the time of the Census. Unemployed people comprise the unutilised component of the labour supply. As such, they represent a potential resource for supporting the growth of the economy.

The three tables that follow describe some of the characteristics of the unemployed workforce. The tables can be compared directly with the corresponding tables on employed people in section 2.1 above. The comparisons will help to reveal some of the mismatches between labour supply and labour demand in the Bay of Plenty and its districts.

- At the time of the Census, there were 11,597 unemployed people in the Bay of Plenty region. This compares with 118,136 employed people.
- These numbers imply that the total labour supply (employed plus unemployed) in the Bay of Plenty was 129,733, of which 91.1 percent were in employment and 8.9 percent were unemployed.
- The number of unemployed people varied significantly from district to district, with 4,200 unemployed people in Tauranga City and 393 unemployed people in Opotiki.
- By district, the unemployment rates were:
  - Western Bay of Plenty 7.2%
  - Tauranga 7.6%
  - Rotorua 10.0%
  - Whakatane 11.0%
  - Kawerau 24.9%
  - Opotiki 11.0%.
- The unemployment rate is the number of people both seeking and available for work as a percentage of the number of employed plus unemployed people.

Table 2.6 Unemployed labour in 2013, by age group

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		Bay of Plenty Region		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
15 - 19 Years	366	23%	975	23%	651	21%	297	18%	96	16%	78	20%	2,463	21%	213	18%	222	22%
20 - 34 years	462	29%	1,317	31%	1,149	37%	612	36%	234	40%	138	35%	3,914	34%	432	37%	324	32%
35 - 49 years	390	25%	1,050	25%	816	26%	438	26%	147	25%	99	25%	2,941	25%	327	28%	228	23%
50 - 64 years	336	21%	762	18%	480	15%	321	19%	102	17%	72	18%	2,074	18%	180	15%	207	21%
65 years and over	42	3%	96	2%	39	1%	18	1%	3	1%	9	2%	207	2%	18	2%	24	2%
Total	1,590	100%	4,200	100%	3,138	100%	1,686	100%	585	100%	393	100%	11,597	100%	1,176	100%	1,002	100%

Source: Statistics New Zealand Census 2013, BERL

- More than half of the unemployed in the Bay of Plenty are less than 35 years old. This proportion did not vary dramatically across the districts.
- In conjunction with Table 2.1, the figures above imply that the unemployment rates by age group in the Bay of Plenty were:
    - 15-19 years 30.8%
    - 20-34 years 13.2%
    - 35-49 years 7.0%
    - 50-64 years 5.2%
    - 65+ years 2.1%.
- The unemployment rate amongst 15-19 year olds ranged from 29.0% in Western Bay of Plenty, to 58.2% in Kawerau.
- The unemployment rate amongst 20-34 year olds ranged from 9.8% in Tauranga, to 39.6% in Kawerau.
- This table can be compared with Table 2.1 above. The comparison shows that, in the region as a whole, 15-19 year olds account for only 5% of people in employment, but 21% of people unemployed. 20-34 year olds account for 22% of people in employment, but 34% of people unemployed. At the other end of the scale, 65+ year olds account for 8% of people in employment, but only 2% of people unemployed. 50-64 year olds account for 32% of people in employment, but only 18% of people unemployed.
- The comparison districts are similar to the Bay of Plenty Region in terms of the age structure of their unemployed labour force.

Table 2.7 Unemployed labour in 2013, by ethnicity

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		Bay of Plenty Region		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Maori	576	36%	1,329	32%	1,908	61%	1,200	71%	453	77%	318	81%	5,787	50%	603	51%	528	53%
Non-Maori	1,014	64%	2,871	68%	1,230	39%	486	29%	132	23%	75	19%	5,810	50%	573	49%	474	47%
Total	1,590	100%	4,200	100%	3,138	100%	1,686	100%	585	100%	393	100%	11,597	100%	1,176	100%	1,002	100%

Source: Statistics New Zealand Census 2013, BERL

- Half the unemployed people in the Bay of Plenty were Māori and half were non-Māori.
- In conjunction with Table 2.2, the figures above imply that the unemployment rate for Māori was 19.0% and the unemployment rate for non-Māori was 5.9%.

- The unemployment rate amongst Māori ranged from 16.4% in Tauranga, to 32.3% in Kawerau.

Table 2.8 Unemployed labour in 2013, by highest educational qualification

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
No Qualification	381	24%	924	22%	861	27%	486	29%	207	35%	126	32%	**2,986**	**26%**	390	33%	297	30%
Level 1 to 4 Certificate Gained at School	630	40%	1,626	39%	1,071	34%	558	33%	174	30%	132	34%	**4,193**	**36%**	387	33%	354	35%
Level 1, 2 or 3 Certificate Gained Post-school	117	7%	303	7%	219	7%	126	7%	39	7%	30	8%	**834**	**7%**	99	8%	60	6%
Level 4 Certificate Gained Post-school	120	8%	327	8%	288	9%	144	9%	54	9%	33	8%	**966**	**8%**	114	10%	72	7%
Level 5 or 6 Diploma	108	7%	291	7%	153	5%	84	5%	24	4%	18	5%	**678**	**6%**	33	3%	51	5%
Bachelor Degree and Level 7 Qualifications	84	5%	306	7%	201	6%	72	4%	15	3%	12	3%	**690**	**6%**	30	3%	33	3%
Post-Graduate Qualifications	30	2%	120	3%	42	1%	18	1%	6	1%	3	1%	**219**	**2%**	6	1%	15	1%
Other	126	8%	303	7%	303	10%	192	11%	60	10%	42	11%	**1,026**	**9%**	120	10%	123	12%
Total	**1,590**	**100%**	**4,200**	**100%**	**3,138**	**100%**	**1,686**	**100%**	**585**	**100%**	**393**	**100%**	**11,597**	**100%**	**1,176**	**100%**	**1,002**	**100%**

Source: Statistics New Zealand Census 2013, BERL

- Nearly two-thirds (62%) of unemployed people in the Bay of Plenty have no qualifications or school qualifications only.
- The proportion of unemployed people with no qualifications or school-only qualifications does not vary significantly across the Region.
- This table can be compared with Table 2.5.
- The comparison shows that 16% of employed people in the Bay of Plenty have no qualifications, compared to 26% of unemployed people who have no qualifications.
- The comparison also shows that 29% of employed people have diploma level or higher qualifications, whereas only 14% of unemployed people have diploma level or higher qualifications.
- The proportion of unemployed people who have no qualifications is larger in the two comparison districts than it is in the Bay of Plenty Region.
- In conjunction with Table 2.5, the figures above imply that the unemployment rates by level of qualification in the Bay of Plenty were:
  - No qualifications 13.7%
  - Level 1-4 Certificate gained at school 9.6%
  - Level 1-3 Certificate gained post-school 15.3%
  - Level 4 Certificate gained post-school 5.8%
  - Level 5 or 6 Diploma 5.0%
  - Bachelor's Degree and Level 7 qualification 4.4%
  - Post-graduate qualifications 3.6%
  - Other 15.6%

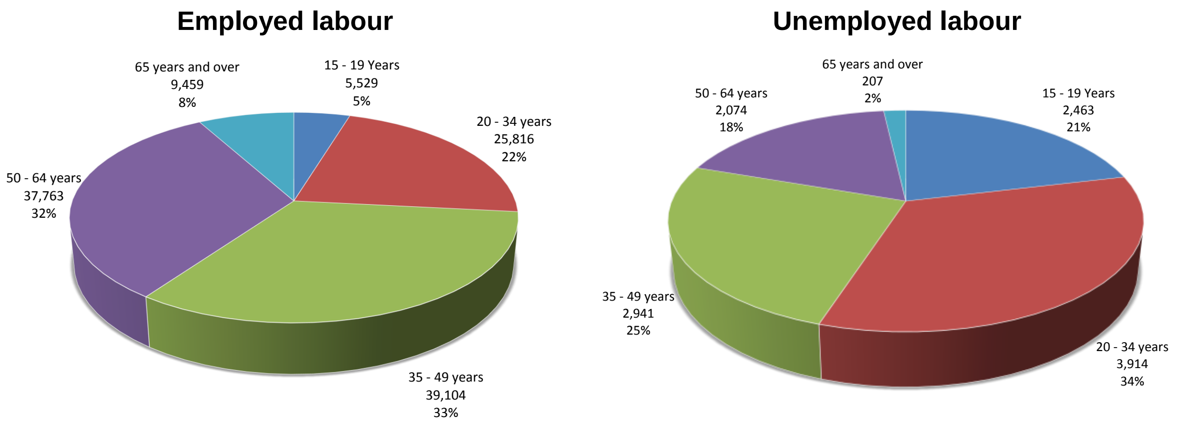
2.4 Comparison between employed and unemployed labour

Key points:

- Compared to employed people, unemployed people in the Bay of Plenty are:
  - Much more likely to be in the younger age groups (less than 35 years old).
  - More likely to be Māori.
  - More likely to have no or low qualifications, and less likely to have degree or post-graduate qualifications.

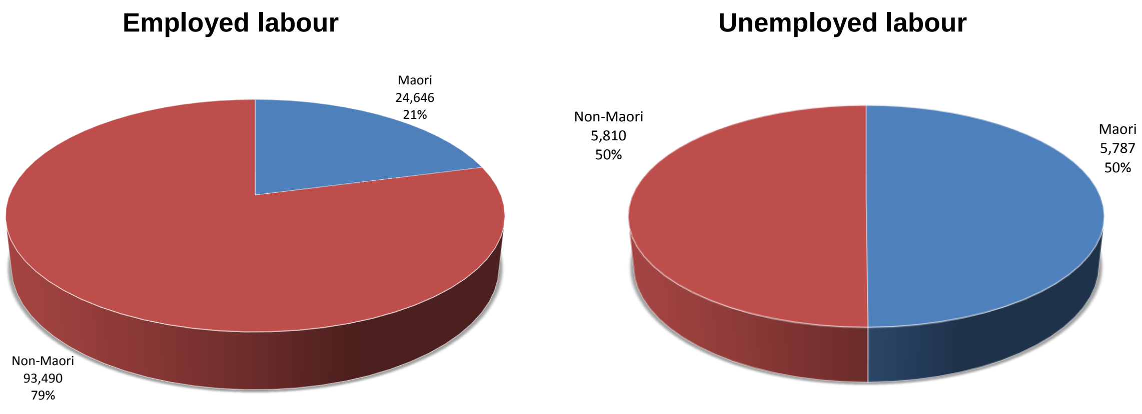
The following figures contrast the composition of employed and unemployed labour in the Bay of Plenty.

Figure 2.6 Employed and unemployed labour in the Bay of Plenty in 2013, by age group



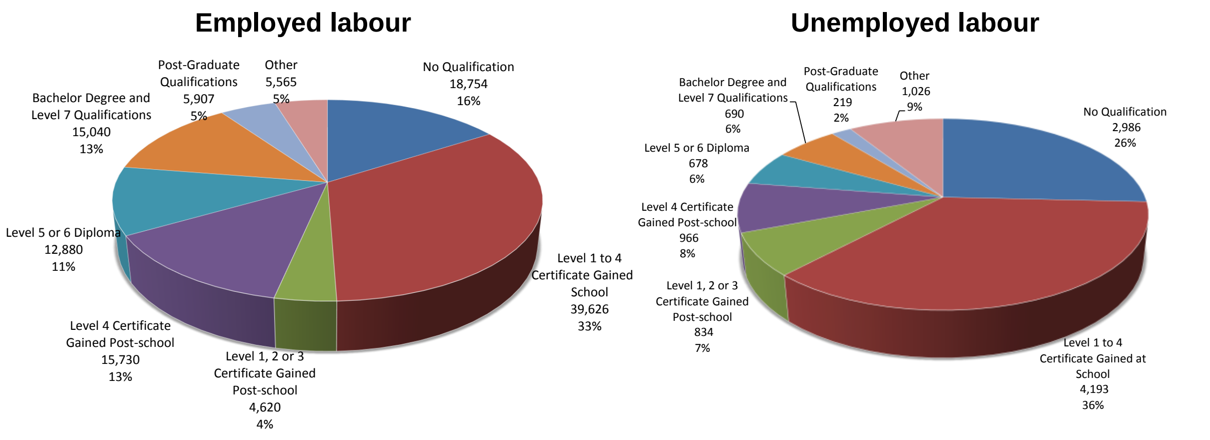
- The age structure of the unemployed labour force is very different from that of the employed labour force.
- Unemployed people are much more likely to be in the younger age groups.
- More than half of unemployed people are aged less than 35, but only just over a quarter of employed people are in the same age group.

Figure 2.7 Employed and unemployed labour in the Bay of Plenty in 2013, by ethnicity



- Just over a fifth (21%) of employed people in the Bay of Plenty are Māori, but they account for exactly half of unemployed people in the region.

Figure 2.8 Employed and unemployed labour in the Bay of Plenty in 2013, by highest educational qualification



- Unemployed people are considerably more likely than employed people to have no qualifications, and to have no qualifications beyond school qualifications.
- Conversely, they are considerably less likely to have a degree or post-graduate qualifications.

2.5 Labour supply summary

As noted earlier, the labour supply is the sum of the number of people employed and the number of people unemployed.

- At the time of the Census, the total labour supply in the Bay of Plenty was 129,733 people.

- By district, the labour supply was:
  - Western Bay of Plenty 21,967
  - Tauranga 55,104
  - Rotorua 31,494
  - Whakatane 15,279
  - Kawerau 2,352
  - Opotiki 3,567.

The following tables and figures present summary views of the labour supply in the Bay of Plenty as a whole.

Figure 2.9 Labour supply in the Bay of Plenty in 2013, by age group

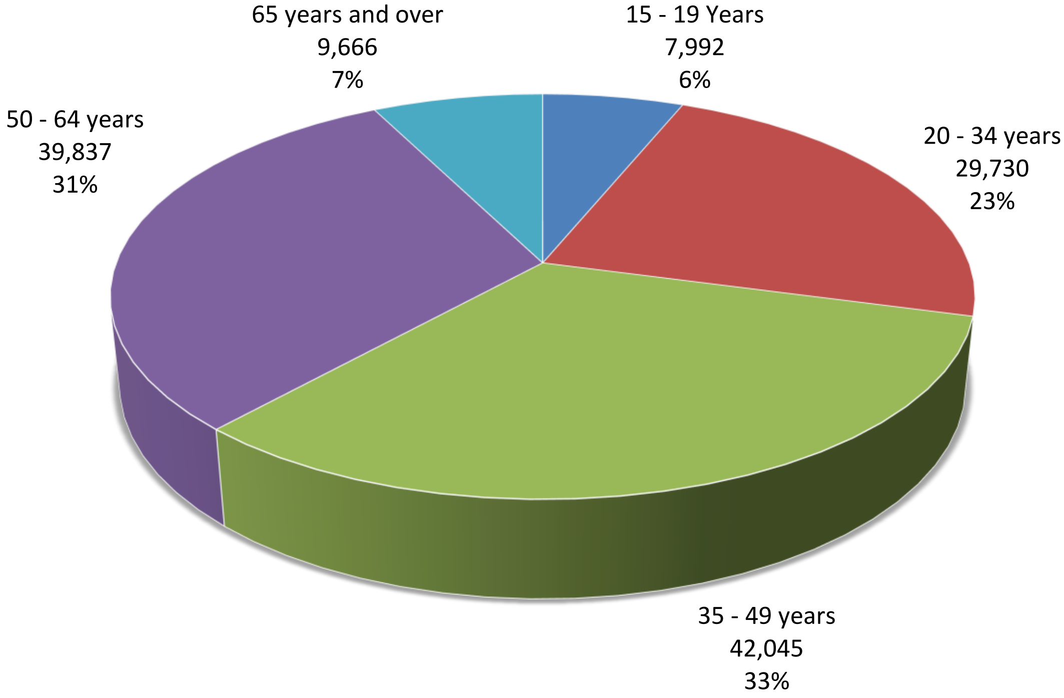


Figure 2.10 Labour supply in the Bay of Plenty in 2013, by ethnicity

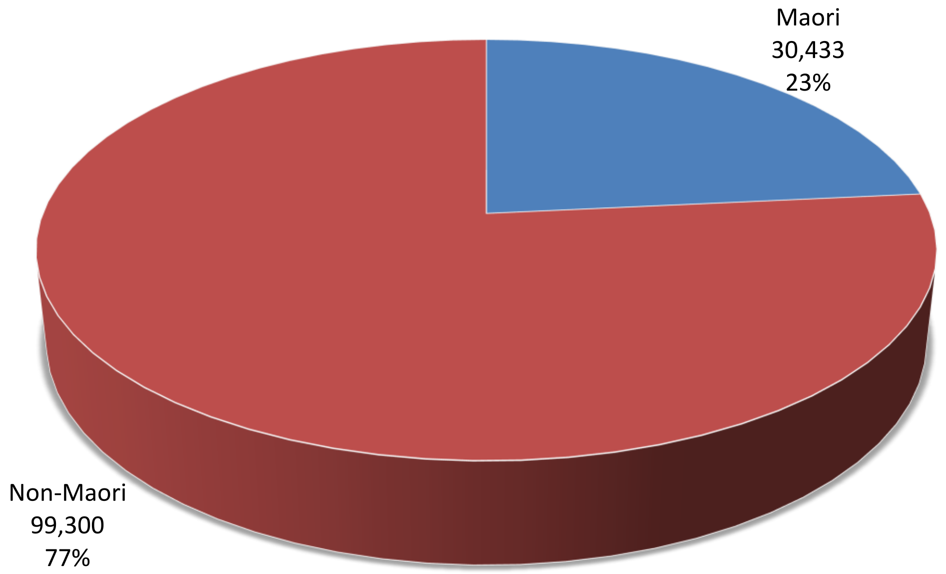
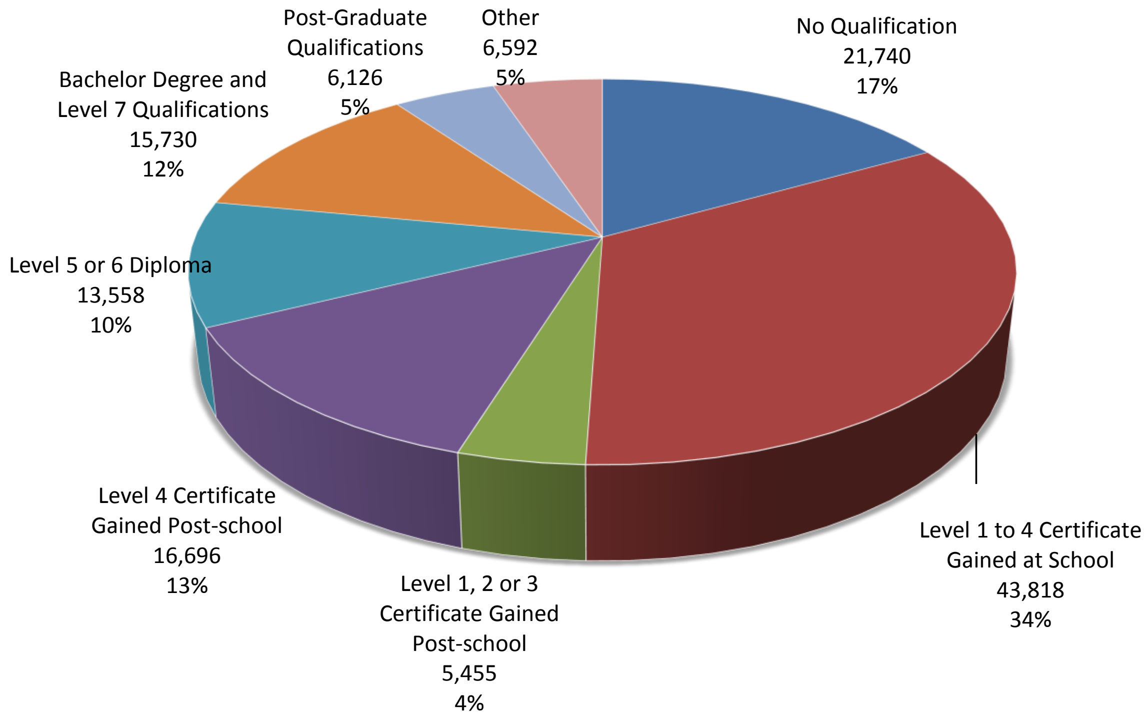


Figure 2.11 Labour supply in the Bay of Plenty in 2013, by highest qualification



3 Changes in labour demand and supply, 2006-2013

Key points: Changes in labour demand

- Between 2006 and 2013:
  - The number of people in employment in the region fell by 1.9%. However, employment in the Western bay of Plenty and Tauranga increased.
  - Employment amongst people aged less than 50 decreased. However, it increased amongst older workers, except in Kawerau.
  - Employment amongst Māori fell by more than amongst non-Māori.
  - Employment in the Bay of Plenty's key sectors fell by more than in the non-key sectors.
  - Employment decreased in all major occupational groups, apart from Professionals and Community & personal service workers.
  - Employment amongst people with no or low qualifications decreased, while employment amongst people with higher qualifications increased.

3.1 Change in labour demand

- The total number of people in employment in the Bay of Plenty at the time of the Census in 2013 was 2,253 fewer than the number of people in employment at the time of the Census in 2006. This section examines where the job losses occurred.
- By district, the changes in the number of people in employment between 2006 and 2013 (and the percentage changes) were:

	N	%
Western Bay of Plenty	78	0.4
Tauranga	1,806	3.7
Rotorua	-2,466	-8.0
Whakatane	-837	-5.8
Kawerau	-642	-26.7
Opotiki	-192	-5.7
Bay of Plenty	**-2,253**	**-1.9**

Table 3.1 Change in labour demand, 2006-2013, by age group[2]

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
15 - 19 Years	-456	-33.8%	-1,293	-35.2%	-867	-37.8%	-432	-40.4%	-87	-55.8%	-84	-40.0%	**-3,219**	**-36.8%**	-279	-40.1%	-345	-28.3%
20 - 34 years	-162	-4.6%	-909	-7.0%	-1,422	-17.6%	-588	-17.7%	-207	-36.7%	0	0.0%	**-3,288**	**-11.3%**	-294	-12.9%	-408	-10.0%
35 - 49 years	-1,356	-17.4%	-291	-1.7%	-1,833	-16.1%	-930	-17.5%	-333	-37.1%	-372	-29.1%	**-5,115**	**-11.6%**	-654	-18.5%	-600	-10.3%
50 - 64 years	915	14.6%	2,583	20.4%	1,020	13.1%	684	17.0%	-78	-11.5%	213	21.0%	**5,337**	**16.5%**	372	15.3%	741	17.5%
65 years and over	717	48.8%	1,566	77.4%	816	62.4%	357	50.0%	39	35.1%	75	28.4%	**3,570**	**60.6%**	243	53.3%	561	70.3%
Total	**-342**	**-1.7%**	**1,653**	**3.4%**	**-2,277**	**-7.4%**	**-912**	**-6.3%**	**-669**	**-27.8%**	**-159**	**-4.7%**	**-2,706**	**-2.2%**	**-612**	**-6.5%**	**-48**	**-0.3%**

Source: Statistics New Zealand Census 2013, BERL

- Between 2006 and 2013, employment amongst people in the 15-19, 20-34 and 35-49 age groups combined decreased by 11,622, whereas employment amongst people in the 50-64 and 65 and over age groups combined increased by 8,907.
- The percentage decline in employment in the 15-19 age group and percentage increase in employment in the 65 and over age group were particularly large.
- The pattern of employment change by age group was similar across the districts, except that Kawerau stood out as being the only district to experiencing a decrease in employment amongst 50-64 year olds.
- The pattern of employment change in the different age groups was similar in the comparison districts to the pattern in the Bay of Plenty Region as a whole. However, South Waikato District experienced a larger decrease, and Taupo experienced a smaller decrease than the Bay of Plenty.

Table 3.2 Change in labour demand, 2006-2013, by ethnicity

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
Maori	-42	-1.5%	156	2.4%	-756	-8.5%	33	0.7%	-348	-26.9%	-3	-0.2%	**-960**	**-3.7%**	-123	-5.4%	-156	-4.2%
Non-Maori	120	0.7%	1,650	3.9%	-1,710	-7.8%	-870	-8.7%	-294	-26.4%	-189	-10.7%	**-1,293**	**-1.4%**	-435	-6.1%	-309	-2.5%
Total	**78**	**0.4%**	**1,806**	**3.7%**	**-2,466**	**-8.0%**	**-837**	**-5.8%**	**-642**	**-26.7%**	**-192**	**-5.7%**	**-2,253**	**-1.9%**	**-558**	**-5.9%**	**-465**	**-2.9%**

Source: Statistics New Zealand Census 2013, BERL

- In percentage terms, the decrease in Māori employment in the Bay of Plenty between 2006 and 2013 was twice the decrease in total employment.
- However, Māori employment increased slightly in Whakatane, whereas it decreased among non-Māori. In Opotiki, Māori employment declined only marginally, whereas it declined significantly among non-Māori.
- Employment increased amongst both Māori and non-Māori in Tauranga.

[2] The numbers and percentages in this table slightly overstate the decline in employment between 2006 and 2013 because around 500 people in 2013 did not specify an age group or did not have their age recorded, whereas this does not appear to have happened in 2006.

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Table 3.3 Change in labour demand, 2006-2013, by industry[3]

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
Aquaculture	-27	-58.2%	58	58.5%	-37	-89.1%	-30	-100.0%	-2	-100.0%	-1	-44.6%	**-39**	**-17.6%**	-18	-85.9%	-41	-100.0%
Forestry	-171	-29.8%	-304	-33.7%	-242	-13.7%	-203	-18.0%	-180	-36.8%	15	13.4%	**-1,086**	**-21.8%**	-311	-26.5%	-302	-27.9%
Kiwifruit	479	37.1%	269	62.1%	-516	-82.6%	-271	-50.9%	-20	-63.0%	63	27.0%	**3**	**0.1%**	-402	-89.7%	-305	-77.6%
Dairy	-543	-35.0%	-192	-30.9%	307	40.0%	450	69.8%	-15	-38.7%	-35	-13.1%	**-29**	**-0.7%**	747	135.1%	293	63.0%
Other food cultivation & processing	78	7.9%	234	25.9%	-181	-32.8%	-148	-33.7%	7	25.0%	-44	-27.6%	**-53**	**-1.7%**	-116	-27.9%	-92	-31.9%
Energy	18	200.0%	48	84.2%	60	181.8%	87	126.1%	0	0.0%	6	200.0%	**219**	**123.7%**	6	50.0%	129	93.5%
Transport & logistics	41	8.1%	247	14.7%	3	0.5%	-46	-17.8%	-28	-42.5%	2	4.8%	**220**	**6.8%**	-21	-7.6%	9	2.4%
ICT	71	42.5%	246	38.6%	-68	-24.6%	-12	-13.7%	-9	-67.7%	1	13.6%	**228**	**19.3%**	-15	-32.6%	-17	-15.2%
Marine	1	1.0%	12	6.5%	-49	-46.4%	18	56.6%	2	59.1%	-4	-79.6%	**-19**	**-4.9%**	-12	-60.1%	10	24.1%
Sport & recreation	13	7.2%	62	9.5%	-1	-0.1%	8	6.7%	-9	-50.0%	-4	-20.2%	**70**	**4.6%**	-24	-28.4%	15	4.6%
Emerging techs	21	3.4%	99	4.2%	-289	-13.1%	-37	-6.3%	-46	-48.4%	-27	-18.1%	**-280**	**-4.7%**	-62	-18.5%	-150	-10.7%
Meat	18	12.1%	-20	-4.3%	-71	-29.5%	-15	-19.3%	-20	-100.0%	-6	-67.6%	**-114**	**-11.9%**	-67	-55.3%	-19	-17.9%
Tourism	13	1.7%	-197	-50.6%	145	38.3%	-42	-13.0%	-3	-22.4%	17	13.8%	**-67**	**-3.4%**	-77	-26.7%	223	104.2%
Key sectors	**10**	**0.1%**	**562**	**6.0%**	**-939**	**-11.5%**	**-238**	**-5.5%**	**-323**	**-39.0%**	**-18**	**-1.6%**	**-947**	**-3.1%**	**-373**	**-9.8%**	**-246**	**-4.9%**
Other	**68**	**0.5%**	**1,244**	**3.1%**	**-1,527**	**-6.7%**	**-602**	**-5.9%**	**-319**	**-20.2%**	**-174**	**-7.8%**	**-1,314**	**-1.5%**	**-185**	**-3.3%**	**-219**	**-2.0%**
Total	**78**	**0.4%**	**1,806**	**3.7%**	**-2,466**	**-8.0%**	**-840**	**-5.8%**	**-642**	**-26.7%**	**-192**	**-5.7%**	**-2,261**	**-1.9%**	**-558**	**-5.9%**	**-465**	**-2.9%**

Source: Statistics New Zealand Census 2013, BERL

- Between 2006 and 2013, employment in the Key sectors in the Bay of Plenty decreased by more than it did in other sectors.
- The largest industries included under "Other" are shown in Appendix A. The "Other" industries that showed the largest gains were in health and residential care. The "Other" industries that showed the largest losses were construction, building and property related.
- However, there was a marginal increase in Key sector employment in the Western Bay of Plenty, and a significant increase in Tauranga.
- At regional level, only five of the thirteen key sectors experienced an increase in employment.
- Employment in the Energy sector increased or remained unchanged in all of the Bay of Plenty districts.
- In the other Key sectors, there was a mixture of increases and decreases, albeit more decreases than increases overall.
- Employment in the sectors that are regarded as Key in the Bay of Plenty also decreased more than employment in the other (non-key) sectors in the two comparison districts.

[3] Green numbers represent those percentage changes over 25 percent, while red numbers represent negative percentage changes.

Table 3.4 Change in labour demand, 2006-2013, by occupation

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
Managers	-156	-3.1%	351	4.4%	-411	-7.8%	-141	-5.4%	-54	-27.3%	-63	-8.6%	**-474**	**-2.2%**	9	0.5%	21	0.7%
Professionals	321	12.0%	1,704	19.9%	48	0.9%	195	8.3%	-36	-13.8%	3	0.7%	**2,235**	**11.4%**	24	2.3%	246	11.7%
Technicians and trade workers	-144	-5.9%	-591	-8.7%	-618	-15.7%	-258	-14.4%	-78	-25.7%	-63	-20.2%	**-1,752**	**-11.3%**	-117	-10.7%	-183	-8.5%
Community and personal service workers	234	19.4%	744	18.8%	96	3.6%	144	13.6%	-27	-12.7%	12	4.9%	**1,203**	**12.9%**	-12	-1.7%	66	4.3%
Clerical and admin workers	-18	-0.9%	-36	-0.6%	-363	-10.7%	-195	-12.6%	-21	-10.3%	3	1.1%	**-630**	**-4.7%**	-33	-3.9%	-120	-7.5%
Sales workers	-111	-8.0%	-198	-3.6%	-345	-12.6%	-144	-12.8%	-45	-26.3%	-45	-19.7%	**-888**	**-8.0%**	-57	-8.4%	-132	-9.2%
Machinery operators and drivers	51	4.6%	-78	-2.8%	-219	-10.9%	-78	-8.1%	-132	-37.3%	-15	-8.6%	**-471**	**-6.4%**	-252	-24.4%	-204	-18.3%
Labourers	69	2.1%	87	1.7%	-396	-10.6%	-48	-2.5%	-153	-31.9%	66	10.5%	**-375**	**-2.5%**	-69	-4.2%	-51	-2.2%
Other	-168	-13.5%	-189	-8.3%	-264	-14.5%	-321	-30.0%	-99	-44.6%	-84	-25.2%	**-1,125**	**-16.2%**	-60	-9.7%	-117	-13.2%
Total	**78**	**0.4%**	**1,806**	**3.7%**	**-2,466**	**-8.0%**	**-837**	**-5.8%**	**-642**	**-26.7%**	**-192**	**-5.7%**	-2,253	-1.9%	**-558**	**-5.9%**	**-465**	**-2.9%**

Source: Statistics New Zealand Census 2013, BERL

- Between 2006 and 2013, employment in the Bay of Plenty decreased in nine out of the eleven occupational groups.
- However, there were significant increases amongst Professionals and Community and personal service workers. The latter group includes mainly child and elder care workers.
- Kawerau stands out as being the only district where employment decreased in every occupational group.
- The pattern of occupational change was somewhat different in the two comparison districts than it was in the Bay of Plenty region.

Table 3.5 Change in labour demand, 2006-2013, by highest educational qualification

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
No Qualification	-999	-22.6%	-2,208	-24.1%	-1,635	-25.3%	-774	-24.5%	-300	-41.0%	-228	-23.0%	**-6,144**	**-24.7%**	-639	-23.1%	-831	-22.8%
Level 1 to 4 Certificate Gained at School	366	5.5%	1,107	6.8%	-459	-4.7%	-12	-0.3%	-156	-22.4%	78	8.0%	**924**	**2.4%**	-24	-0.8%	126	2.4%
Level 1, 2 or 3 Certificate Gained Post-school	-261	-25.9%	-672	-24.4%	-678	-38.4%	-225	-29.9%	-87	-55.8%	-51	-31.5%	**-1,974**	**-29.9%**	-57	-12.3%	-186	-20.9%
Level 4 Certificate Gained Post-school	63	2.3%	-213	-3.1%	-369	-9.1%	-156	-7.5%	-66	-19.6%	-9	-2.4%	**-750**	**-4.6%**	-54	-4.3%	-72	-3.2%
Level 5 or 6 Diploma	72	3.1%	534	10.1%	-198	-6.5%	-96	-6.5%	-45	-24.6%	0	0.0%	**267**	**2.1%**	-42	-5.5%	-6	-0.4%
Bachelor Degree and Level 7 Qualifications	597	36.8%	2,331	47.2%	705	25.0%	408	33.3%	42	41.2%	45	22.1%	**4,128**	**37.8%**	210	39.8%	366	30.3%
Post-Graduate Qualifications	363	70.8%	1,092	65.4%	417	36.9%	180	42.9%	9	50.0%	27	40.9%	**2,088**	**54.7%**	81	60.0%	183	43.6%
Other	-114	-11.3%	-159	-7.4%	-246	-13.6%	-171	-18.6%	-42	-22.6%	-60	-21.3%	**-792**	**-12.5%**	-27	-4.6%	-48	-5.6%
Total	**78**	**0.4%**	**1,806**	**3.7%**	**-2,466**	**-8.0%**	**-837**	**-5.8%**	**-642**	**-26.7%**	**-192**	**-5.7%**	-2,253	-1.9%	**-558**	**-5.9%**	**-465**	**-2.9%**

Source: Statistics New Zealand Census 2013, BERL

- Between 2006 and 2013, the number of people in employment in the Bay of Plenty with no qualifications decreased by around a quarter.
- The percentage decline in the number of people with no qualifications was significantly greater in Kawerau than in other districts.
- In absolute terms, the increase in the number of employed people with a degree or post-graduate qualifications was as great as the decline in the number of people in employment with no qualifications.
- The number of people in employment with a degree increased significantly in all districts. The number of people in employment with a post-graduate qualification increased even more significantly.

- The pattern of change in the number of people with intermediate qualifications in employment was mixed, both across the districts and according to level of qualification.

3.2 Change in labour demand: summary

Table 3.6 Change in labour demand in the Bay of Plenty, 2006-2013, by age group

Figure 3.1 Change in labour demand in the Bay of Plenty, 2006-2013, by age group

	N	%
15 - 19 Years	-3,219	-36.8%
20 - 34 years	-3,288	-11.3%
35 - 49 years	-5,115	-11.6%
50 - 64 years	5,337	16.5%
65 years plus	3,570	60.6%
Total	**-2,706**	**-2.2%**

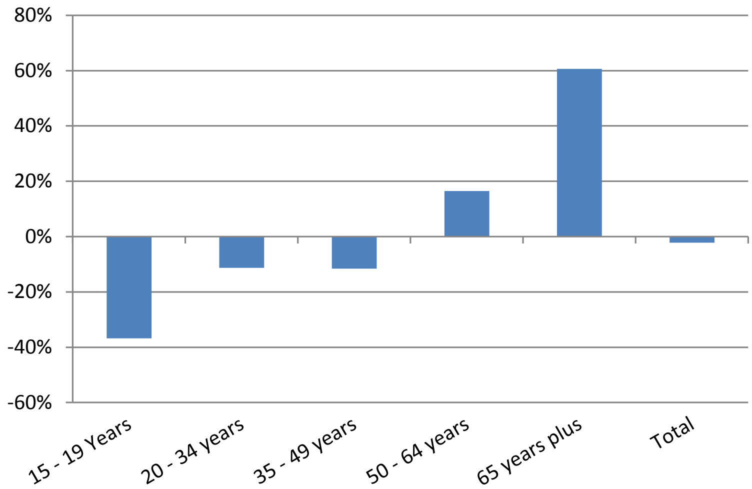


Table 3.7 Change in labour demand in the Bay of Plenty, 2006-2013, by ethnicity

Figure 3.2 Change in labour demand in the Bay of Plenty, 2006-2013, by ethnicity

	N	%
Maori	-960	-3.7%
Non-Maori	-1,293	-1.4%
Total	**-2,253**	**-1.9%**

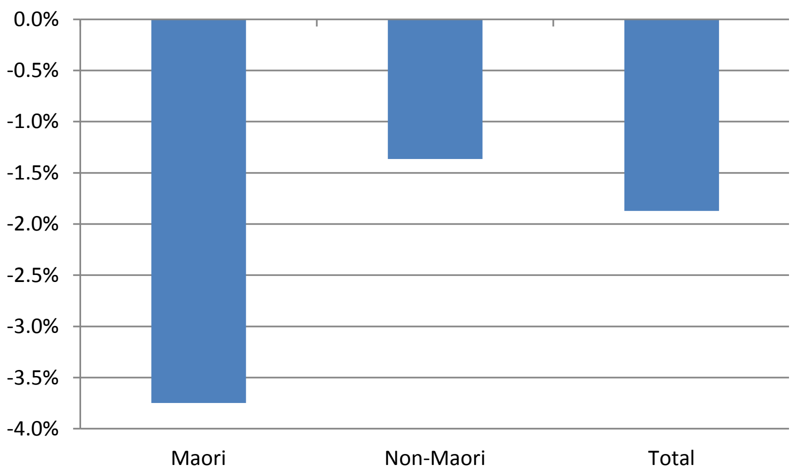


Table 3.8 Change in labour demand in the Bay of Plenty, 2006-2013, by sector

Figure 3.3 Change in labour demand in the Bay of Plenty, 2006-2013, by sector

	N	%
Key sectors	-947	-3.1%
Other sectors	-1,314	-1.5%
Total	**-2,261**	**-1.9%**

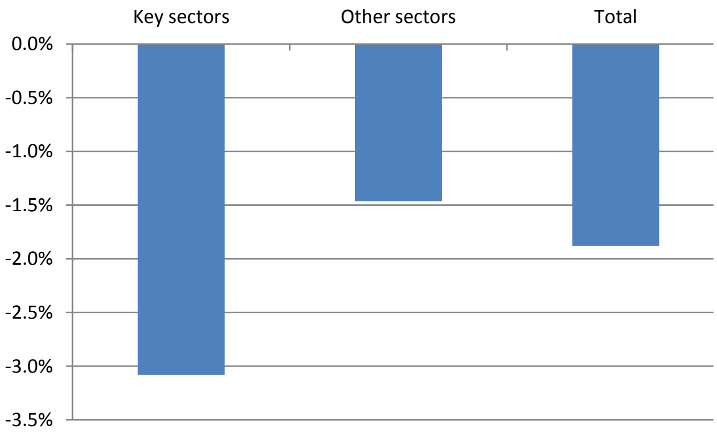


Table 3.9 Change in labour demand in the Bay of Plenty, 2006-2013, by occupation

Figure 3.4 Change in labour demand in the Bay of Plenty, 2006-2013, by occupation

	N	%
Managers	-474	-2.2%
Professionals	2,235	11.4%
Tech & trade workers	-1,752	-11.3%
Community & personal service	1,203	12.9%
Clerical & admin workers	-630	-4.7%
Sales workers	-888	-8.0%
Machinery operators & drivers	-471	-6.4%
Labourers	-375	-2.5%
Other	-1,125	-16.2%
Total	**-2,253**	**-1.9%**

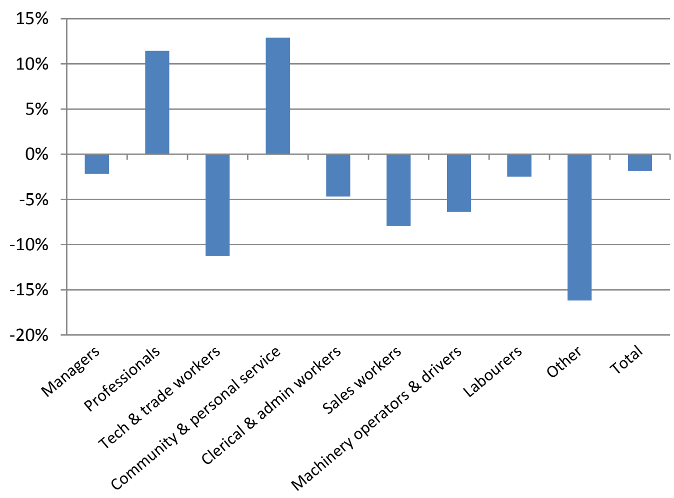
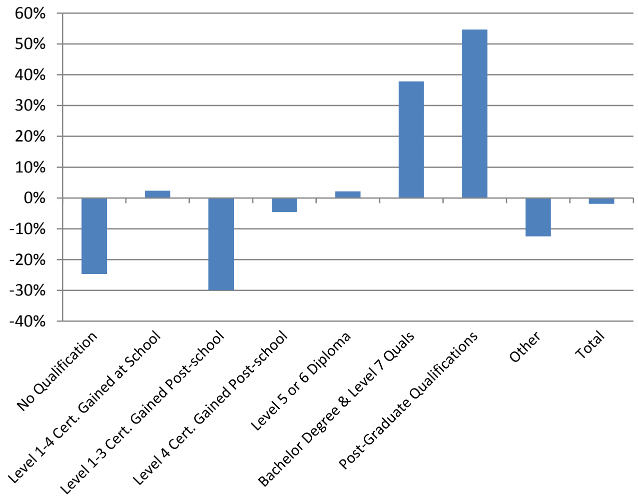


Table 3.10 Change in labour demand in the Bay of Plenty, 2006-2013, by highest educational qualification

Figure 3.5 Change in labour demand in the Bay of Plenty, 2006-2013, by highest educational qualification

	N	
No Qualification	-6,144	-
Level 1-4 Cert. Gained at School	924	
Level 1-3 Cert. Gained Post-school	-1,974	-
Level 4 Cert. Gained Post-school	-750	
Level 5 or 6 Diploma	267	
Bachelor Degree & Level 7 Quals	4,128	
Post-Graduate Qualifications	2,088	
Other	-792	-
Total	**-2,253**	



3.3 Changes in unemployed labour

Key points: Changes in unemployment

- Between 2006 and 2013:
  - The number of unemployed people increased in every district in the region, in all age groups, amongst both Māori and non-Māori, and regardless of qualification level.
  - The percentage increases in the number of unemployed people tended to be greatest in the categories (i.e. district, age group, ethnicity, qualifications) where unemployment rates were lowest in 2006.

Table 3.11 Change in unemployed labour in the Bay of Plenty, 2006-2013, by age group

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
15 - 19 Years	36	11%	195	25%	39	6%	6	2%	0	0%	-3	-4%	**273**	**12%**	-15	-7%	45	25%
20 - 34 years	201	77%	480	57%	411	56%	156	34%	99	73%	6	5%	**1,353**	**53%**	159	58%	84	35%
35 - 49 years	153	65%	423	67%	267	49%	90	26%	48	48%	-6	-6%	**975**	**50%**	141	76%	69	43%
50 - 64 years	216	180%	426	127%	228	90%	171	114%	60	143%	27	60%	**1,128**	**119%**	63	54%	105	103%
65 years and over	15	56%	45	88%	21	117%	6	50%	0	0%	9	0%	**96**	**86%**	9	100%	12	100%
Total	**615**	**63%**	**1,572**	**60%**	**966**	**44%**	**435**	**35%**	**204**	**54%**	**24**	**7%**	**3,816**	**49%**	**369**	**46%**	**312**	**45%**

Source: Statistics New Zealand Census 2013, BERL

- In the Bay of Plenty as a whole, unemployment increased in every age group between 2006 and 2013.
- The largest increases were in the older age groups, albeit from a low base in the case of people aged 65 years and over.
- There were large variations across the region in terms of both age group and district.
- In conjunction with earlier tables, the figures above imply that the increases in the unemployment rates in the Bay of Plenty by age group were:
  - 15-19 years old 53.9%
  - 20-34 years old 62.8%
  - 35-49 years old 64.3%
  - 50-64 years old 83.7%
  - 65 years and older 15.7%.

Table 3.12 Change in unemployed labour in the Bay of Plenty, 2006-2013, by ethnicity

	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
Maori	216	60%	510	62%	603	46%	309	35%	150	50%	21	7%	**1,809**	**45%**	186	45%	195	59%
Non-Maori	399	65%	1,062	59%	363	42%	126	35%	54	69%	3	4%	**2,007**	**53%**	183	47%	117	33%
Total	**615**	**63%**	**1,572**	**60%**	**966**	**44%**	**435**	**35%**	**204**	**54%**	**24**	**7%**	**3,816**	**49%**	**369**	**46%**	**312**	**45%**

Source: Statistics New Zealand Census 2013, BERL

- In both absolute and percentage terms, unemployment increased less amongst Māori than amongst non-Māori between 2006 and 2013.
- In conjunction with earlier tables, the figures above imply that the increases in the unemployment rates in the Bay of Plenty by ethnicity were:
  - Māori 41.4%
  - Non-Māori 51.7%.

Table 3.13 Change in unemployed labour in the Bay of Plenty, 2006-2013, by highest educational qualification

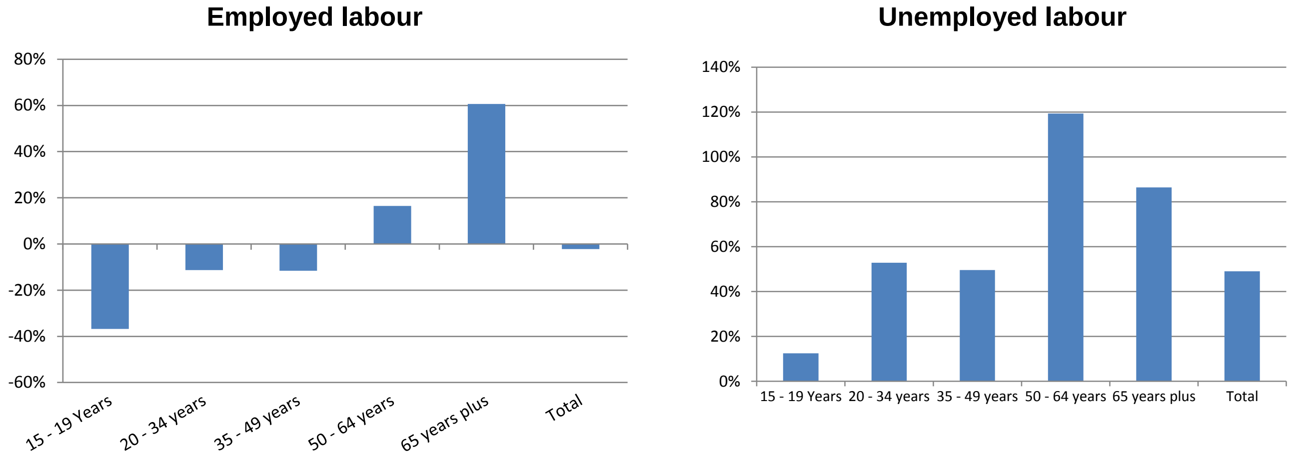
	Western Bay of Plenty District		Tauranga City		Rotorua District		Whakatane District		Kawerau District		Opotiki District		**Bay of Plenty Region**		South Waikato District		Taupo District	
	N	%	N	%	N	%	N	%	N	%	N	%	**N**	**%**	N	%	N	%
No Qualification	66	21%	159	21%	84	11%	0	0%	54	35%	-48	-28%	**315**	**12%**	48	14%	51	21%
Level 1 to 4 Certificate Gained at School	300	91%	789	94%	453	73%	237	74%	66	61%	48	57%	**1,893**	**82%**	156	68%	162	84%
Level 1, 2 or 3 Certificate Gained Post-school	51	77%	75	33%	21	11%	9	8%	6	18%	-6	-17%	**156**	**23%**	30	43%	18	43%
Level 4 Certificate Gained Post-school	60	100%	117	56%	141	96%	51	55%	33	157%	15	83%	**417**	**76%**	66	138%	21	41%
Level 5 or 6 Diploma	51	89%	132	83%	84	122%	42	100%	21	700%	3	20%	**333**	**96%**	6	22%	15	42%
Bachelor Degree and Level 7 Qualifications	45	115%	156	104%	123	158%	33	85%	9	150%	6	100%	**372**	**117%**	15	100%	12	57%
Post-Graduate Qualifications	12	67%	87	264%	12	40%	12	200%	6	0%	0	0%	**129**	**143%**	6	0%	9	150%
Other	30	31%	54	22%	48	19%	45	31%	9	18%	9	27%	**195**	**23%**	45	60%	30	32%
Total	**615**	**63%**	**1,572**	**60%**	**966**	**44%**	**435**	**35%**	**204**	**54%**	**24**	**7%**	**3,816**	**49%**	**369**	**46%**	**312**	**45%**

Source: Statistics New Zealand Census 2013, BERL

- The percentage increases in the number of unemployed people were greatest amongst people with degree and post-graduate qualifications.
- However, the largest absolute increase was amongst people with school-only qualifications.
- The pattern was broadly the same across all districts.
- In conjunction with earlier tables, the figures above imply that the increases in the unemployment rates in the Bay of Plenty by level of qualification were:
  - No qualifications 41.7
  - Level 1-4 Certificate gained at school 70.6
  - Level 1-3 Certificate gained post-school 64.0
  - Level 4 Certificate gained post-school 79.4
  - Level 5 or 6 Diploma 87.8
  - Bachelor's Degree and Level 7 qualification 54.9
  - Post-graduate qualifications 55.2
  - Other 34.6

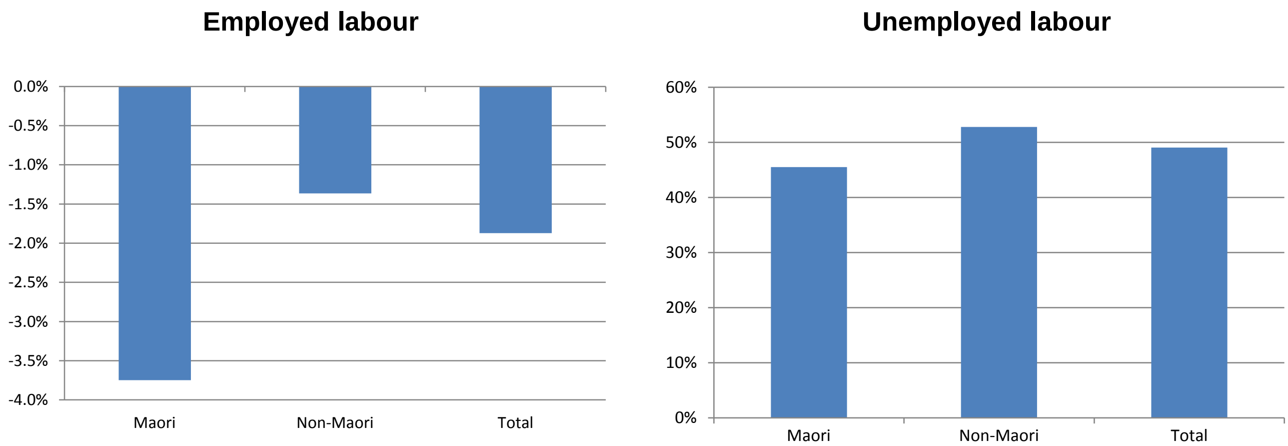
3.4 Comparison between changes in employed and unemployed labour: Summary

Figure 3.6 Change in employment and unemployment in the Bay of Plenty, 2006-2013, by age group



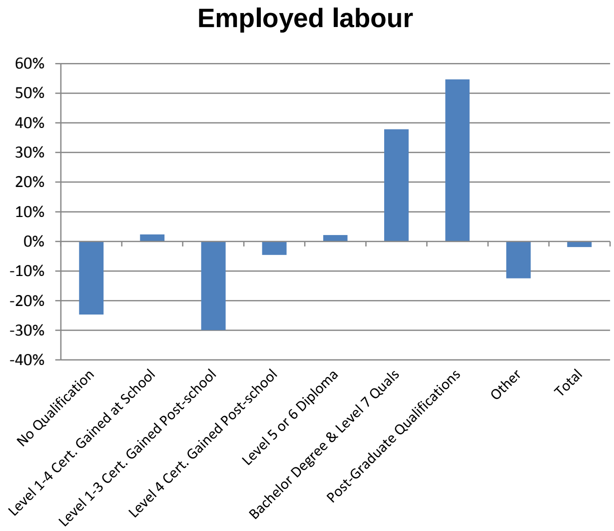
- The largest percentage increases in the number of unemployed people were in the age groups where employment grew most.
- Conversely, the smallest percentage increases in the number of unemployed people were in the age groups where employment grew least.
- This pattern reflects the ageing of the workforce.
- Employment grew only amongst older workers, but unemployment grew in all age groups.

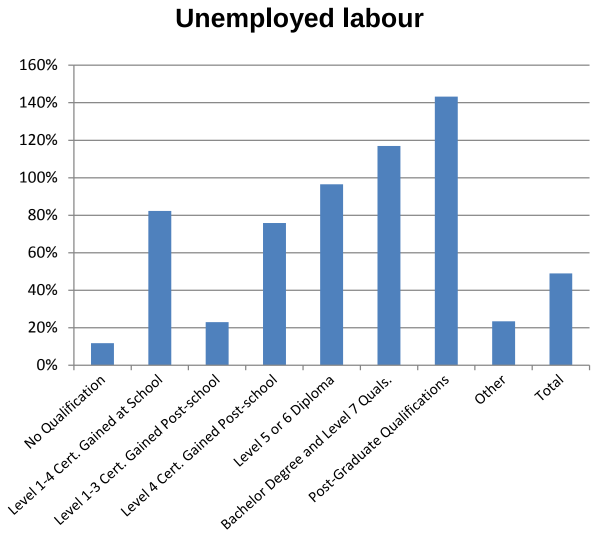
Figure 3.7 Change in employment and unemployment in the Bay of Plenty, 2006-2013, by ethnicity



- The percentage increase in the number of unemployed Māori was lower than the percentage increase in the number of unemployed non-Māori, despite the fact that Māori employment grew more slowly than non-Māori employment.

Figure 3.8 Change in employment and unemployment in the Bay of Plenty, 2006-2013, by highest educational qualification





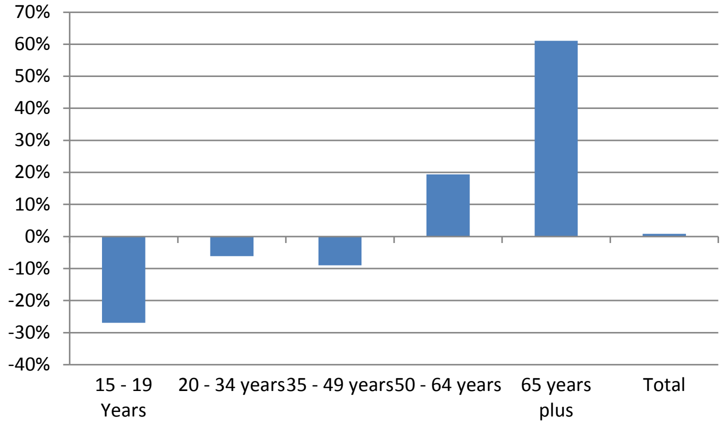
- By level of qualification, the only significant percentage increases in the number of employed people were amongst people with degrees or post-graduate qualifications.
- However, at the same time there were significant percentage increases in the number of unemployed people regardless of qualification level.
- The percentage increases were greater amongst people with higher level qualifications, albeit from a low base. As was shown in section 2, unemployment rates amongst people with higher level qualifications were still very much lower in 2013 than amongst people with low or no qualifications.

3.5 Change in labour supply: summary

Table 3.14 Change in labour supply in the Bay of Plenty, 2006-2013, by age group

Figure 3.9 Change in labour supply in the Bay of Plenty, 2006-2013, by age group

	N	%
15 - 19 Years	-2,946	-26.9%
20 - 34 years	-1,935	-6.1%
35 - 49 years	-4,140	-9.0%
50 - 64 years	6,466	19.4%
65 years plus	3,666	61.1%
Total	**1,110**	**0.9%**

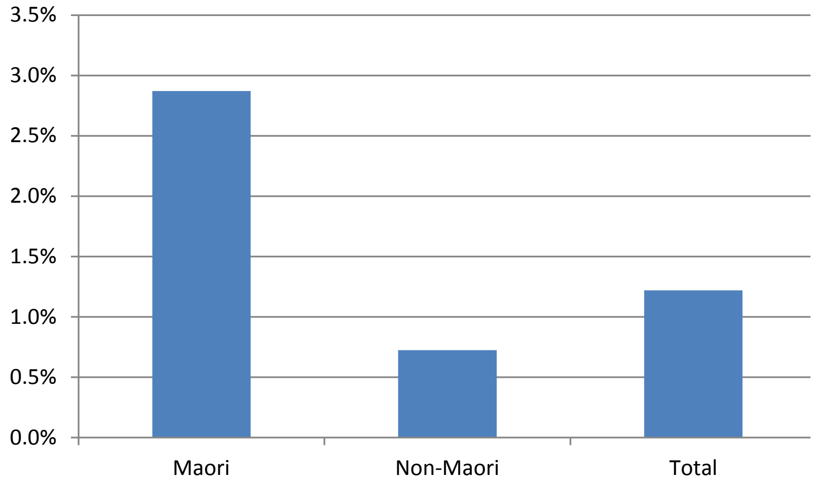


- The table and chart above make clear that there was a significant ageing of the workforce in the Bay of Plenty between 2006 and 2013.

Table 3.15 Change in labour supply in the Bay of Plenty, 2006-2013, by ethnicity

Figure 3.10 Change in labour supply in the Bay of Plenty, 2006-2013, by ethnicity

	N	%
Maori	849	2.9%
Non-Maori	714	0.7%
Total	**1,563**	**1.2%**

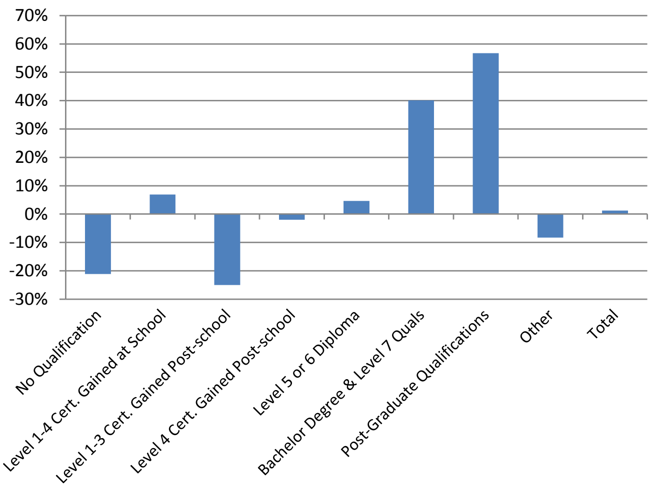


- The Māori labour supply in the Bay of Plenty grew by more than the non-Māori labour supply between 2006 and 2013.

Table 3.16 Change in labour supply in the Bay of Plenty, 2006-2013, by highest educational qualification

Figure 3.11 Change in labour supply in the Bay of Plenty, 2006-2013, by highest educational qualification

	N	%
No Qualification	-5,830	-21.1%
Level 1-4 Cert. Gained at School	2,817	6.9%
Level 1-3 Cert. Gained Post-school	-1,818	-25.0%
Level 4 Cert. Gained Post-school	-333	-2.0%
Level 5 or 6 Diploma	600	4.6%
Bachelor Degree & Level 7 Quals	4,500	40.1%
Post-Graduate Qualifications	2,217	56.7%
Other	-597	-8.3%
Total	**1,563**	**1.2%**



- The workforce in the Bay of Plenty became siginficantly better qualified between 2006 and 2013.

4 Changes in labour demand and supply: differences between Bay of Plenty and New Zealand

Key points:

- Between 2006 and 2013:
    - Employment increased nationally, but decreased in the Bay of Plenty.
    - Employment of people aged 65 years and over increased more rapidly in the Bay of Plenty than it did nationally.
    - Māori unemployment in the Bay of Plenty decreased by more than it did nationally.
    - Employment in the Bay of Plenty's key sectors decreased more within the region than it did nationally.
    - The pattern of occupational change in the region was similar to the pattern of change nationally, although the Bay of plenty did not experience the increase in the number of managers that occurred nationally.
    - The pattern of employment change by level of qualification was very similar in the Bay of Plenty to the national pattern.

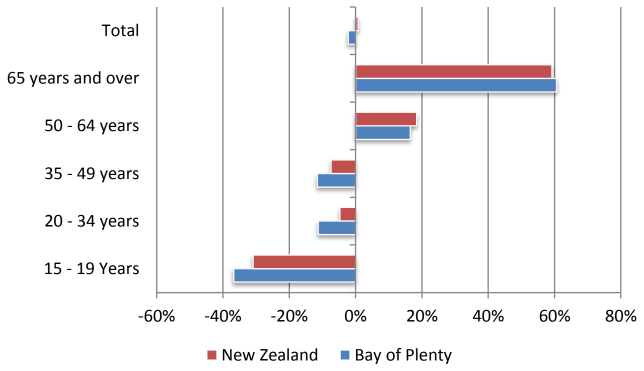
4.1 Labour demand

Table 4.1 Change in labour demand, 2006-2013, by age group, Bay of Plenty and New Zealand

Figure 4.1 Change in labour demand, 2006-2013, by age group, Bay of Plenty and New Zealand

	Bay of Plenty Region		Total New Zealand	
	N	%	N	%
15 - 19 Years	-3,219	-36.8%	-42,378	-30.9%
20 - 34 years	-3,288	-11.3%	-26,646	-4.7%
35 - 49 years	-5,115	-11.6%	-53,367	-7.4%
50 - 64 years	5,337	16.5%	89,469	18.4%
65 years and over	3,570	60.6%	48,144	59.2%
Total	**-2,706**	**-2.2%**	**15,231**	**0.8%**

Source: Statistics New Zealand Census 2013, BERL



- The table and chart above slightly exaggerate the decrease in labour demand in the Bay of Plenty between 2006 and 2013 because around 500 employed people in the region did not state their age or did not have their age recorded in the 2013 Census. However, even allowing for this, there was still a decline in employment at regional level and an increase at national level.

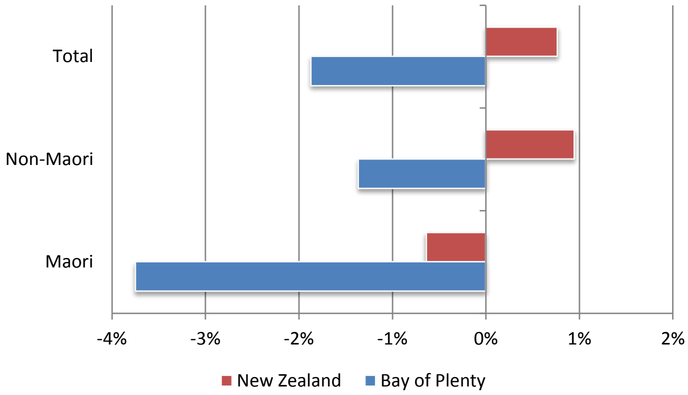
- The only age group where the Bay of Plenty did better than New Zealand as a whole was in 65 years and over group.

Table 4.2 Change in labour demand, 2006-2013, by ethnicity, Bay of Plenty and New Zealand

Figure 4.2 Change in labour demand, 2006-2013, by ethnicity, Bay of Plenty and New Zealand

	Bay of Plenty Region		Total New Zealand	
	N	%	N	%
Maori	-960	-3.7%	-1,434	-0.6%
Non-Maori	-1,293	-1.4%	16,662	0.9%
Total	**-2,253**	**-1.9%**	**15,228**	**0.8%**

Source: Statistics New Zealand Census 2013, BERL



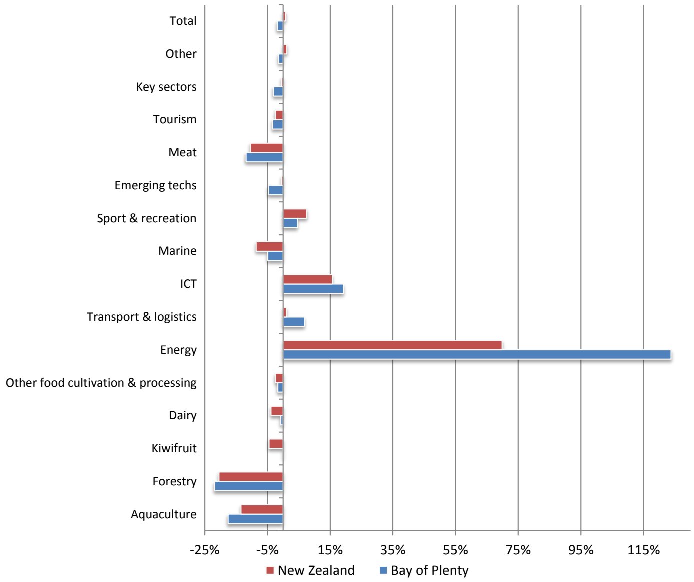
- New Zealand had an increase in non-Māori employment between 2006 and 2013, while the Bay of Plenty had a decrease.
- Māori employment decreased both nationally and regionally, but the decrease was greater in the Bay of Plenty.

Table 4.3 Change in labour demand, 2006-2013, by industry, Bay of Plenty and New Zealand

Figure 4.3 Change in labour demand, 2006-2013, by industry, Bay of Plenty and New Zealand

	Bay of Plenty Region		Total New Zealand	
	N	%	N	%
Aquaculture	-39	-17.6%	-235	-13.5%
Forestry	-1,086	-21.8%	-6,594	-20.5%
Kiwifruit	3	0.1%	-203	-4.5%
Dairy	-29	-0.7%	-1,995	-3.9%
Other food cultivation & processing	-53	-1.7%	-1,606	-2.5%
Energy	219	123.7%	3,108	69.9%
Transport & logistics	220	6.8%	473	1.0%
ICT	228	19.3%	7,446	15.7%
Marine	-19	-4.9%	-730	-8.6%
Sport & recreation	70	4.6%	1,591	7.5%
Emerging techs	-280	-4.7%	-514	-0.5%
Meat	-114	-11.9%	-1,759	-10.5%
Tourism	-67	-3.4%	-1,521	-2.5%
Key sectors	**-947**	**-3.1%**	**-2,538**	**-0.6%**
Other	**-1,314**	**-1.5%**	**17,784**	**1.2%**
Total	**-2,261**	**-1.9%**	**15,246**	**0.8%**

Source: Statistics New Zealand Census 2013, BERL



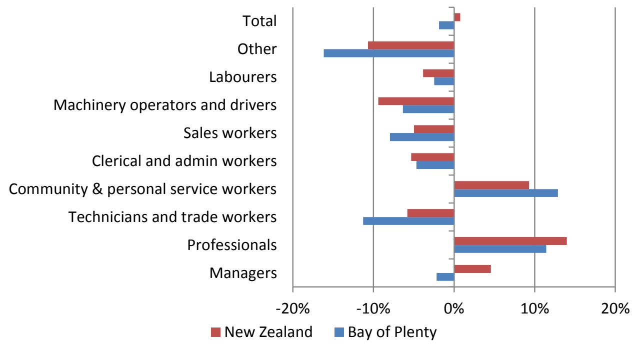
- Between 2006 and 2013, employment in the sectors that are designated as key in the Bay of Connections strategy framework fell by less at national level than it did in the Bay of Plenty region.
- Employment in most key Bay of Plenty industries decreased at both regional and national level, or increased at both regional and national level. The exception was the kiwifruit industry, where employment increased marginally in the Bay of plenty, but decreased at national level.
- In terms of percentage employment change, Energy was an outlier in the Bay of Plenty and at national level.
- As was noted earlier, “Other” industries are dominated by public services (e.g. education, health and care services) and property and construction related industries (including building, civil engineering, property management and real estate).

Table 4.4 Change in labour demand, 2006-2013, by occupation, Bay of Plenty and New Zealand

Figure 4.4 Change in labour demand, 2006-2013, by occupation, Bay of Plenty and New Zealand

	Bay of Plenty Region		Total New Zealand	
	N	%	N	%
Managers	-474	-2.2%	15,543	4.6%
Professionals	2,235	11.4%	52,365	14.0%
Technicians and trade workers	-1,752	-11.3%	-14,037	-5.8%
Community & personal service workers	1,203	12.9%	14,565	9.3%
Clerical and admin workers	-630	-4.7%	-12,816	-5.3%
Sales workers	-888	-8.0%	-9,243	-5.0%
Machinery operators and drivers	-471	-6.4%	-10,749	-9.4%
Labourers	-375	-2.5%	-8,397	-3.8%
Other	-1,125	-16.2%	-11,997	-10.7%
Total	**-2,253**	**-1.9%**	**15,228**	**0.8%**

Source: Statistics New Zealand Census 2013, BERL



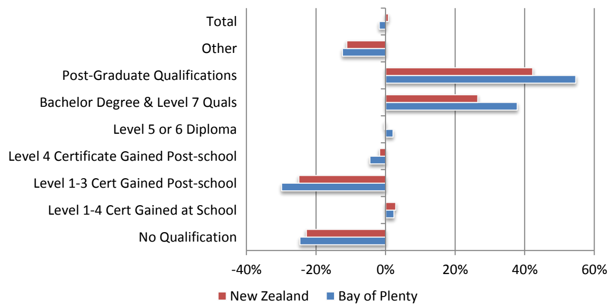
- The pattern of occupational change between 2006 and 2013 in the Bay of Plenty was similar to the pattern at national level, except that the number of Managers employed decreased in the Bay of Plenty, while it increased nationally.
- The greatest percentage increases were amongst Community and personal service workers in the Bay of Plenty and amongst Professionals at national level.
- However, both regionally and nationally, the greatest absolute increases in employment were amongst Professionals.

Table 4.5 Change in labour demand, 2006-2013, by highest educational qualification, Bay of Plenty and New Zealand

Figure 4.5 Change in labour demand, 2006-2013, by highest educational qualification, Bay of Plenty and New Zealand

	Bay of Plenty Region		Total New Zealand	
	N	%	N	%
No Qualification	-6,144	-24.7%	-80,961	-22.8%
Level 1-4 Cert Gained at School	924	2.4%	19,107	2.9%
Level 1-3 Cert Gained Post-school	-1,974	-29.9%	-22,737	-25.0%
Level 4 Certificate Gained Post-school	-750	-4.6%	-3,975	-1.8%
Level 5 or 6 Diploma	267	2.1%	-723	-0.4%
Bachelor Degree & Level 7 Quals	4,128	37.8%	68,115	26.5%
Post-Graduate Qualifications	2,088	54.7%	46,377	42.3%
Other	-792	-12.5%	-9,978	-11.2%
Total	**-2,253**	**-1.9%**	**15,228**	**0.8%**

Source: Statistics New Zealand Census 2013, BERL



- The pattern of employment change according to highest educational qualification was very similar in the Bay of Plenty to the pattern at national level.
- In absolute and percentage terms, the greatest increases in employment, both regionally and nationally were people with Degrees and Post-graduate qualifications.
- Likewise, the greatest decreases in employment were amongst people with No qualifications or lower level post-school qualifications.

5 Looking to the future

Key points:

- Previous sections of this report showed decreasing employment and increasing unemployment in the Bay of Plenty region between 2006 and 2013. Employment decreased in the majority of key industries and major occupational groups.
- However, the future seems much more positive. In the medium to longer term, employment in the region is projected by both MBIE and BERL to increase in virtually all industries.
- Employment in the highly skilled and skilled occupations is projected to increase especially fast, but employment in lower skilled occupations will also increase.
- In combination with NIDEA's labour force projections, BERL's employment projections for the Bay of Plenty imply that unemployment will decrease.
- If strategy boosts economic growth, and if participation rates amongst women and older workers do not increase, the region is likely to experience labour shortages.

5.1 Short-term employment prospects

This section examines employment prospects in the period to 2016. It draws on projections by MBIE, which mainly focus on the national picture, but which also provide some regional information. BERL's economic scenarios, produced for the Bay of plenty Regional Council in 2013, are also used. It should be noted that the MBIE projections and BERL's projections have slightly different timeframes.

5.1.1 National employment prospects 2013-2016

The key points from MBIE's mid-2013 analysis of short-term employment prospects[4] were that:

- Employment will increase gradually, growing by 1.3% between 2013 and 2014 year to March, by 2.3% between 2014 and 2015 year to March and by 2.1% between 2015 and 2016 year to March.
- The unemployment rate is expected to trend down slowly, falling to 6.0% by March quarter 2014 down to 5.7% by March quarter 2015 and decline below 5% by March quarter 2016.
- Strong employment growth is expected in the Construction and Utilities industries over the next 3 years, while the prospects for employment in other industries vary over time.
- Growth in demand for employment in highly skilled jobs (that is, Managers and Professionals across a number of areas) will be consistently high over the forecast period, accounting for about 50% of the overall employment growth.
- Opportunities for lower-skilled workers are expected to account for about 35% of the employment growth over the period. The Food processing, Retailing, Accommodation, Agriculture and Construction industries are expected to create most of these opportunities.

[4] http://www.dol.govt.nz/publications/research/short-term-employment-prospects/short-term-employment-prospects.pdf

- Employment growth will be strongest mainly in the Auckland and Canterbury regions.
- The global economic outlook is much better than six months ago with lower downside risk. The uncertainty and concerns that the Eurozone may fall into recession have diminished. The prospects for growth in the US have strengthened while weakening somewhat in Australia and China. This could dampen New Zealand's export demand and returns, although the Canterbury rebuild will provide a strong growth stimulus for the economy.

MBIE's analysis was based on Treasury forecasts of GDP growth of 2.4% in 2014, 3.0% in 2015 and 2.6% in 2016. This would lead to employment growth of 1.3%, 2.3% and 2.1% in the same years. This is equivalent to a 130,200 increase in the number of jobs over the three year period.

It should be noted, however, that the growth forecasts MBIE used already look to be conservative. The Treasury's 2014 Budget Economic and Fiscal Update (BEFU) included forecasts of GDP growth (production measure) of 3.0% in 2014, 4.0% in 2015 and 3.0% in 2016. Reflecting the more rapid GDP growth rate, evidence of employment growth that is more rapid than MBIE forecast has already emerged. The latest results from the Household Labour Force Survey (HLFS) showed employment growth at national level of 83,000, or 3.7%, in the year to March 2014. In other words, the employment growth measured by the HLFS for the year to March 2014 was approximately the same as MBIE forecast would occur in 2014 and 2015 combined.

Table 5.1 shows MBIE's forecasts of employment at aggregated industry level. The table suggests that during the three years, the industries with the greatest employment growth will be Construction and utilities (increasing by 36,700 jobs), Health and education (22,400) and Other private services[5] (18,800). Over the three year period, employment is expected to grow in every aggregated industry.

Table 5.1 Employment growth by aggregated industry, March years

	2014		2015		2016	
Aggregated industry	**(000)**	**(%)**	**(000)**	**(%)**	**(000)**	**(%)**
Primary sector	3.2	2.0%	2.5	1.5%	1.5	0.9%
Primary processing	1.7	1.7%	1.5	1.5%	1.2	1.1%
Other manufacturing	-0.2	-0.1%	2.1	1.3%	1.8	1.2%
Construction and utilities	12.8	6.7%	17.1	8.3%	6.8	3.1%
Wholesale and Retail trade	2.8	0.9%	5.8	1.8%	8.6	2.7%
Hospitality	1.3	1.0%	2.0	1.5%	1.9	1.4%
Transport and storage	0.7	0.7%	2.2	2.1%	2.6	2.5%
Other private services	2.2	0.6%	7.7	2.0%	8.9	2.2%
Core government sector	-1.2	-0.9%	1.5	1.2%	2.3	1.8%
Health and education	3.4	0.8%	7.7	1.8%	11.3	2.6%
Other public services	1.6	1.2%	2.4	1.8%	2.7	1.8%
Total	**28.4**	**1.3%**	**52.3**	**2.3%**	**49.5**	**2.1%**

Source: MBIE

[5] "Other private services" include Communications services, Finance and insurance, Property services and Business services.

Table 5.2 shows forecasts of employment growth by broad skill level, and it implies that almost two-thirds of the new jobs created (i.e. 65%) will be in the Highly skilled and Skilled categories. A similar proportion of the opportunities created by people retiring will be in the same categories.

Table 5.2 Employment growth by skills level, March years

Skill level	**2014**		**2015**		**2016**	
(ANZSCO based)	**(000)**	**(%)**	**(000)**	**(%)**	**(000)**	**(%)**
Highly skilled	15.8	17.7%	25.8	2.8%	25.9	2.7%
Skilled	4.3	1.7%	7.6	2.9%	4.8	1.7%
Semi-skilled	3.1	0.5%	10.3	1.6%	12.4	1.8%
Elementary skilled	5.2	1.4%	8.6	2.2%	6.4	1.6%
Total	**28.4**	**1.3%**	**52.3**	**2.3%**	**49.5**	**2.1%**

Source: MBIE

Table 5.3 indicates that, at 2.0% per annum, employment growth in the Bay of Plenty during the period 2013-16 will be slightly above the national rate of 1.9%. Only the Canterbury region is expected to experience a more rapid employment growth rate.

Table 5.3 Employment growth by region, 2013-16, March years

	2013-2016	
Region	**Total increase (000)**	**% per annum**
Northland	4.3	2.0%
Auckland	36.1	1.7%
Waikato	9.0	1.9%
Taranaki	6.1	2.0%
Bay of Plenty	9.0	2.0%
East Coast	5.6	1.8%
Central	7.0	2.0%
Wellington	10.5	1.4%
Nelson	5.9	2.0%
Canterbury	23.7	2.7%
Southern	13.3	2.0%
Total	**130.2**	**1.9%**

Source: MBIE

5.1.2 Bay of Plenty employment prospects, 2012-2017

In 2013, BERL developed a set of economic scenarios for the Bay of Plenty, covering the period up to 2022[6]. For the sake of brevity, at this point we summarise the Business as Usual scenario up to 2017.

Table 5.4 suggests that employment in the Bay of Plenty's key industries will increase across the board, but it also indicates that employment in the key industries will grow slightly more slowly than employment in other industries combined.

[6] Bay of Plenty economic scenarios –Exploring alternative futures, BERL, October 2013.

Table 5.4 Projected Bay of Plenty employment (FTEs), by industry, 2012 and 2017

Industry	FTEs in 2012	FTEs in 2017	% change 2012-2017
Aquaculture	316	352	11.4%
Forestry	5,834	5,877	7.4%
Kiwifruit	4,195	4,372	4.2%
Dairy	5,780	5,959	3.1%
Other food cultivation and processing	3,578	3,924	9.7%
Energy	871	1,061	21.8%
Transport and logistics	4,284	4,717	10.1%
ICT	872	938	7.6%
Marine	366	425	16.1%
Sport and recreation	1,793	1,893	5.6%
Tourism	6,513	6,954	6.8%
Emerging technologies	1,068	1,285	20.3%
Meat	2,009	2,037	1.4%
Total: Bay of Plenty key industries	**37,480**	**39,800**	**6.2%**
Other industries	**84,293**	**90,700**	**7.6%**
All industries	**121,772**	**130,500**	**7.2%**

Source: BERL CGE projections to 2022

5.2 Medium- to longer-term employment prospects

5.2.1 National employment outlook to 2020

MBIE also publishes projections for employment from 2015 to 2020[7]. The latest projections were published in June 2012 and the key points were that:

- The employment outlook over the medium-longer term is for steadier and moderate employment growth on average, but declining further out.
- Total employment is expected to increase by 172,400 over the 2010-15 period and by about 154,000 over the subsequent five years to 2020.
- This represents employment growth of about 1.6% per year (or 34,500 jobs on average) and about 1.3% per year (or about 31,000 jobs on average), respectively.
- This employment outlook is conditional on average GDP growth of 2.8% and 2.9% over the 2010-15 and 2015-20 periods, respectively.
- Increasing labour supply constraints arising from an ageing population and reduced labour force growth underpin this outlook. Labour supply constraints are expected to push up labour

[7] http://www.dol.govt.nz/publications/research/medium-long-term-employment-outlook/medium-long-term-employment-outlook.pdf

costs and lead to increased capital investment by firms. This is expected to result in productivity rising by about one-third from 2015 to 2020.

- Strong employment growth is expected in the Primary processing, certain Manufacturing industries such as Machinery and equipment, Metal products and Construction-related activities. Service industries, including the Health and Education sectors, will also experience modest employment growth. The growth will be strongest for highly-skilled occupations, including managers and professionals.
- Opportunities for lower-skilled workers are expected to account for more than one-third of employment growth over the 2010-15 period. This will be somewhat lower over the 2015-20 period as employment growth in the construction sector slows. The Food processing, retailing, accommodation and construction industries are expected to create most of these opportunities.
- The number of workers retiring is expected to rise from about 50,000 per year during 2010-15 to about 70,000 per year during 2015-20, even with slightly higher participation by older workers.

MBIE's analysis was based on assumptions of GDP growth of 2.8% per annum between 2010 and 2015, and 2.9% per annum between 2015 and 2020. This would lead to employment growth of 1.6% per annum between 2010 and 2015, and 1.3% per annum between 2015 and 2020. Employment growth is projected to slow after 2015, despite a faster GDP growth rate. This is because the labour force is expected to grow more slowly, so necessitating more rapid increases in productivity.

Table 5.5 indicates that employment is projected to grow in every broad industry group, even if only marginally in the case of Government administration and defence. Approaching half (i.e. 44%) of the projected employment growth is expected to be in the Private services sector (including Banking, finance and insurance, and Arts, recreation and personal services). Almost a quarter (24%) is expected to be in the various public services.

Table 5.5 Projected employment growth, by broad industry group, New Zealand, 2015-2020

Industry group	Absolute increase ('000s)	Annual % increase
Primary sector	6.7	0.8%
Primary processing	6.0	1.1%
Other manufacturing	15.6	1.7%
Construction and utilities	10.7	1.0%
Private services sector	67.4	1.3%
Government administration and defence	1.5	0.3%
Health and education	31.5	1.4%
Other public services	14.5	1.8%
Total	**154.1**	**1.3%**

Source: MBIE

Table 5.6 implies that almost 70% of the new jobs projected to be created between 2015 and 2020 will be highly skilled or skilled. A further 18% will be semi-skilled and only 14% will be elementary skilled. However, during 2015-2020, around 70,000 opportunities are expected to be created by people moving into retirement. Just over half of these (52%) are expected to be in highly skilled and skilled occupations, with the remainder in semi-skilled and elementary skilled occupations.

Table 5.6 Employment growth by skill level, New Zealand, 2015-2020

Skill level (ANZSCO based)	Absolute change 2015-2020	Average annual percentage change
Highly skilled (HS)	73.4	1.9%
Skilled (S)	32.2	1.2%
Semi-skilled (SS)	27.1	0.8%
Elementary skilled (ES)	21.3	1.2%
Total	**154.1**	**1.3%**

Source: MBIE

Table 5.7 shows the top 10 occupations ranked by projected employment growth between 2015 and 2020. Four of the occupations are classified as highly skilled and four are classified as skilled. Only one is classified as semi-skilled, and only one is classified as elementary skilled.

Table 5.7 Top 10 occupational groups ranked by growth in employment, New Zealand, 2015-2020

Skill level (ANZSCO based)	Skill level	Absolute change 2015-2020	Average annual percentage change
Specialised managers	HS	35.5	2.5
Business professionals	HS	10.8	2.6
Finance/Sales Assoc. Profs.	S	10.4	1.8
Personal care workers	S	8.8	3.0
Labourers	ES	8.2	1.9
Writers/Artists/Sports Profs.	S	7.7	3.0
Computing profs.	HS	5.9	2.7
Primary and ECE Teach Profs.	HS	5.5	1.6
Social work Assoc. Profs.	S	5.5	2.5
H. Keeping and Rest. Workers	SS	5.2	1.1

Source: MBIE

5.2.2 BERL employment scenarios for the Bay of Plenty

BERL's economic scenarios, referred to above, looked as far ahead as 2022, and the employment projections are summarised here.

Based on a Business As Usual (BAU) scenario, Table 5.8 suggests that employment in the Bay of Plenty's key industries will increase across the board between 2012 and 2022. However, it also indicates that employment in the key industries will grow slightly more slowly than employment in other industries combined.

Table 5.8"Business as Usual" projections of Bay of Plenty employment (FTEs), by industry, 2012 and 2022

Industry	FTEs in 2012	FTEs in 2022	% change 2012-2022
Aquaculture	316	392	24.1%
Forestry	5,834	5,921	1.5%
Kiwifruit	4,195	4,557	8.6%
Dairy	5,780	6,144	6.3%
Other food cultivation and processing	3,578	4,305	20.3%
Energy	871	1,293	48.5%
Transport and logistics	4,284	5,194	21.2%
ICT	872	1,010	15.8%
Marine	366	494	35.0%
Sport and recreation	1,793	1,999	11.5%
Tourism	6,513	7,425	14.0%
Emerging technologies	1,068	1,546	44.8%
Meat	2,009	2,065	2.8%
Total: Bay of Plenty key industries	**37,480**	**42,300**	**12.9%**
Other industries	**84,293**	**97,600**	**15.8%**
All industries	**121,772**	**139,900**	**14.9%**

Source: BERL CGE projections to 2022

Table 5.9 summarises BERL's projections of employment growth under different scenarios. In essence **Scenario 1: Business As Usual** is a "policy unchanged" scenario and assumes no strategic inventions to support growth in key sectors. **Scenario 2: Strategy Stretch** is based on the sector growth strategies as identified through the Bay of Connections growth strategy. **Scenario 3: Reality check** allows for a combination of positive and negative external influences.

For key sector employment and total employment in the Bay of Plenty, the Strategy Stretch scenario is associated with the most positive outcomes, with employment growing by around a quarter over the ten year period. The Business As Usual scenario is associated with the least favourable employment outcomes, although it still implies overall employment growth of almost 15% between 2012 and 2022.

Table 5.9 Summary of projected employment growth by scenario, 2012-2022

FTEs	2012	2022	Difference	% p.a.	FTEs p.a.
BAU (scenario 1)					
Key sectors	37,500	42,300	4,800	1.2	480
Other industries	84,300	97,600	13,300	1.5	1,330
Total (all industries)	121,800	139,900	18,100	1.4	1,810
Strategy stretch (scenario 2)					
Key sectors	37,500	47,600	10,100	2.4	1,010
Other industries	84,300	106,000	21,700	2.3	2,170
Total (all industries)	121,800	153,600	31,800	2.3	3,180
Reality check (scenario 3)					
Key sectors	37,500	45,000	7,500	1.8	750
Other industries	84,300	102,700	18,400	2.0	1,840
Total (all industries)	121,800	147,600	25,800	1.9	2,580

Note: sub-totals rounded to nearest 100. Source: BERL Regional Database 2012 and CGE projections to 2022

5.2.3 Occupational outlook for young people

MBIE also has a publication called Occupational Outlook[8], which is designed, amongst other things, to indicate the employment prospects approximately five years ahead for young people entering particular occupations.

In the Occupational Outlook, employment prospects in each occupational group are graded as Good, Average or Limited, and Table 5.10 presents a summary. 26 occupations are shown as having Good prospects, 20 are shown as having Average prospects, and only 4 are shown as having Limited prospects. This distribution reflects MBIE's generally positive economic and employment projections.

8 http://www.dol.govt.nz/publications/lmr/occupational-outlook/occupation-outlook-report-2014.pdf

Table 5.10 Occupations classified by industry group and employment prospects

Industry group:	Occupations with good employment prospects	Occupations with average employment prospects	Occupations with limited employment prospects
Construction and infrastructure	Carpenters & joiners Civil engineering technicians Construction project managers Electricians Welders	Architects & Landscape architects Plumbers	
Manufacturing and technology	Engineering professionals Environmental scientists Food technologists ICT business and systems analysts Science technicians Software developers	Automotive technicians and electricians ICT & telecoms technicians	
Primary industries	Agricultural & forestry scientists Farmers & farm managers Veterinarians		
Service industries	Accountants Advertising & marketing professionals Chefs Exercise instructors Financial advisors & brokers Sales representatives	Conference & event organisers Hairdressers Hospitality workers Human resource professionals Lawyers Policy analysts Public relations professionals Receptionists Retails sales assistants Travel agents Truck drivers	Pilots & air traffic controllers
Creative industries		Graphic & web designers Industrial designers	Actors
Social and community services	Dentists Doctors Healthcare assistants Pharmacists Psychologists Registered nurses	Early childhood teachers Police School teachers	Journalists Fire fighters

Source: MBIE

5.3 NIDEA demographic projections

NIDEA has produced demographic projections for the Bay of Plenty as far ahead as 2063, but the projections shown here only show look ahead as far as 2023 in order to correspond as closely as possible with the BERL employment scenarios shown above.

NIDEA produced four different labour force scenarios, and they are summarised in Table 5.11. Scenario 1 is based on the assumption that labour force participation rates remain at the levels observed in 2013. Scenario 2 assumes that the labour force participation rate for prime age women increases. Scenario 3 assumes that the labour force participation rate amongst older workers continues to increase in the way it has done in the recent past. Scenario 4 assumes the participation rates for both prime age women and older workers increase.

Table 5.11 NIDEA Bay of Plenty Labour Force projections, 2013-2023

	Western Bay of Plenty	Tauranga	Rotorua	Whaka-tane	Kawerau	Opotiki	**Bay of Plenty**
Scenario 1							
2013	24,465	59,118	36,100	17,350	2,850	4,001	**143,884**
2018	26,050	63,834	37,034	17,361	2,860	3,951	**151,089**
2023	27,354	68,127	37,430	17,048	2,814	3,855	**156,628**
% change 2013-2023	*11.8%*	*15.2%*	*3.7%*	*-1.7%*	*-1.3%*	*-3.6%*	*8.9%*
Scenario 2							
2013	24,465	59,118	36,100	17,350	2,850	4,001	**143,884**
2018	26,352	64,587	37,368	17,523	2,889	3,985	**152,703**
2023	28,035	69,804	38,126	17,394	2,866	3,926	**160,150**
% change 2013-2023	*14.6%*	*18.1%*	*5.6%*	*0.3%*	*0.6%*	*-1.9%*	*11.3%*
Scenario 3							
2013	24,465	59,118	36,100	17,350	2,850	4,001	**143,884**
2018	26,662	65,420	37,668	17,751	2,934	4,031	**154,466**
2023	28,851	72,177	38,926	18,011	2,979	4,025	**164,969**
% change 2013-2023	*17.9%*	*22.1%*	*7.8%*	*3.8%*	*4.5%*	*0.6%*	*14.7%*
Scenario 4							
2013	24,465	59,118	36,100	17,350	2,850	4,001	**143,884**
2018	26,864	65,955	37,899	17,849	2,949	4,053	**155,567**
2023	29,075	72,746	39,167	18,083	2,981	4,048	**166,100**
% change 2013-2023	*18.8%*	*23.1%*	*8.5%*	*4.2%*	*4.6%*	*1.2%*	*15.4%*

Source: NIDEA

As can be seen in Table 5.11, each scenario is associated with a projected increase in the labour force. Under scenario 1, the labour force is projected to increase in the Region as a whole and in three of the Districts, but it is projected to fall in three of the Districts. Under scenario 2, the labour force is projected to decline only in Opotiki.

NIDEA project that the labour force in the Bay of Plenty will increase by between 8.9% and 15.4% between 2013 and 2023, depending on the scenario. By comparison, BERL's projections in Table 5.9 above suggest that employment will grow by between 14.9% and 26.1% between 2012 and 2022, again depending on the scenario. Even though the two sets of scenarios cover slightly different timespans, they imply that unemployment in the Bay of Plenty will decline significantly.

Taking BERL's scenario 1 and NIDEA's scenario 1, which are both essentially Business As Usual, employment will increase by around 18,100 over the next ten years, while the labour force will increase by around 12,700. This implies a decrease in unemployment of around 5,400 from the 2013 level of 11,600. Under these circumstances, generalised labour shortages would probably be avoided, although there might be localised shortages in the parts of the region (mainly in Western Bay of Plenty and Tauranga), where unemployment is already relatively low and where most of the employment growth is expected to occur.

However, if BERL's most expansive scenario (scenario 2: Strategy Stretch) is combined with NIDEA's most expansive scenario (scenario 4), employment will increase by 31,800, while the labour force will increase by 22,200. This implies a decrease in unemployment of 9,600, from the 2013 level of 11,600. Under these circumstances, some labour shortages are likely to be experienced, especially in some occupations and localities. In parts of the region where unemployment is already relatively low and where most of the employment growth is expected to occur, labour shortages could become common.

Labour shortages would be all the more likely if BERL's scenario 2 came to pass and the increase in labour force participation modelled in NIDEA's scenarios 3 and 4 did not happen. This would mean a 33,000 increase in labour demand, but an increase in the labour force of between 12,800 (NIDEA scenario 1) and 16,300 (NIDEA scenario 2).

6 Implications for the Bay of Plenty

6.1 Conclusions

The analysis presented in this report strongly suggests that the Bay of Plenty region as a whole:

- experienced employment loss between 2006 and 2013, while there was a slight increase at national level.
- but can look forward to employment growth and declining unemployment in the future.

The region's labour force also has some distinctive features:

- the employed labour force is relatively old.
- half of the employed labour force has no or low qualifications.
- there are major district-by-district variations in labour market conditions.

Concerning the latter point, it appears that the region has a three-tier labour market; with the Western Bay of Plenty and Tauranga in the top tier, Rotorua and Whakatane in the second tier, and Kawerau and Opotiki in the third tier. Opotiki has some of the characteristics of a second tier district, but it is similar to Kawerau in key respects.

Appendix B provides a district-by-district collation of the findings, but the key findings can be summarised as follows:

Western Bay of Plenty and Tauranga

- both experienced population and employment growth between 2006 and 2013.
- both have relatively large proportions of their workforce employed in highly skilled occupations.
- both have relatively low unemployment.
- both are expected to experience significant population growth during the next decade.
- both face the risk of labour and skills shortages in the future.

Rotorua and Whakatane

- both experienced small decreases in population between 2006 and 2013.
- both experienced moderate decreases in employment between 2006 and 2013.
- both have unemployment rates above the regional average.
- both have moderately large proportions of unemployed people who have no educational qualifications.

Kawerau and Opotiki

- both experienced significant population loss between 2006 and 2013.
- both experienced a decrease in employment between 2006 and 2016 (large in Kawerau, moderate in Opotiki).
- both have unemployment rates above the regional average (slightly above in Opotiki, dramatically above in Kawerau).

- both have employed workforces that include relatively large numbers of Maori, labourers and people who have no or low qualifications.

There are also noteworthy differences in terms of employment rates and between employed and unemployed people. Unemployment rates are much higher than the regional average:

- in Kawerau
- among 15-34 year olds
- among Maori
- among people with no qualifications.

And, compared to employed people, unemployed people are more likely to be:

- young
- Maori
- unqualified or lowly qualified.

6.2 Implications for action

The findings summarised above indicate that there are significant inequalities across the Bay of Plenty. BERL believe that action to address these inequalities is justifiable, not only on grounds of equity, but also on grounds of efficiency. As was seen in section 5, parts of the region are likely to experience labour shortages, if strategy boosts economic growth. Economic growth could be constrained, if nothing is done to avoid the shortages; and this would make it even harder for the struggling districts to turn around their fortunes.

In order to be effective, action will need to be tailored according to the needs and circumstances of the districts in the three tiers.

Western Bay of Plenty and Tauranga

The top tier districts are likely to need action in order to ensure that labour shortages do not hold back their growth at a time when economic growth at national level seems likely to be relatively rapid. These districts could attract labour from second and third tier districts in the region, but there are indications from the Census data that this has been happening anyway. In any case, if the top tier districts were to meet their increased labour needs in the future by means of intra-regional migration, it would probably diminish the ability of the lower tier districts to improve, or turn around, their fortunes.

Rather, it will be preferable to increase the capacity and capability of the labour force in the top tier through a combination of immigration from outside the region and increased productivity. Immigration from outside the region would probably reduce the reliance, especially in the Western Bay of Plenty, on older workers; and it will probably boost productivity because migrants tend to be more skilled than average. There is also scope to increase the productivity of the existing labour force because, as was shown in section 2, more than half of employed people in both Western Bay of Plenty and Tauranga have no qualifications or qualifications at levels 1-3 only.

Rotorua and Whakatane

Both these tier two districts experienced a slight population decline and a moderate employment decrease between 2006 and 2013. Because of the generally more favourable national and international economic outlook, they will probably see these trends reversed in the next 10 years or so, but this is by no means guaranteed.

If employment growth fails to occur, young and capable residents of these districts will tend to leave to seek opportunities elsewhere. It is essential, therefore, that businesses and industries prosper. The Bay of Connections strategy already recognises this, but it will be important to keep the strategy under review and to revise it if necessary. Initiatives led by central government, such as the recently announced Bay of Plenty Regional Growth Study, may also help, but it will be necessary to ensure that regionally-led and nationally-inspired initiatives do not impede one another.

As is the case with other districts in the region, both Rotorua and Whakatane have a labour force in which more than half of employed people have no qualifications or qualifications at levels 1-3 only. Education and skills development will, therefore, need to go hand-in-hand with industry and enterprise (i.e. individual business) development.

Kawerau and Opotiki

Opotiki has been bracketed with Kawerau in the third tier, rather than with Rotorua and Whakatane in the second tier, because it is more similar to Kawerau than to Rotorua and Whakatane in terms of the population decline it has experienced, and the ethnicity, skills and qualifications of its labour force.

Although the generally more benign economic climate is expected to lead to an increase in employment and a reduction in unemployment in both these districts, there is still a risk that growth could pass them by, and that they could decline irrecoverably. As was observed in other work by BERL for the Regional Council, on the subject of agglomeration, if a centre of population loses employment, the population can drift away, leading to difficulties in maintaining public service delivery and a weakening of the social fabric. A downward spiral becomes possible.

In the case of these two districts, a multi-faceted approach seems necessary. This would combine action to: encourage industry development (e.g. through inward investment); improve the qualifications and skills of the workforce; and, maintain public service delivery and the social fabric.

Targeting action

Action will need to focus on particular groups in the workforce, as well as on specific areas. In general, the actions should focus on involving the relatively disadvantaged groups in the workforce (i.e. younger people, Māori and those with no/low qualifications) across the region in skills development; and on enterprise development in the relatively deprived localities. However, in the areas that face the prospect of skills and labour shortages, it will also be necessary to encourage older workers to remain in the workforce and to encourage women to return to the workforce.

Appendix A Employment and employment change in "Other" industries

Table A.1 shows the number of employees in the Bay of Plenty in 2013 who were working in the 10 largest "other" industries, i.e. industries not included in the key industries/priority sectors identified in the Bay of Connections strategy. The table shows ANZSIC sub-divisions (i.e. 86 industry level) that have no constituent ANZSIC groups or classes within the key industries/priority sectors.

Table A.1 Number of employees in top 10 largest "Other" industries in the Bay of Plenty Region

Rank	Industry	Number of employees in 2013
1	Pre-school and school education	7,344
2	Construction services	5,280
3	Medical and other health care services	5,061
4	Hospitals	3,228
5	Public administration	2,634
6	Residential care services	2,595
7	Property operators and real estate services	2,457
8	Building cleaning, Pest control and Other support services	2,397
9	Building construction	2,388
10	Social assistance services	2,310

Source: Statistics New Zealand Census 2013, BERL

Table A.2 shows the top 10 "other" industries ranked in terms of the absolute increase in their employment between 2006 and 2013.

Table A.2 Change in employment in "Other" industries in the Bay of Plenty Region – industries with the largest gains

Rank	Industry	Change in number of employees, 2006-2013	Percentage change
1	Medical and other health care services	498	10.9%
2	Hospitals	303	10.4%
3	Residential care services	162	6.7%
4	Public administration	156	6.3%
5	Heavy and civil engineering construction	87	5.2%
6	Basic material wholesaling	42	3.5%
7	Tertiary education	42	3.2%
8	Metal ore mining	36	100.0%
9	Social assistance services	33	1.5%
10	Polymer product and Rubber product manufacturing	21	4.3%

Source: Statistics New Zealand Census 2013, BERL

Table A.3 shows the "other" industries in the Bay of plenty that experienced the 10 greatest losses of employment between 2006 and 2013

Table A.3 Change in employment in "Other" industries in the Bay of Plenty Region – industries with the largest losses

Rank	Industry	Change in the number of employees 2006-2013	Percentage change
1	Construction services	-2094	-28.4%
2	Building construction	-1653	-40.9%
3	Property operators and real estates services	-897	-50.4%
4	Pre-school and school education	-321	-4.2%
5	Finance	-276	-15.5%
6	Public Order, Safety and Regulatory Services	-189	-7.5%
7	Printing	-171	-14.5%
8	Auxilliary finance and insurance services	-120	-3.6%
9	Commission based wholesaling	-114	-48.7%
10	Building Cleaning, Pest Control and Other Support Services	-114	-4.5%

Appendix B Collated district-by-district findings

Tauranga

- **Between 2006 and 2013:**
    - Largest population increase of any district (11%)
    - Largest increase in both Māori (13%) and non-Māori (10%) population
    - Largest increase in employment (3.7%)
    - Largest increase in employed people aged 65+ (77.4%)
    - Largest increase in both Māori (2.4%) and non-Māori (3.9%) employment
    - Largest increase in both key sector (6.0%) and other sector (3.1%) employment
    - Largest increase in professional employment (19.0%)
    - Only district to increase managerial employment (4.4%)
    - Largest increase in employed people with Diploma, Degree or Post-grad qualifications (33%).

- **In 2013:**
    - Largest proportion of people in employment who are aged less than 35 years (29%)
    - Joint lowest proportion of employed people who are Māori (13%)
    - Lowest proportion of employed people who are in the Bay of Plenty key sectors (19%)
    - Lowest unemployment rate amongst Māori (16.4%).

- **By 2023:**
    - Largest projected labour force increase (minimum 15.2%, maximum 23.1%[9]).

[9] Based on different projections by NIDEA.

Western Bay of Plenty

- **Between 2006 and 2013:**
    - Only district, other than Tauranga, to increase population (4%)
    - Joint largest increase in number of people aged 65+ (29%)
    - Only district, other than Tauranga, to increase employment (0.4%)
    - Lowest decrease in youth employment (-33.8%)
    - Largest increase in employed labour force with Post-graduate qualifications (70.8%)
    - Largest increase in number of unemployed (63%).

- **In 2013:**
    - Largest proportion of population aged 50+ (42%)
    - Joint largest proportion of employed labour force aged 65+ (11%)
    - Smallest proportion of employed labour force aged less than 35 (21%)
    - Joint smallest proportion of employed labour force who are Māori (13%)
    - Second largest proportion of employed labour force working in Bay of Plenty key sectors (34%)
    - Largest proportion of employed labour force who are Managers (24%)
    - Lowest unemployment rate (7.2%)
    - Lowest youth unemployment rate (29%).

- **By 2023:**
    - Second largest projected increase in labour force (minimum 11.8%, maximum 18.8%).

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Rotorua

- **Between 2006 and 2013:**
  - Small decrease in population (-1%)
  - Second largest decrease in the number of people in employment (-8.0%)
  - Second largest increase in number of employed people aged 65+ (62.4%)
  - Second largest decrease in Māori employment (-8.5%)
  - Second largest decrease in key sector employment (-11.5%)
  - Second largest decrease in number of people in labour force with no qualifications (-25.3%).

- **In 2013:**
  - Second largest proportion of employed labour force aged 15-34 (28%)
  - Joint lowest proportion of employed labour force aged 65+ (7%)
  - Second largest proportion of employed labour force who are Professionals (19%)
  - Second smallest proportion of employed labour force with no qualifications (17%).

- **By 2023:**
  - Only district, other than Western Bay of Plenty and Tauranga, to have projected labour force increase with participation rates unchanged (3.7%).

Whakatane

- **Between 2006 and 2013:**
    - Small decrease in population (-2%)
    - Second largest decrease in youth employment (-40.4%)
    - Only district other than Tauranga to increase Māori employment (0.7%)
    - Second smallest increase in the number of unemployed (35%)
    - Second smallest increase in number of Māori unemployed (35%).

- **By 2023:**
    - Second smallest projected increase in the labour force (minimum -1.7%, maximum 4.2%).

Kawerau

- **Between 2006 and 2013:**
    - Largest population decrease (-8%)
    - Largest youth population decrease (-18%)
    - Joint largest increase in population aged 65+ (29%)
    - Largest decrease in Māori population (-14%)
    - Largest decrease in employment (-26.7%)
    - Largest decrease in youth employment (-55.8%), employment in 20-34 age group (-36.7%) and employment in 35-49 age group (-37.1%)
    - Largest decrease in Māori employment (-26.9%)
    - Largest decrease in key sector employment (-39.0%)
    - Largest decrease in Managerial employment (-27.3%)
    - Only district where Professional employment decreased (-13.8%)
    - Largest increase in number of unemployed with no qualifications (35%).

- **In 2013:**
    - Largest Māori share of employment (54%)
    - Smallest proportion of Managers (8%) and Professionals (13%) in the employed labour force
    - Joint largest proportion of employed labour force with no qualifications (24%)
    - Smallest proportion of the employed labour force with Diploma, Degree or Post-graduate qualifications (18%)
    - Highest unemployment rate (24.9%)
    - Highest youth unemployment rate (58.2%)
    - Highest Māori unemployment rate (32.3%).

- **By 2023:**
    - Labour force projected to increase, unless participation rates stay the same (minimum -1.3%, maximum 4.6%).

Opotiki

- **Between 2006 and 2013:**
    - Second largest population decrease (-6%)
    - Highest growth in employed labour force aged 50-64 (21%), but lowest growth in employed labour force aged 65+ (28.4%)
    - Second smallest decrease in employed labour force with no qualifications (-23%)
    - Smallest increase in the number of unemployed (7%)
    - Smallest increase in number of Māori unemployed (7%)
    - Only district to see a decrease in the number of unemployed people with no qualifications (-28%).

- **In 2013:**
    - Second largest Māori share of employment (50%)
    - Largest share of employment in key sectors (35%)
    - Second largest proportion of employed people working as Managers (21%), but second smallest proportion working as Professionals (14%)
    - Joint largest proportion of employed labour force with no qualifications (24%)
    - Second smallest proportion of the employed labour force with Diploma, Degree or Post-graduate qualifications (21%)
    - Largest Māori share of unemployment (81%).

- **By 2023:**
    - Labour force projected to decline with participation unchanged (-3.6%), and to grow only slowly with increased participation by women and older people (1.2%).