

# **Labour market insights from the 2013 Census and implications on the Pacific labour force in Auckland**

**Penelope Tevita-Tuatagaloa  
Research and Evaluation Unit (RIMU), Auckland Council**

## **Abstract**

Pacific people make up an increasingly large proportion of Auckland's population and are projected to continue growing at an annual average rate of 2.4 per cent over the next 6 years, compared to only 1.5 per cent for Auckland overall. The current median age of Pacific people in Auckland is just 22.6 years, well under the 35.1 years for the Auckland population overall and 38.0 years for New Zealand. With a young and growing population, the implications on Auckland's labour market will be significant.

The distribution of occupational employment across the industries and sectors of the economy are critical in our understanding of the Pacific labour market. The 2013 Census provides new insights into the mix of occupations and industries to understand their relative importance and changes. In this paper, labour market insights of Pacific people in Auckland gained from the 2013 Census and labour market outcomes are discussed. The analysis looks at the main industries and occupations of employment for Pacific people, and whether these have become more or less important or have remained relatively unchanged over the inter-census period 2006 to 2013. The occupational groups for Pacific people across three age groups are also analysed. The new insights will then be matched with the regional economic projections of occupations and industries from the Auckland Economic Futures Model to determine whether Pacific Peoples labour market outcomes are likely to improve or decline based on their current occupational employment profiles identified through the Census data.

## **1.0. Introduction**

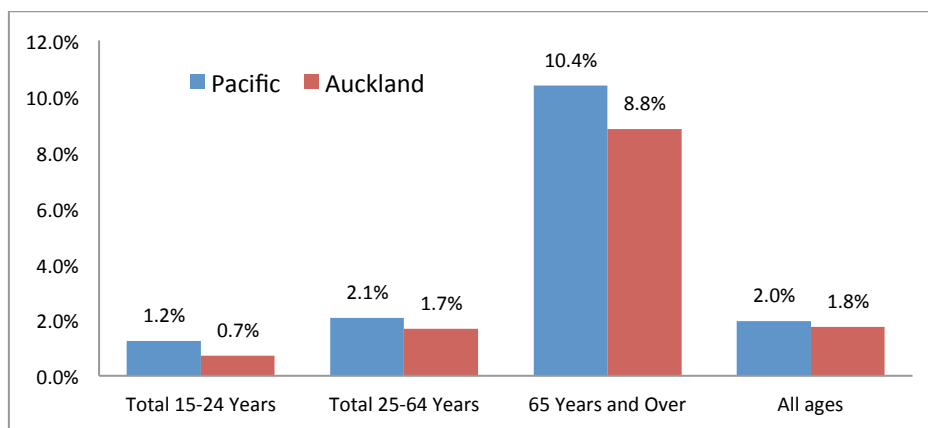
People of Pacific ethnicities have a long history of settlement in New Zealand. At the 2013 Census, there were almost 300,000 people living in New Zealand who identified with at least one Pacific Islands' ethnicity (compared to just 2,200 in 1945). A significant proportion of the New Zealand Pacific population (two thirds) live in Auckland, with high concentrations in certain parts of Auckland, particularly South Auckland.

Pacific people like many others faced the challenges of adapting to and establishing themselves in a new country. In the labour market in particular Pacific people faced considerable difficulties with lack of qualifications and skills required in the New Zealand labour market and consequently were over-represented among the unemployed, lower-skilled workers and low income earners. The restructuring of the late 1980s and early 1990s and more recently the global financial crisis in 2007 further highlighted these difficulties which had a disproportionate effect on Pacific people, many of whom worked in industries and occupations that bore the brunt of job losses.

Considerable developments however have been made in education and employment, particularly for some of the younger, New Zealand-born Pacific people with improvements in education enabling many to move away from the traditional blue collar jobs towards more skilled white-collar jobs. Despite these progress, disparities still exist between Pacific people and other ethnic groups in education and employment.<sup>1</sup>

Pacific people are very youthful (median age of 22.6 years compared to 35.1 years for Auckland overall) and are making up an increasingly large proportion of Auckland's population (14.6% in 2013 from 11.9% in 1991). With a young and growing population, the implications on Auckland's labour market will be significant. To put this into perspective Figure 1 shows the annual average growth rate of the Pacific labour force and Auckland overall between the 2001 and 2013 Censuses. The Pacific labour force in total grew on average by 2.0 per cent per annum since the 2001 census compared to 1.8 per cent for Auckland overall. Pacific people now make up 10.9 per cent of Auckland's labour force, from 10.6 per cent in 2001. As shown in Figure 1, the Pacific labour force grew faster across all three age groups; 15-24 years, 25-64 years and those 65 years and over than Auckland overall and most notably for older people (65 years and over).

**Figure 1:** Labour force annual average growth rate for Pacific workers and Auckland overall, 2001 - 2013  
Census



**Source:** Statistics New Zealand, 2001 and 2013 Census.

According to Statistics New Zealand's sub-national ethnic population projections,<sup>2</sup> Pacific people aged 15 years and over in Auckland are projected to continue to make up an increasingly large proportion of the Auckland population (12.0% in 2013 to 12.5% by 2016 and 13.0% by 2021). The average participation rate in the labour force of Pacific workers and Auckland overall over the last three censuses, 2001, 2006 and 2013 is used to estimate the Pacific and Auckland labour force based on Statistics New Zealand's ethnic population projections. Assuming a participation rate of 62.7 per cent for Pacific and 67.8 per cent for Auckland overall, the Pacific labour force is projected to grow at an annual average rate of 5.4 per cent from 2013 to 2021, compared to only 4.1 per cent

<sup>1</sup> These disparities are highlighted in a number of reports, more recently in the Salvation Army 2014. This is Home report and Allpress, J.A. 2014. The Labour Market and Skills in Auckland.

<sup>2</sup> This is based on Stats NZ's medium projections. See: [http://www.stats.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections/subnational-ethnic-population-projections/nature-of-projections.aspx](http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/subnational-ethnic-population-projections/nature-of-projections.aspx)

for Auckland overall. As a result Pacific workers will increase their proportion of the Auckland labour market from 10.9 per cent in 2013 to 12.1 per cent by 2021.

As shown, Pacific people make up and will continue to make up a significant proportion of the Auckland labour force. Further understanding what this means by examining the industries and occupations of significance to Pacific people is the focus of this paper. The 2013 Census provides new insights into the mix of occupations and industries to understand their relative importance and changes. The new insights will then be matched with the regional economic projections of occupations and industries from the Auckland Economic Futures Model to determine whether Pacific Peoples labour market outcomes are likely to improve or decline based on their current occupational employment profiles identified through the Census data.

## **2.0. The Pacific labour force and occupational structure in 2013**

This section provides a brief overview of the Pacific labour force, followed by a more detailed look at the occupational structure of Pacific workers at the time of the 2013 Census. This includes analysis of the occupations of Pacific workers for three age groups; youth (age 15-24 years), 25-64 year olds and older people (age 65 years and over) and their industries of employment.

### **The Pacific labour force – brief overview**

The 2013 Census shows one in two Pacific adults in Auckland (64,239 people, or 50.5% of adults) were employed compared to 61.5 per cent for Auckland overall. This represents 12,333 in part-time employment and 51,906 in full-time employment. Pacific people however, made up only 9.9 per cent of all those in full-time and/or part-time employment in Auckland at the time of the 2013 census.

Also included in the labour force are the unemployed and in 2013, 12,969 Pacific people aged 15 years and over were unemployed. This equates to an unemployment rate of 16.8 per cent for Pacific, twice that for Auckland overall of 8.1 per cent.<sup>3</sup> In total, 77,208 Pacific adults were in the labour force in 2013 - a 60.7 per cent labour force participation rate compared to 66.9 per cent for Auckland overall.

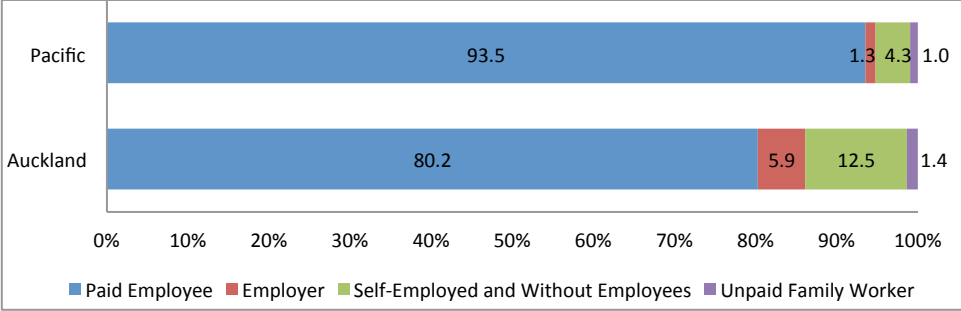
In 2013, 19.8 per cent of Pacific workers were youth (aged 15-24), the majority (58.8%) were aged 25-49 years, 19.2 per cent were 50-64 years and only 2.2 per cent were 65 years and older. There were higher proportions of Pacific workers aged 15-24 years and 25-49 years than Auckland overall (13.7% and 55.5% respectively) reflecting the youthful structure of Pacific people in Auckland.

In terms of employment status, the majority of Pacific workers were in paid employment (93.5%) in 2013, similar to Auckland overall. Pacific people however were significantly less likely than the total population to be self-employed, at 4.3 per cent compared with 12.5 per cent overall and to be an employer, at 1.3 per cent compared to 5.9 per cent overall.

---

<sup>3</sup> Census data is not the official unemployment rate – that comes from Statistics New Zealand's Household Labour Force Survey.

**Figure 2:** Labour force employment status for Pacific workers and Auckland overall, 2013 Census



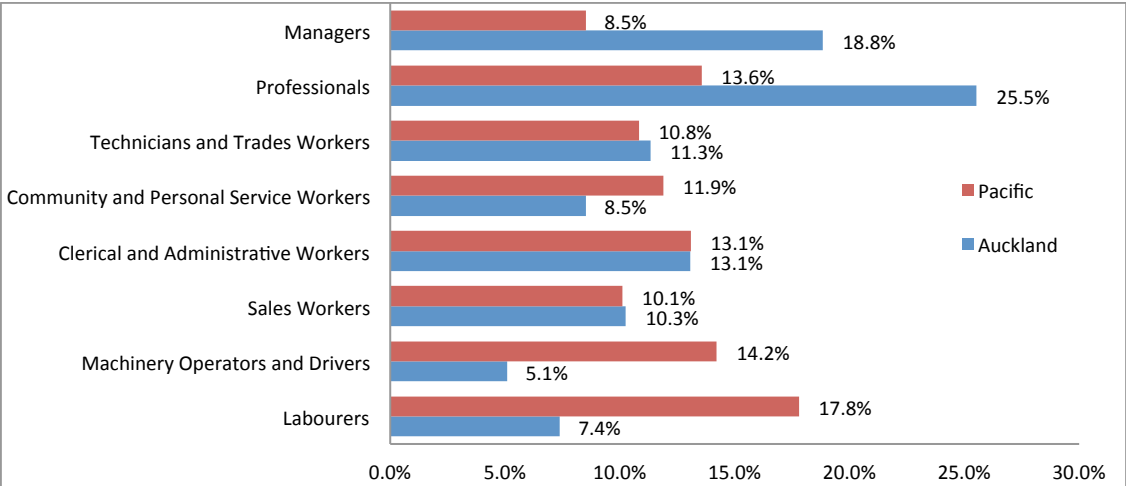
**Source:** Statistics New Zealand, 2013 Census.

Most Pacific workers were in full time employment in 2013; 82.8 per cent of employees, 80.1 per cent of employers and 71.6 per cent of those who were self-employed were in full time employment. The unpaid family worker category however had slightly more Pacific workers employed part-time (54.3%), the same as that for Auckland overall with 56.5 per cent in part time employment.

**Occupational structure of Pacific workers in 2013**

Pacific workers were represented across all eight occupational categories as shown in Figure 3. This is based on the Australian and New Zealand Standard Classification of Occupations (ANZSCO) Level 1. Pacific workers were generally over-represented in the low skilled (and often lower paid) jobs, with about a third of Pacific workers employed as labourers and machinery operators and drivers compared to only 12.5 per cent of all workers in Auckland. On the other hand, Pacific workers were under-represented in the highly skilled occupations, with 22.1 per cent of Pacific workers employed as managers and professionals compared to 44.3 per cent for Auckland overall.

**Figure 3:** Proportion of Pacific workers by Occupation (ANZSCO Level 1) and Auckland overall, 2013 Census



**Source:** Statistics New Zealand, 2013 Census.

The next level of occupations for Pacific workers, ANZSCO Level 2 (with 43 categories) for three age groups – youth, 24-64 years and older people (65 years and over) is provided in Table 1. The occupations are also grouped according to skills levels based on previous studies, as well as the corresponding ANZSCO Level 1 occupation categories. In line with Figure 3, half of the 10 top occupations for Pacific people in 2013 were labourers and machinery operators and drivers in the low skilled category. Only two highly skilled occupations made the top 10 for Pacific people in 2013, specialist managers at fourth employing 4.9 per cent of the Pacific labour force and educational professionals at ninth with 4.1 per cent of Pacific workers in 2013.

Auckland occupations where over a quarter of the labour force were Pacific workers in 2013 include: factory process workers (36.5%), store persons (36.4%), mobile plant operators (33.3%) and machinery and stationary plant operator (28.8%) – all low skilled occupations.

**Table 1: Occupation (ANZSCO Level 2) of Pacific workers for three age cohorts, 2013 Census**

Level 1	Level 2	15-24 yrs	25-64 yr.	65+ yrs	Total	% Pacific	% Auck
<b>Highly skilled</b>							
Managers	Chief Executives, General Managers and Legislators	36	669	18	720	1.3%	2.5%
	Farmers and Farm Managers	18	57	3	78	0.1%	2.8%
	Specialist Managers	264	2,529	27	2,823	4.9%	4.6%
	Hospitality, Retail and Service Managers	300	969	12	1,284	2.2%	5.6%
Professionals	Arts and Media Professionals	63	282	3	351	0.6%	4.5%
	Business, Human Resource and Marketing Professionals	165	1,338	21	1,524	2.6%	3.8%
	Design, Engineering, Science and Transport Professionals	87	534	6	627	1.1%	3.0%
	Education Professionals	183	2,079	69	2,334	4.1%	7.2%
	Health Professionals	60	945	30	1,041	1.8%	4.3%
	ICT Professionals	54	438	3	492	0.9%	2.8%
	Legal, Social and Welfare Professionals	114	1,269	60	1,443	2.5%	10.1%
<b>Med High Skilled</b>							
Technicians and trade workers	Engineering, ICT and Science Technicians	96	615	12	726	1.3%	6.1%
	Automotive and Engineering Trades Workers	204	1,470	30	1,701	3.0%	12.2%
	Construction Trades Workers	210	996	12	1,215	2.1%	11.3%
	Electrotechnology and Telecommunications Trades Workers	99	453	6	555	1.0%	7.9%
	Food Trades Workers	156	657	15	828	1.4%	8.3%
	Skilled Animal and Horticultural Workers	36	180	12	231	0.4%	4.7%
	Other Technicians and Trades Workers	144	813	15	975	1.7%	8.7%
<b>Medium skilled</b>							
Community and personal service workers	Health and Welfare Support Workers	84	666	21	771	1.3%	15.6%
	Carers and Aides	282	2,310	102	2,694	4.7%	16.2%
	Hospitality Workers	591	639	6	1,233	2.1%	10.1%
	Protective Service Workers	243	1,095	21	1,362	2.4%	16.9%
	Sports and Personal Service Workers	246	531	3	786	1.4%	7.4%
Clerical and administrative workers	Office Managers and Program Administrators	108	822	6	933	1.6%	6.0%
	Personal Assistants and Secretaries	21	246	3	270	0.5%	4.5%
	General Clerical Workers	222	1,092	24	1,335	2.3%	9.1%
	Inquiry Clerks and Receptionists	369	696	12	1,080	1.9%	10.6%
	Numerical Clerks	117	930	12	1,056	1.8%	7.0%
	Clerical and Office Support Workers	207	693	12	909	1.6%	18.0%
	Other Clerical and Administrative Workers	351	1,587	21	1,956	3.4%	14.2%

Sales workers	Sales Representatives and Agents	774	1,878	9	2,658	4.6%	10.9%
	Sales Assistants and Salespersons	1,185	1,203	21	2,409	4.2%	7.7%
	Sales Support Workers	363	387	3	753	1.3%	10.2%
<b>Low skilled</b>							
Machinery operators and drivers	Machine and Stationary Plant Operators	303	2,247	48	2,601	4.5%	28.8%
	Mobile Plant Operators	189	777	12	981	1.7%	33.3%
	Road and Rail Drivers	147	1,425	66	1,638	2.8%	14.7%
	Storepersons	684	2,268	18	2,970	5.2%	36.4%
Labourers	Cleaners and Laundry Workers	315	1,803	102	2,223	3.9%	21.2%
	Construction and Mining Labourers	180	591	9	780	1.4%	17.3%
	Factory Process Workers	780	2,673	36	3,489	6.1%	36.5%
	Farm, Forestry and Garden Workers	78	291	6	378	0.7%	9.5%
	Food Preparation Assistants	183	297	15	495	0.9%	13.0%
	Other Labourers	864	1,953	60	2,880	5.0%	22.1%

**Source:** Statistics New Zealand, 2013 Census.

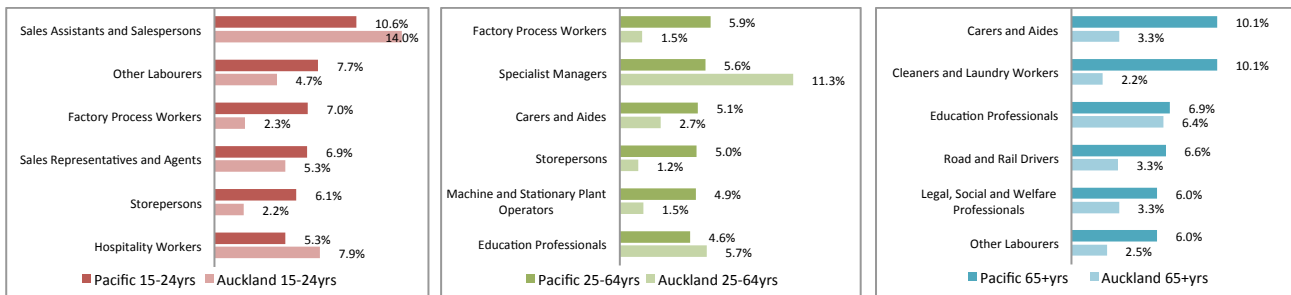
### Occupational structure across age groups

Figure 4 shows the top six occupations for Pacific workers for each age group including the proportion for Auckland overall of these occupations. Whilst Pacific people were represented across all occupational groups they were also over-represented in the low skilled occupations across each of the age groups. This is especially acute for Pacific workers aged 15-24 years with the top six occupations in 2013 - employing over 40 per cent of all Pacific workers aged 15-24 years in 2013 – in the low and medium skilled occupations. In fact, 79.5 per cent of all Pacific workers in 2013 were employed in the medium and low skilled occupations. The top occupation for Pacific youth in 2013 was sales assistants and salespersons and this age group accounts for nearly half of all sales assistants and salespersons of Pacific ethnicity in 2013. None of the highly skilled and medium high skilled occupations made the top six occupations for Pacific workers aged 15-24 years or even the top 10 in 2013. Only 12 per cent of Pacific workers aged 15-24 years in Auckland were employed in highly skilled occupations, compared to 21.3 per cent for youths overall in Auckland.

For Pacific workers aged 25-64 years, one in four was employed in a highly skilled occupation in 2013. Specialist managers had the second most Pacific workers aged 25-64 years with 5.6 per cent, however this is still much lower compared to Auckland overall where 11.3 per cent of all workers were specialist managers in 2013. Factory process workers employed the most Pacific workers aged 25-64 years in 2013 with 5.9 per cent. Medium skilled occupations employed the most Pacific workers aged 25-64 years in 2013 (32.5%), just slightly more than those in low skilled occupations with 31.6 per cent.

Of the 1,415 Pacific workers aged 65 years and over in 2013, nearly two thirds were employed in medium skilled and low skilled occupations. About one in five of the older Pacific workers (aged 65 years and over) were either a carer and aide and/or cleaner and laundry worker. For this age group, the third highest occupation for Pacific people was educational professionals employing 6.9 per cent of all Pacific workers aged 65 years and over in 2013 and legal, social and welfare professionals was fifth with 6.0 per cent – both in the highly skilled occupations category where 25 per cent of older Pacific workers were employed.

**Figure 4: Top six Occupations (ANZSCO Level 2) for Pacific workers and Auckland overall for three age groups (%), 2013 Census**



**Source:** Statistics New Zealand, 2013 Census.

## Occupations across industries

The mix of occupations and industries for Pacific people at the 2013 Census shows that whilst Pacific workers are employed across all occupations and across all industries in 2013, there is a high representation of Pacific workers in the less-skilled manual jobs in secondary industries. Table 2 lists occupations of Pacific workers for ANZSCO Level 1 across 19 industry sectors based on ANZSIC06 Level 1 industry classifications.

The top four industries employing over half of all Pacific workers in 2013 were; manufacturing (16.7%), health care and social assistance (9.1%), transport, postal and warehousing (8.6%) and retail trade (8.5%). Some interesting findings show that in 2013:

- Over a third of all Pacific workers in 2013 were in highly skilled occupations and in the education and training industry, over two-thirds of all Pacific workers were in highly skilled occupations (managers and professionals).
- Just under half (48.4%) of all Pacific workers in professional occupations were in the education and training and health care and social assistance industries. The most Pacific managers were employed in the retail trade (12.7%) and construction (10.8%) industries – 16.3 per cent of all specialist managers were employed in the construction industry in 2013.
- Over 30 per cent of all Pacific technicians and trades workers were employed in manufacturing and 22.6 per cent in construction industries. One in three Pacific community and personal service workers were in the health care and social assistance industry.
- Not surprising the majority of Pacific workers in the manufacturing industry (62.6%) were in low skilled occupations (machinery operators and labourers) and over half of Pacific workers in the wholesale and transport, postal and warehousing industries were in low skilled occupations.

**Table 2: Occupation (ANZSCO Level 1) of Pacific workers by industry, 2013 Census**

	Managers	Professionals	Technicians and Trades Workers	Community & Personal Service Workers	Clerical and Administrative Workers	Sales Workers	Machinery Operators and Drivers	Labourers
Agriculture, Forestry and Fishing	42	0	24	9	9	6	33	288
Mining	0	0	0	0	0	0	0	0
Manufacturing	384	168	1947	39	645	198	2553	3102
Electricity, Gas, Water and Waste Services	0	9	15	0	18	36	69	57
Construction	531	120	1407	57	186	33	372	933
Wholesale Trade	342	147	222	0	528	465	1197	558
Retail Trade	624	135	228	114	357	2175	504	567
Accommodation and Food Services	348	60	315	897	129	468	63	678
Transport, Postal and Warehousing	300	120	54	216	1239	432	1869	486
Information Media and Telecommunications	108	249	108	0	159	279	12	84
Financial and Insurance Services	321	312	54	30	813	357	117	150
Rental, Hiring and Real Estate Services	147	75	60	39	114	198	138	186
Professional, Scientific and Technical Services	264	750	219	117	633	219	345	225
Administrative and Support Services	195	195	168	243	366	246	216	1293
Public Administration and Safety	186	579	66	1101	531	174	21	39
Education and Training	312	2172	75	627	333	27	0	171
Health Care and Social Assistance	249	1608	150	2235	498	18	39	324
Arts and Recreation Services	96	126	18	327	54	75	18	30
Other Services	162	390	438	210	249	84	99	267
<b>Total</b>	<b>4824</b>	<b>7680</b>	<b>6024</b>	<b>6612</b>	<b>7386</b>	<b>5745</b>	<b>7902</b>	<b>9816</b>

**Source:** Statistics New Zealand, 2013 Census.

### 3.0. Occupational changes over time

This section now looks at changes in the occupational structure of Pacific workers between the 2006 and 2013 censuses. Whilst ideally it would be good to look at a longer time frame to assess these changes (e.g. the 2001 Census), the classification of occupations used in the census changed in 2006 to provide a more accurate reflection of current occupations within the labour market. Therefore comparisons of occupations with the 2013 census could only be made with the 2006 census results.

The economic slowdown experienced in New Zealand and Auckland in the period between 2006 and 2013, along with general shifts in Auckland's industrial structure (such as the decrease in primary manufacturing activities) has resulted in considerable changes within some occupational categories overall and have had a disproportionate effect on Pacific people, many of whom worked in industries and occupations that bore the brunt of these job losses.

#### Broad changes overall

Across the eight main categories of occupations (ANZSCO Level 1), Pacific workers in the highly skilled categories grew at much higher annual average growth rates than Auckland overall with the rate of increase of those in professional occupations higher than those in managerial occupations. The same pattern is also observed in the annual change in shares since 2006 (Table 3).



There has been a decrease in the number of Pacific people employed in three out of the eight categories of occupations since 2006, compared to five categories for Auckland overall. Pacific workers fell by much higher rates for the technicians and trade workers and the labourers occupations compared to Auckland overall. For the machinery operators and drivers occupations, the greater decline across Auckland overall in this category has resulted in an increase in the proportion of Pacific workers employed in Auckland despite a decline in the actual numbers of Pacific workers in this occupation since 2006.

**Table 3:** Occupational changes (ANZSCO Level 1) for Pacific workers and Auckland overall, 2006 to 2013 Census

	Pacific share of occupation		Annual average growth rate 2006-2013		Annual change in shares 2006-2013	
	2006	2013	Pacific	Auckland	Pacific	Auckland
Managers	7.5%	8.5%	2.5%	1.3%	1.9%	0.7%
Professionals	10.8%	13.6%	3.8%	2.3%	3.3%	1.7%
Technicians and trade workers	13.4%	10.8%	-2.5%	-1.0%	-3.0%	-1.6%
Community and personal service workers	10.3%	11.9%	2.6%	2.0%	2.0%	1.5%
Clerical and administrative workers	13.2%	13.1%	0.4%	-0.8%	-0.1%	-1.4%
Sales workers	9.6%	10.1%	1.3%	-0.2%	0.8%	-0.8%
Machinery operators and drivers	15.9%	14.2%	-1.1%	-1.9%	-1.6%	-2.4%
Labourers	19.3%	17.8%	-0.6%	-0.3%	-1.1%	-0.9%

**Source:** Statistics New Zealand, 2006 and 2013 Census.

## Occupational changes at ANZSCO Level 2

To determine occupations that have become more important for Pacific people in Auckland I have taken those occupations that have increased their shares by 2 per cent or more per annum since the 2006 census and likewise, occupations that have become less important, have decreased their shares by 2 per cent or more per annum. The analysis looks at the share of each occupation in 2006 and in 2013 and calculates the annual change in the proportion of these shares over the two inter-census periods. The results are listed in Table 4.

Occupations that have become more important for Pacific people with share increases of over 2 per cent were largely concentrated in the highly skilled (nine out of the 16 with two managers and seven professionals) occupations. The remaining occupations were spread across the medium high skilled (with two), medium skilled (with five) and two low skilled occupations. None of the sales workers occupations saw increases of over 2 per cent over this period for Pacific workers.

There were 10 out of 43 occupations with shares declining by 2 per cent or more since 2006. These were certain types of technicians and trade workers and clerical workers (four each) and in the low skilled occupations (food preparation assistants and machine and stationary plant operators).

The balance, 17 occupational groups more or less maintained their shares by changing on average by less than 2 per cent (both increases and decreases) over the 2006 to 2013 period. The occupational groups which maintained their share with increases of less than 2 percent were

largely in the low skilled (five out of six) occupations. Hospitality, retail and service managers increased its share of Pacific workers since 2006 by 0.4 per cent per annum. Amongst the occupational groups which maintained their share with decreases of less than 2 per cent, four were labourers and the medium skilled occupational groups accounted for a third (three out of nine). The only highly skilled occupation that saw some decline in their share over the 2006 to 2013 period were farmers and farm managers (-1.1%).

**Table 4:** Change in shares of occupation (ANZSCO Level 2) for Pacific workers, 2006-2013 Census

Annual increase of over 2%		Increase/decrease less than 2%		Annual decrease of 2% and more	
Office Managers and Program Administrators	10.1%	Other Clerical and Administrative Workers	1.5%	Machine and Stationary Plant Operators	-5.5%
Health and Welfare Support Workers	6.4%	Sales Representatives and Agents	1.4%	Construction Trades Workers	-5.2%
Legal, Social and Welfare Professionals	4.6%	Carers and Aides	1.3%	Other Technicians and Trades Workers	-4.5%
Sports and Personal Service Workers	4.2%	Sales Assistants and Salespersons	1.0%	Automotive and Engineering Trades Workers	-3.4%
Education Professionals	3.9%	Storepersons	0.7%	Food Preparation Assistants	-3.2%
Chief Executives, General Managers and Legislators	3.8%	Hospitality, Retail and Service Managers	0.4%	Personal Assistants and Secretaries	-3.2%
ICT Professionals	3.4%	Skilled Animal and Horticultural Workers	0.0%	General Clerical Workers	-2.7%
Protective Service Workers	3.0%	Road and Rail Drivers	0.0%	Clerical and Office Support Workers	-2.3%
Construction and Mining Labourers	3.0%	Inquiry Clerks and Receptionists	-0.3%	Food Trades Workers	-2.1%
Arts and Media Professionals	2.5%	Hospitality Workers	-0.5%	Numerical Clerks	-2.0%
Design, Engineering, Science and Transport Professionals	2.4%	Farmers and Farm Managers	-1.1%		
Health Professionals	2.4%	Cleaners and Laundry Workers	-1.1%		
Electrotechnology and Telecommunications Trades Workers	2.3%	Engineering, ICT and Science Technicians	-1.3%		
Specialist Managers	2.3%	Factory Process Workers	-1.3%		
Business, Human Resource and Marketing Professionals	2.2%	Other Labourers	-1.5%		
Mobile Plant Operators	2.2%	Sales Support Workers	-1.5%		
		Farm, Forestry and Garden Workers	-1.8%		

**Source:** Statistics New Zealand, 2006 and 2013 Census

### Occupational changes by age group

The proportion of Pacific workers in Auckland declined from 21.4 per cent in 2006 to 19.4 per cent in 2013. Both the 25-64 year olds and the 65 years and over age groups however increased their share of Pacific workers in Auckland from 77.7 per cent to 78.8 per cent and 0.9 per cent to 1.7 per cent respectively over this period.

The occupational changes since the 2006 census across the different age groups shows the high representation of Pacific workers in the less-skilled manual jobs across each age groups but also how this pattern is changing as more younger Pacific people enter skilled white-collar jobs. Across all age groups, highly skilled occupations overall have become more important (increasing by 2 per cent or more per annum since the 2006 census) and medium high skilled occupations have become less important (with shares declining by 2 per cent or more) particularly for youth (-5.0%).

Low skilled occupations have also declined in shares for Pacific workers aged 25-64 years and 65 years and over age groups since the 2006 census.

Occupations that have become more important (with share increases of over 2 per cent) for Pacific workers aged 15-24 years people were quite similar to those for Pacific workers aged 25-64 years (see Table 5). For Pacific workers aged 15-24 years half of the occupations that have increased their shares by 2 per cent or more since the 2006 census were in highly skilled (eight out of the 16 with three managers and five professionals) occupations and a quarter were community and personal service workers occupations. The only low skilled occupation that increased its share over the 2006 to 2013 period for Pacific workers aged 15-24 years were construction and mining labourers (5.1%).

The same is also evident for Pacific workers aged 25-64 years with only two low skilled occupations becoming more important since the 2006 census; construction and mining labourers and mobile plant operators. Still in this age group, seven occupations that have become more important were in the highly skilled (five professionals and two managerial) and three out of 15 were community and personal service workers occupations. Office managers and program administrators for both Pacific workers aged 15-24 years and Pacific workers aged 25-64 years increased their shares by 10 per cent per annum over the seven year period.

In contrast to older Pacific workers (aged 65 years and over), five of the 14 occupations that have become important since the 2006 Census (with share increases of over 2 per cent), were in the low skilled occupations.

**Table 5:** Occupations (ANZSCO Level 2) with share increases of 2% or more for Pacific workers for three age groups, 2006-2013 Census

15-24 Years	25-64 Years	65 Years and Over
Health and Welfare Support Workers	12.6%	Office Managers and Program Administrators 10.2%
Office Managers and Program Administrators	9.7%	Chief Executives, General Managers and Legislators 16.6%
Arts and Media Professionals	5.9%	Health and Welfare Support Workers 5.6%
Sports and Personal Service Workers	5.8%	Mobile Plant Operators 10.1%
Protective Service Workers	5.6%	Skilled Animal and Horticultural Workers 10.1%
Education Professionals	5.4%	Hospitality, Retail and Service Managers 10.1%
Chief Executives, General Managers and Legislators	5.1%	Protective Service Workers 8.0%
Construction and Mining Labourers	5.1%	Road and Rail Drivers 6.3%
Legal, Social and Welfare Professionals	4.9%	Specialist Managers 5.6%
Farmers and Farm Managers	3.6%	Sales Representatives and Agents 5.6%
ICT Professionals	3.6%	Storepersons 5.6%
Hospitality, Retail and Service Managers	3.3%	Carers and Aides 4.8%
Health Professionals	3.3%	Business, Human Resource and Marketing Professionals 2.5%
Carers and Aides	3.3%	General Clerical Workers 3.9%
Sales Assistants and Salespersons	2.3%	Electrotechnology and Telecommunications Trades Workers 2.9%
Electrotechnology and Telecommunications Trades Workers	2.3%	Health Professionals 2.9%
		Food Preparation Assistants 2.9%
		Construction and Mining Labourers 2.4%
		Protective Service Workers 2.3%

**Source:** Statistics New Zealand, 2006 and 2013 Census

Table 6 lists the occupations that have become less important (with share decreases of 2 per cent or more) for Pacific workers across the three age groups. The largest declines in occupational shares of over 2 percent for Pacific workers aged 15-24 years were mainly in the medium high skilled category of technicians and trade workers (engineering, ICT and science technicians, skilled animal and horticultural workers, food trades workers, automotive and engineering trades workers, other technicians and trades workers and construction trades workers) and certain types of clerical workers (clerical and office support workers, general clerical workers, numerical clerks and personal assistants and secretaries). Three low skilled occupations were also on the decline; machine and stationary plant operators, farm, forestry and garden workers and food preparation assistants. The only highly skilled occupation to decline for Pacific workers aged 15-24 years was specialist managers by 2.3 per cent.

For Pacific workers aged 25-64 years, only eight of the 43 occupations saw declines of over 2 per cent since 2006. Three were technicians and trade workers and three low skilled occupations (machine and stationary plant operators, other labourers and food preparation assistants). For this age group only one managerial occupation saw some decline in their share over the 2006 to 2013 period, farmers and farm managers (-2.3%), similar to older Pacific workers although by a much higher decline of 9.7 per cent.

For Pacific workers aged 65 years and over, the distribution of occupations that saw some decline in their share over the 2006 to 2013 period was more widespread, with about four in the low skilled category, four in medium skilled, three in medium high skilled and three in the highly skilled category. For older Pacific workers the decreases were also much sharper than for Pacific workers aged 15-24 years and Pacific workers aged 25-64 years for most of the occupations.

**Table 6:** Occupations (ANZSCO Level 2) with share decreases of 2% or more for Pacific workers for three age groups, 2006-2013

15-24 Years		25-64 Years		65 Years and Over	
Personal Assistants and Secretaries	-7.6%	Machine and Stationary Plant Operators	-5.9%	Design, Engineering, Science and Transport Professionals	-9.7%
Construction Trades Workers	-7.5%	Construction Trades Workers	-4.6%	Arts and Media Professionals	-9.7%
Other Technicians and Trades Workers	-6.4%	Other Technicians and Trades Workers	-4.3%	Sales Support Workers	-9.7%
Numerical Clerks	-6.2%	Food Preparation Assistants	-3.2%	Clerical and Office Support Workers	-9.7%
General Clerical Workers	-5.8%	Automotive and Engineering Trades Workers	-3.1%	Farm, Forestry and Garden Workers	-9.7%
Automotive and Engineering Trades Workers	-5.2%	Personal Assistants and Secretaries	-2.9%	Farmers and Farm Managers	-9.7%
Food Trades Workers	-5.0%	Other Labourers	-2.3%	Personal Assistants and Secretaries	-9.7%
Clerical and Office Support Workers	-4.2%	Farmers and Farm Managers	-2.1%	Machine and Stationary Plant Operators	-8.9%
Machine and Stationary Plant Operators	-3.8%			Automotive and Engineering Trades Workers	-8.3%
Skilled Animal and Horticultural Workers	-3.2%			Sales Assistants and Salespersons	-5.3%
Food Preparation Assistants	-2.9%			Factory Process Workers	-4.3%
Farm, Forestry and Garden Workers	-2.9%			Food Trades Workers	-2.9%
Engineering, ICT and Science Technicians	-2.6%			Other Labourers	-2.9%
Specialist Managers	-2.3%			Other Technicians and Trades Workers	-2.9%

**Source:** Statistics New Zealand, 2006 and 2013 Census

## Occupational changes by industries

The occupational changes for Pacific peoples by industry shows the high representation of Pacific workers in the less-skilled manual jobs in secondary industries but also how this pattern is changing as more Pacific people enter skilled white-collar jobs in the expanding service industries. The annual share increase/decrease for the 43 ANZSCO Level 2 occupations by industries for Pacific workers since the 2006 census is summarised in Table 7, for the highly skilled, medium high skilled, medium skilled and low skilled occupations.

The share of Pacific workers employed in the manufacturing industry overall fell by 3.4 per cent per annum since the 2006 Census. During this period, 18 of the 43 occupations declined their shares by 2 per cent or more per annum and only five have become more important; four in medium skilled and one in the low skilled occupation. The second industry with the most Pacific workers in 2013 is health care and social assistance, and this industry overall increased its share of Pacific workers by 2.7 per cent per annum since 2006. Occupations that have become more important in this industry were in highly skilled (five), medium high skilled (one), medium skilled (6) and low skilled (4). Three occupations have declined their shares by 2 per cent or more all in medium skilled occupations.

Overall Pacific workers in highly skilled occupations (managers and professionals) have become more prevalent in the public administration and safety, arts and recreation services, transport, postal and warehousing, education and training and financial and insurance industries since 2006.

**Table 7:** High level summary of occupations with annual change in shares for Pacific workers by industry, 2013-2031

	Highly skilled	Med High Skilled	Medium skilled	Low skilled
Agriculture, Forestry and Fishing	-5.8%	-3.2%	2.8%	1.1%
Manufacturing	-1.8%	-1.7%	0.4%	-2.8%
Construction	-2.5%	-0.1%	2.4%	2.9%
Wholesale Trade	1.9%	0.1%	-2.8%	0.2%
Retail Trade	0.6%	-0.3%	0.2%	1.0%
Accommodation and Food Services	-3.7%	-0.6%	-0.8%	-2.6%
Transport, Postal and Warehousing	3.3%	3.4%	-0.7%	3.8%
Information Media and Telecommunications	-2.7%	0.4%	-0.7%	5.1%
Financial and Insurance Services	2.0%	5.3%	0.2%	0.1%
Rental, Hiring and Real Estate Services	1.0%	-0.6%	-3.8%	3.5%
Professional, Scientific and Technical Services	-0.9%	2.8%	-1.9%	5.7%
Administrative and Support Services	-2.0%	6.2%	-3.0%	3.6%
Public Administration and Safety	3.3%	1.3%	2.1%	19.8%
Education and Training	2.2%	10.4%	2.3%	-1.9%
Health Care and Social Assistance	1.2%	6.3%	1.2%	4.9%
Arts and Recreation Services	3.3%	0.4%	1.9%	-3.0%
Other Services	-0.5%	2.9%	1.8%	-1.6%

**Source:** Statistics New Zealand, 2006 and 2013 Census

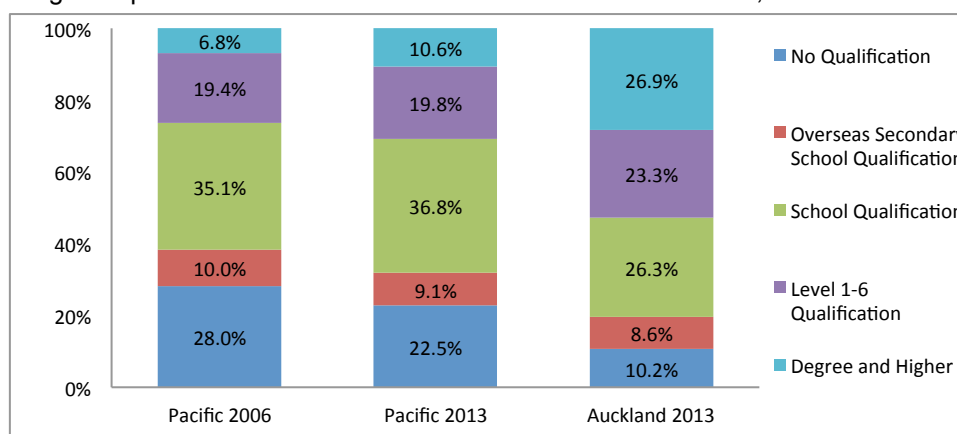
#### 4.0. Occupations and levels of highest qualifications

This section provides a brief overview of levels of highest qualifications for Pacific workers across the different occupations in the 2013 census and proportional changes since the 2006 census. Qualifications provide many of the prerequisite technical skills required for entry into specific industry areas and are an important indicator of the supply and availability of skills within a population. It is important to note that whilst qualifications are an important base upon which skills are built and developed they do not account for skills that people acquire through workplace training and informal learning including life long experiences.

##### Highest qualifications for Pacific workers in 2013

Census data on individuals' highest levels of qualifications show that in 2013, over half of Pacific workers had no qualification or only a school qualification. Ten per cent of Pacific workers in 2013 had a degree or higher qualification compared to 26.9 per cent for Auckland overall. Across the occupations, about 70 per cent of Pacific workers in 2013 with a degree or higher qualification was employed in a highly skilled occupation and over half of Pacific workers with no qualifications were employed in low skilled occupations. Within the highly skilled occupations, over forty per cent of Pacific workers in a managerial occupation had school qualification as their highest qualification compared to professionals with 43.1 per cent of Pacific workers holding a degree or higher qualification. In the medium skilled occupations, over half of all sales workers in 2013 had a school qualification as their highest qualification levels, and for the lower skilled occupations; machinery operators and drivers and labourers, 39.1 per cent and 41.6 per cent of Pacific workers in these occupations had no qualifications respectively.

**Figure 5:** Highest qualifications for Pacific workers and Auckland overall, 2006 and 2013 Census



**Source:** Statistics New Zealand, 2006 and 2013 Census

Changes in the highest levels of qualifications for Pacific workers since the 2006 Census also reflect the changes observed in occupation levels. During this period, the proportion of Pacific workers with no qualifications declined from 28.5 per cent to 22.0 per cent in 2013. On the other hand, the share of Pacific workers with a degree or higher qualification had increased from 6.8 per cent in 2006 to 10.6 per cent in 2013. The proportion of Pacific workers with degrees or higher qualification had increased across all the eight broad categories of occupations (ANZSCO L1) since the 2006 census and similarly those with no qualifications had declined across all eight occupations.

**Table 8:** High level summary of occupations with highest qualifications for Pacific workers, 2006 and 2013

<b>2006</b>	<b>No Qualification</b>	<b>Overseas Secondary School Qualification</b>	<b>School Qualification</b>	<b>Level 1-6 Qualification</b>	<b>Degree and Higher</b>
Highly Skilled	6.9%	8.3%	16.7%	26.6%	67.7%
Medium High Skilled	16.0%	15.8%	10.0%	18.2%	3.0%
Medium Skilled	21.5%	23.8%	45.5%	39.2%	25.6%
Low Skilled	55.6%	52.0%	27.7%	16.0%	3.9%
<b>2013</b>	<b>No Qualification</b>	<b>Overseas Secondary School Qualification</b>	<b>School Qualification</b>	<b>Level 1-6 Qualification</b>	<b>Degree and Higher</b>
Highly Skilled	7.6%	9.9%	18.2%	25.9%	69.1%
Medium High Skilled	13.4%	12.9%	8.1%	16.2%	2.6%
Medium Skilled	22.9%	27.4%	46.2%	40.4%	24.9%
Low Skilled	56.0%	49.6%	27.5%	17.5%	3.6%

**Source:** Statistics New Zealand, 2006 and 2013 Census

#### **4.0. Economic projections of occupations and industries**

This section now looks at the projections of occupations and industries in Auckland from the Auckland Economic Futures Model (EFM). The EFM is a projection model that has been developed for Auckland Council and is also used by other councils including Wellington City Council and Waikato Regional Council to assist with their short term and long term planning needs.

##### **The Economic Futures Model**

Projections of regional occupations and industries in Auckland to 2031 is taken from the Economic Futures Model. The EFM is based on the concept that economic growth is driven by a combination of population growth, export growth and investment. The model is based on a multiregional input-output table of commodity flows that captures how historical growth has been distributed among Auckland's economic sectors and how this growth flows through the rest of the Auckland economy.

This growth is then projected forward every five years out to 2031, across 48 economic sectors. This creates an indication of economic growth under a business-as-usual scenario. The key inputs of population, export growth and investment growth may also be changed to show different growth projections under low, medium and high growth scenarios. It is important to note that the projections outlined below represent an extrapolation of present trends. The projections are not predictions of Auckland's future; rather they provide a picture of what Auckland's economy and labour market will look like if present activity continues undisturbed.

##### **Broad results in 2031**

Occupations employing the most people in Auckland by 2031 (top 10) are provided in Table 9. As projected in the EFM, the top 10 occupations will employ nearly half (49.8%) of the total workers in Auckland in 2031. Eight of the occupations are in the highly skilled occupations of managers and professionals. Sales assistants and salespersons and sales representatives and agents make up

the top 10, accounting in total for 9.1 per cent of all occupations in Auckland in 2031. In the 2013 Census, these same occupations made up 46.8 per cent of all workers in Auckland compared to just over a quarter (27.7%) of all Pacific workers. The top 10 occupations employing the most people in Auckland in 2013 are projected to be the same in 2031 although the share of these occupations as shown in Table 9 are projected to change slightly.

**Table 9:** Top 10 Occupations (ANZSCO Level 2) for Auckland, 2031

Top 10 occupations of employment	Auckland 2031 (projections)	Auckland % 2031 (projections)	Auckland % 2013	Pacific % 2013
Specialist Managers	82,769	10.1%	9.5%	4.9%
Business, Human Resource and Marketing Professionals	53,625	6.5%	6.2%	2.6%
Sales Assistants and Salespersons	43,751	5.3%	4.8%	4.2%
Education Professionals	40,289	4.9%	5.0%	4.1%
Chief Executives, General Managers and Legislators	38,126	4.6%	4.4%	1.3%
Health Professionals	35,898	4.4%	3.7%	1.8%
Sales Representatives and Agents	31,624	3.8%	3.8%	4.6%
Hospitality, Retail and Service Managers	31,063	3.8%	3.5%	2.2%
Design, Engineering, Science and Transport Professionals	28,596	3.5%	3.2%	1.1%
ICT Professionals	23,626	2.9%	2.7%	0.9%

**Source:** Auckland Economic Futures Model

**Note:** Employment in the EFM is measured using modified employment count similar to Statistics NZ but includes sole proprietors of businesses.

### Occupational changes to 2031

Occupations at ANZSCO Level 2 that are projected to increase their shares of the total Auckland workforce from 2013 to 2031 are listed in Table 9. The corresponding annual change in shares of the same occupations for Pacific workers from 2006 to 2013 is included for reference.

Over half of the 15 occupations in Auckland that are projected to grow their shares are in the highly skilled (five out of 15) and skilled (three out of 15) occupations. Health professionals are projected to have the largest increase in shares over this period of 0.6 per cent per annum. The only low skilled occupation that is projected to increase its share over the next 18 years are construction and mining labourers. Looking at the same occupations for Pacific workers and the occupational changes since the 2006 census, it shows over half of these occupations have become more important for Pacific people, that is have increased their shares of Pacific workers by over 2 per cent per annum and three other occupations have also increased their shares but by less than 2 per cent.

**Table 10:** Occupational (ANZSCO Level 2) change in shares for Auckland, 2013-2031

Occupations projected to increase shares by 2031	Auckland annual change 2013-2031 (projections)	Pacific annual change 2006 - 2013
Health Professionals	0.6%	2.40%
Health and Welfare Support Workers	0.5%	6.40%
Carers and Aides	0.3%	1.30%
Protective Service Workers	0.2%	3.00%
Sales Assistants and Salespersons	0.2%	1.00%
Sales Support Workers	0.2%	-1.50%



Construction Trades Workers	0.2%	-5.20%
Electrotechnology and Telecommunications Trades Workers	0.2%	2.30%
Legal, Social and Welfare Professionals	0.1%	4.60%
Engineering, ICT and Science Technicians	0.1%	-1.30%
Inquiry Clerks and Receptionists	0.1%	-0.30%
Construction and Mining Labourers	0.1%	3.00%
Design, Engineering, Science and Transport Professionals	0.1%	2.40%
Arts and Media Professionals	0.1%	2.50%
Hospitality, Retail and Service Managers	0.1%	0.40%

**Source:** Auckland Economic Futures Model

## Assumptions and limitations of the EFM

The EFM makes some key assumptions that are important in understanding the economic outputs from the model. These are:

- **A demand driven assumption:** The EFM is a demand driven model. As such, for each industry the model asks ‘if all resources were infinitely available, and demand was fixed at X, what would the output be?’
- **Labour and capital intensity remain constant:** The labour/capital ratio of inputs varies among different industries. Those industries that require a high labour component for each unit of capital are said to be labour intensive (construction for instance). Conversely, industries that require very little labour for each unit of capital are said to be capital intensive (finance & insurance). The EFM assumes that the ratio between capital and labour is therefore fixed over time for all industries.
- **Propensity to consume differs across demographics:** The EFM assumes varying propensity to consume across age cohorts.
- **Technological assumptions:** The EFM is assumed to be a continuation of growth from a long run average over the last 18 years. These long run prevailing growth rates are then projected into the future. The EFM makes no allowance for technological changes that may permanently lift the productivity of a particular industry.
- **Inter-industry relationships:** The model assumes that future growth will be incremental from the existing economic base, and there will be no systemic transformations in the city, regional or national economy. If a systemic transformation were to occur, it would alter the nature of the input-output (IO) relationships on which the EFM is based. As such, any ‘shock’ that does not change these fundamental interactions can be run easily in-house.
- **Infinite Resource Supply:** The EFM is not a general equilibrium model; rather it is a demand driven model. This means that the IO tables do not account for market demand and supply simultaneously when determining its outputs. In essence, the model assumes infinite resource supply, implying that growth can occur forever without restriction.

The outputs from the EFM should be interpreted as a representation of a possible future given the underlying assumptions and data, and are indicative of an overall trend rather than a prediction of Auckland's future. Market Economics Limited who developed the EFM is continuously making improvements to the model as well as updating it with new information as they become available, for example the 2013 Census results, Statistics New Zealand's latest population projections and so forth. It is anticipated that an updated version of the EFM will be released in 2016 and it may be worth updating this paper once the new occupation projections from the new EFM are available. It may also be worth looking at other occupation projections and how these compare with the EFM results and these findings at a future date.

## **6.0 Implications for Pacific and Auckland labour force overall**

The distribution of occupational employment across the industries and sectors of the economy are critical in our understanding of the Pacific labour market. The 2013 Census provides this insight into the mix of occupations and industries for Pacific workers in 2013 and the types of changes that have taken place during the inter-Census period. The comprehensive nature of the information collected in a Census allows for these changes over time to be monitored effectively and can also be used to signal likely changes in the future as used in occupational employment forecasting and projections such as the EFM.

These initial findings provide useful insights and implications for the Pacific workforce and the impact it might have on the future of the Auckland and New Zealand labour market.

### **1. Pacific workers will increasingly become the face of the Auckland workforce**

Pacific people are very youthful (median age of 22.6 years compared to 35.1 years for Auckland overall) and are making up an increasingly large proportion of Auckland's population (14.6% in 2013 from 11.9% in 1991). With a young and growing population, the implications on Auckland's labour market will be significant.

Since the 2001 Census, the Pacific labour force grew by 2.0 per cent per annum, higher than the rate for the Auckland labour force overall of 1.8 per cent. Pacific workers now make up 10.9 per cent of Auckland's labour force, from 10.6 per cent in 2001. Assuming a labour force participation rate of 62.7 per cent for Pacific and 67.8 per cent for Auckland overall in 2021, the Statistics New Zealand medium ethnic population projections for Auckland estimates that the Pacific labour force will make up 12.1 per cent of the Auckland labour force by 2021. By 2021, it also projects that the median age for Pacific people will be 23.3 years compared to 39.7 years for Europeans in

Auckland – a hugely significant variance. The implications of this on the future of the Auckland and New Zealand labour market cannot be underestimated.<sup>4</sup>

In the future therefore we may expect that a larger proportion of the Auckland workforce, particularly younger workers, will be Pacific people. Coupled with this is an ageing Auckland and New Zealand population. Maintaining GDP growth in the face of slowing labour force growth and decreasing labour force participation will require significant increases in labour force productivity. Currently Pacific workers are proportionately under-represented in tertiary education and highly skilled occupations and if such trends were to continue there is a strong likelihood of a decline in productivity from a lack of advanced skills in the economy.

## **2. Investigations of the occupational and qualification profile of Pacific workers in Auckland shows a population with significant capacity for upskilling.**

In the 2013 Census Pacific workers in Auckland were over-represented in the lower skilled occupations and under-represented in the highly skilled occupations. Pacific youth (aged 15-24 years) in particular were the most affected with a third employed in low skilled occupations and only 12 per cent in highly skilled occupations compared to 21 per cent for Auckland youths overall. The over representation in lower skilled occupations is in turn reflected in the qualifications of Pacific workers with over half of Pacific workers in Auckland having no qualification or only a school qualification in 2013.

While some of these workers may undertake further training, a significant number will enter the workforce with very low, or no qualifications. Individuals who have no, or low qualifications are ill equipped for an economy that is moving away from low-skilled jobs toward a greater proportion of highly skilled, high-productivity jobs. An oversupply of low-skilled workers represents potential and a significant capacity for upskilling. Given the disparities in educational attainment and levels of skills, significant number of Pacific workers are likely to most strongly benefit from increased education and skills training. Upskilling Pacific workers particularly the youth is crucial if Auckland is to transition into a highly skilled, highly productive economy.

Another important implication for Pacific people is the significant need for increases in training in information technology, science, engineering, and health, in particular, which are necessary as the economy moves towards higher skilled employment. Whilst analysis shows the pattern is changing for Pacific workers with more now entering skilled white-collar jobs in the expanding service industries, Pacific workers are still under represented in service industries such as finance and insurance, and information media and telecommunications which are top productivity performers and over represented in retail, and accommodation and food services which generally have low productivity levels and growth rates.<sup>5</sup> The success of upskilling Pacific people requires training

---

<sup>4</sup> A number of studies have looked at the ageing New Zealand population and the increasingly diverse future of the labour force including *The demographic forces shaping New Zealand's future. What population ageing [really] means* by Natalie Jackson and *The Economics of Population Ageing* a New Zealand Treasury Working Paper 02/05.

<sup>5</sup> Research has established strong links between ICT and productivity in the services sector, both overseas and in New Zealand. NZ Productivity Commission 2014.

across all disciplines but in particular in the areas of science, technology, engineering and health that are conducive for a productive economy.

### **3. With improvements noted in occupational employment and qualifications since the 2006 Census, what are the implications for Auckland's workforce?**

The occupational changes for Pacific workers overall and across the different age groups and industries since the 2006 census has been very positive. Pacific workers in the highly skilled categories grew at much higher annual average growth rates than Auckland overall over the seven year inter-census period with the rate of increase of those in professional occupations higher than those in managerial occupations. Across the three age groups there was a high representation of Pacific workers in the less-skilled manual jobs although this pattern is changing especially for Pacific youth (aged 15-24 years) and Pacific workers aged 25-64 years as more younger Pacific people enter skilled white-collar jobs. Even across the industries, highly skilled occupations have become more important and low skilled occupations have declined their shares across most industries with more Pacific people entering skilled white-collar jobs in the expanding service industries. This is also reflected in the levels of highest qualifications for Pacific people with the proportion of Pacific workers with no qualifications decreasing since 2006 and the share of Pacific workers with a degree or higher qualification increasing from 6.8 per cent in 2006 to 10.6 per cent in 2013.

The occupations and industries that have become more important for Pacific people over the inter-census period are also projected to increase their shares of the Auckland labour market according to regional occupation employment projections. The Economic Futures Model projections of employment occupations to 2031, show occupations that are projected to grow their shares are in the highly skilled and medium high skilled occupations and those projected to decline are medium skilled and low skilled occupations.

If recent trends were to continue what would the Pacific occupational structure look like in 2031. Using the compound annual growth rate from the inter-census period 2006 to 2013 for each occupation and assuming the same compounded rate of growth to 2031, the proportion of Pacific workers across each occupation by 2031 is projected as shown in Table 11. Put simply this means that if Pacific workers in highly skilled occupations were to grow each year by 3.3 per cent over the period 2013 to 2031, the proportion of Pacific workers in highly skilled occupations will increase from 22.1 per cent of total occupations in 2013 to 33.2 per cent in 2031. This equates to an additional 10,000 more Pacific workers in highly skilled occupations by 2031 on top of the 12,700 in the 2013 Census.

The proportion of highly skilled occupations in Auckland overall is projected to make up 44.7 per cent of total occupations by 2031. Whilst recent occupational changes for Pacific workers is making progress in the right direction, the proportion of Pacific workers in highly skilled occupations as shown is still below that for Auckland overall by 2031 if recent trends were to continue. In other words, Pacific workers in highly skilled occupations would need to grow on average by 5.1 per cent each year to 2031, in order to have the same proportion of highly skilled

occupations as in Auckland by 2031. That is an additional 18,000 Pacific workers in highly skilled occupations by 2031, more than double the number in the 2013 Census.

**Table 11:** Occupational (ANZSCO Level 2) projections of share of Pacific workers and Auckland overall, 2031

	Projections based on recent trends - Pacific	EFM projections- Auckland
Managers	11.0%	18.9%
Professionals	22.2%	25.8%
Technicians and trades workers	5.7%	11.0%
Community and personal service workers	15.7%	8.7%
Clerical and administrative workers	11.8%	13.1%
Sales workers	10.7%	10.4%
Machinery operators and drivers	9.7%	5.0%
Labourers	13.2%	7.2%

**Source:** Auckland Economic Futures Model and author's calculations

A workforce and economy is most productive when the skills of workers match the skills required for their jobs. As the analysis of the supply of skills shows, Pacific workers have significantly lower qualification levels and are over represented in lower-skilled occupations than Auckland overall. The projections of occupations for Pacific workers based on recent trends show future occupations for Pacific workers will be largely in highly skilled occupations. There is clearly a significant gap between the current supply of skills and projected occupations for Pacific workers in Auckland. The continuation of these differences presents a clear warning that more needs to be done to close the gaps in educational attainment if Auckland is to have enough highly-skilled workers to fuel its economy in the future. This is especially critical for Pacific people who are projected to make up a larger proportion of the Auckland workforce in the future, particularly younger workers.

To conclude, these implications on the Pacific labour force need to be considered in the wider context of the changing global economy. Pacific workers in Auckland are part of the global labour market with increasingly open international borders. This exacerbates the situation for Pacific workers, as not only do they have to compete with other ethnic groups in Auckland they also have to compete with migrants for the limited number of jobs in Auckland. Technology and changing skill requirements is also changing the nature of many jobs and the types of skills that workers require. Education is crucial to enable workers to respond to new technologies. This is even more critical for Pacific workers who are proportionately under-represented in tertiary education. Even the nature of jobs are changing with an increasing trend towards self employment especially for younger people and self employment looks set to be a permanent feature of our economic landscape. The statistics on self employment and employers for Pacific people are very low, 4.3 per cent and 1.3 per cent respectively in 2013. Again this presents the potential and reinforces the need to upskill Pacific workers particularly the youth with the right skills and new skills that enables them to successfully contribute towards a highly productive economy and in the context of the changing global economy.

## 7.0 References

1. Allpress, J A. 2013. The labour market and skills in Auckland. Auckland Council technical report, TR2013/005.
2. Auckland Council. 2015. Pacific people in Auckland. 2013 Census report (forthcoming)
3. Cooper, G. 2008. Auckland city Economic Futures Model Technical Report.
4. Jackson, N. 2011. The demographic forces shaping New Zealand's future. What population ageing [really] means.
5. New Zealand Productivity Commission. 2014. Boosting productivity in the services sector.
6. Salvation Army. 2014. This is Home: An update on the state of Pasifika people in New Zealand.
7. Stephenson, J and Scobie, G. 2002. The Economics of Population Ageing. New Zealand Treasury Working Paper 02/05.