

# **MERA Working Paper 2009/04**

## **Occupational Distribution of Maori Residents of Australia and New Zealand**

*A Contribution to the FRST “Missing Men”  
Programme*

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All statistics from the Census of Population and Dwellings sources have had the corresponding random rounding, small domain filtering and other then current confidentialising protocols applied.

## **Acknowledgements**

This paper was prepared as part of a wider project Foundation for Research, Science and Technology funded *Education capital formation, employment, migration, gender, work-life balance and missing men* (Short title *Missing men*) project, <http://ips.ac.nz/events/completed-activities/Missing%20men/Missing%20men.html>.

The Deputy Director Paul Callister and Paul Hamer at the Institute of Policy Studies, School of Government, Victoria University of Wellington and Professor Richard Bedford of the Population Studies Centre, University of Waikato provided comment on the draft report.

Published by Monitoring and Evaluation Research Associates Limited, Wellington, New Zealand

December 2009

**ISBN (web) 978-1-877549-03-8**

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## Summary

This paper is a contribution to the FRST funded “missing men” programme. It puts the 2006 occupational distribution of Australian resident Maori in context as an important component of the transnational “New Zealand” sourced working population. It extends results published in Newell and Callister (2008) on the concentration of Maori Ancestry residents of Australia with the corresponding occupational distribution of Maori ethnicity (total response) residents of New Zealand at the time of the 2006 census. It compares differences in the occupational distribution of Maori residents by age and gender with Australian residents overall and New Zealand resident Maori. It discusses what these results suggest on the differences between Maori trans-Tasman migrants and stayers and on the differences in comparative distribution of Maori by occupation in New Zealand and Australia.

The results show that Australia residents of Maori ancestry make up a very large component to the working Australasian Maori population. One in five Australasian Maori males aged 25 to 34 years and one in six of working New Zealand born Australia resident males were resident in Australia in 2006. The Australia resident Maori population has a sex ratio of 1.24 compared to only 1.08 for the New Zealand resident Maori population.

The general picture shows that Maori in Australia are under-represented in the skilled occupational groups such as management, professions in particular. In contrast there tends to be heavy over-representation in “machinery operators and drivers” and “labourers” and “sales workers”, and this is more marked amongst males than females. Both male and female Maori in Australia also have markedly different occupational distributions from Maori of like age in New Zealand.

**The occupational distribution of Australia resident Maori at major group level is closest to that of New Zealand residents of Pasifika ethnicity** not to New Zealand resident Maori. The only exception to this at major occupational group level is for males aged 15 to 24 years, which are least dissimilar in occupational distribution to New Zealand resident Maori. This suggests that Australia resident Maori are selecting for jobs in a peripheral lower skill segment of the labour market similar to the role of those of Pasifika ethnicity in the New Zealand labour market.

Although these statistics might be interpreted to mean that there is a disproportionate migration of Maori with lower skills to Australia to take up the assumed higher wages and better conditions offered in corresponding Australian occupations, it may be that the high wage rates of some Australian jobs in the “machinery operators and drivers” occupations for example may be drawing on skilled as well as unskilled Maori. The extent to which this is occurring would be possible to explore by comparing the educational attainment levels of Maori working in corresponding New Zealand and Australian occupations.

Analysis of Australia resident Maori distribution at Australian state level or lower would help to show the extent of the direct “pull” factor of the Australian mining boom on trans-tasman movement of New Zealand Maori, but the extent of indirect pull effects due to flow on labour market effects at state and national level would be much more difficult to establish.

## Key Points

### Context and Framework

- This paper compares the occupational distributions of Australians of Maori Ancestry (“Australia resident Maori”) with other Australasian subpopulations. The subpopulations include New Zealand born, Australia born and other born Australians of different birthplaces, New Zealand born and not New Zealand born New Zealand residents and New Zealand residents of different total response ethnicity.
- Simple proportions as well as indices of dissimilarity in occupational distribution are used to compare the occupational distributions of the different subpopulations

### Age Composition and Gender Ratios of the Subpopulations

- There are some major differences age distribution of the working subpopulations. Persons aged 15 to 24 years make up 21.1% of Australia resident Maori compared with only 11.4% of working New Zealand born Australia residents. These sorts of differences mean that comparisons on an age group or age standardised basis are needed.
- Strong gender differences exist between the subpopulations. For example, the sex ratio of working Australia resident Maori aged 15 to 59 years is 1.24 compared with only 1.08 for working NZ residents of Maori ethnicity.
- The working Australia resident Maori and New Zealand born Australia residents made up a major share of the Australasian Maori and New Zealand born working populations in 2006.
- Australia resident Maori made up 20.4% or about **one in five** of working Australasian Maori males aged 25 to 34 years in 2006.
- New Zealand born Australia residents made up 17.6% or about **one in six** of working New Zealand born Australasian males aged 25 to 34 years in 2006.

### Differences in the Occupational distribution of the Australasian subpopulations

- Maori in Australia are far more likely to be employed in less skilled occupations, but these may be ones with high comparative wage incomes.
- The **occupational distribution of Australia resident Maori at major group level is closest to that of New Zealand residents of Pasifika ethnicity** not to New Zealand resident Maori. The only exception to this at major occupational group level is for males aged 15 to 24 years, which are least dissimilar in occupational distribution to New Zealand resident Maori.
- The close similarity between the occupational distribution of Australia resident Maori and New Zealand resident Pasifika subpopulations has a number of possible explanations. One is that the two similar subpopulations have their most accessible labour market niche in the peripheral unskilled or semi-skilled niche as migrant communities in the respective countries. Another could be a selective trans-tasman migration of unskilled and semi-skilled compared with skilled Maori. Counter to this latter argument, it may be that even skilled Maori trans-tasman migrants are being drawn to the reputed higher relative wages in some unskilled or semi-skilled occupations.

- The comparison of occupational distributions of the subpopulations is dependent on the occupational scale (level of disaggregation) of the comparison. Dissimilarities in the occupational distribution of the trans-tasman populations increase faster than same country comparisons as the level of occupational disaggregation of the analysis is increased. This is likely to be the reflect distinctive country specific nuances in the detailed industry and occupational makeup of the two countries.
- For males, the largest contributor is that both NZ resident Pasifika and Australia resident Maori workers are much less likely to be engaged in a management occupation and much more likely to be engaged in a “machinery operators and drivers” occupation than their NZ resident Maori ethnicity counterparts.
- Of lesser importance but also contributing to the result is lower representation in the “professionals” and “technicians and trades workers” occupational groups.
- This is partly counterbalanced by those males of New Zealand Pasifika ethnicity being less represented in the “clerical and administrative”, “community social and personal services” and more represented in the labourers occupational group than both New Zealand and Australia resident Maori.
- For females, the largest contributor is that both NZ resident Pasifika and Australia resident Maori workers are much less likely to be engaged in a “professional”, “management” and more likely to be engaged in the “machinery operators and drivers” occupations than their NZ resident Maori ethnicity counterparts.
- Of lesser importance but also contributing to the result is lower representation in the “clerical and administrative” and “labourers” occupational groups.
- This is partly counterbalanced by those females of New Zealand Pasifika ethnicity being less represented in the “technicians and trades workers”, “sales workers” occupational groups than both New Zealand and Australia resident Maori.

# 1 Introduction

## 1.1 New Zealand's Diasporas

A high profile policy issue in New Zealand at present is the diaspora. This is seen as a result of the economic pull effects, especially in Australia, assumed to be primarily a result of what are high salaries by New Zealand standards. Associated with this is the argument that New Zealand is losing its most highly skilled, a sort of brain-drain.

But what if some other factors were also at work? What if push factors were operating, notably the loss of employment during the restructuring that savaged New Zealand industries in the late 1980s and 1990s? During that period the estimated 'discouraged worker effects', as measured by losses in the numbers of jobs quinquennium by quinquennium between 1986 and 2001, was nationally a decrease of 15% for males and 7% for females, 1986-91; and 10% 1991-96 for men, but a gain of 4% for women; and a continuing loss 1996-2001 of 9% for males, but an 8% gain for females. These declines especially for males meant that, nationally, demographic supply of labour was outrunning the growth in full-time equivalent jobs. But these effects were most marked at the more mobile ages – 15-44 years – and in the peripheral regions of the North Island, the West Coast and Southland (Pool et al 2006: Tables 17 and Appendix Table 7). These changes most adversely affected Maori and Pasifika, and fell particularly on men in industrial sectors involving manual work, such as production and processing, and construction. In part this was a factor of a shift-share between clerical, primary sector, manufacturing and process jobs towards professional, administrative, managerial and some other services sector employment, but some of it represented a net loss in jobs. Losses were, therefore, most marked overall for regions where Maori were heavily represented and where employment in manual occupations was proportionately above the national level (Pool et al 2005: Tables 15, 17, and Appendix Tables).

But equally, there were pull factors. These were, however, rather unique in the late 20<sup>th</sup>/early 21<sup>st</sup> centuries, and may be more akin to those that had spurred the great gold rushes of the 19<sup>th</sup> century than to other recent migration flows. Today globally, the typical mass migrations involve recruitment into service occupations, skilled or unskilled, plus construction in development zones such as the Gulf States, most frequently for labour markets in large, growing metropolitan centres. In contrast the mass migrations associated with gold rushes saw men, mainly, race to rural localities, often isolated and with severe environmental conditions, wherever precious metals had been found; they were the result of 'commodity booms'.

Restructuring in New Zealand happened to coincide with a period in which Australia was advantaged by a latter-day commodity boom, which saw the rapid growth of extractive industries. This was not petroleum that is the most common cause of boom and bust, but was the mining of coal, aluminium and iron ore, all of which were exported in bulk form to heavy industrial zones, notably in China. These industries were capital intensive, but created demands for labour in jobs such as machine operating and driving.

Another aberrant feature of the direction of migration flows generated by the recent commodity boom in Australia has been the geographical concentration of the boom in

the more isolated parts of the continent. These regions also suffer severe natural conditions, above all in Queensland, South Australia and Western Australia. These areas are more likely to attract itinerant workers or recent migrants.

Finally, these jobs also allowed workers to gain very high wages, a function both of the tasks involved and the isolated locality of many of the extractive sites. These also proved highly attractive to itinerant workers and recent migrants.

A first research question in this paper is to discern the degree to which Maori migration to Australia has been a result of normal economic push/pull factors, or has instead been affected disproportionately by the coincidence of a commodity boom across the Tasman and the loss of employment in New Zealand. Necessarily, this will mean that we must infer this from comparisons between Maori employment patterns in Australia and those of Maori in New Zealand, and other ethnic groups in Australia and New Zealand. We do this by occupation, controlling, where possible, by age and gender and trans-Tasman geographical distribution. To understand the direct localised pull factors such as the Australian mining boom it would be useful to analyse the Maori ancestry Australia resident working population at a state level or lower, but that is beyond the scope of this paper. Indirect effects of that mining boom will be found not just locally but throughout the Australian economy but are much harder to attribute to any one of a number of drivers. A second related question is the degree to which Maori flows to Australia differ from those of Non-Maori.

The results have major implications. A diaspora towards labour markets that provide relatively stable employment across a normal economic base, particularly in monotonically expanding sectors, could imply that migrants are more likely to settle and stay, and not return to their home country. This has implications for policy in New Zealand. In contrast, the attraction of migrants to commodity boom zones poses a different set of policy implications for countries from which workers are recruited.

These booms are just that; they fluctuate wildly in terms of demand for their product – in this case Asian heavy manufacturing industries generate demand – and thus employment demand. The 19<sup>th</sup> century phenomenon of a sudden growth and then a flight towards the next ‘el dorado’ clearly no longer pertains, but extractive industrial sites still face the possibility of growth then decline. This has implications for New Zealand policy: in a period of downturn, or after working at these sites for some duration, do the workers recruited to such boom industries move to Australian metropoli, where most Australian residents live, or is it possible that they may return to New Zealand?

## 1.2 Genesis of this Paper

This paper is a contribution towards the research objectives of the “Missing Men” programme which has the long title “Education capital formation, employment, migration, gender, work-life balance and missing men”.

The focus of this paper comprises comparisons between the occupational distribution of Australians of Maori Ancestry (hereafter referred to as ‘Australia resident Maori’) and other Australasian subpopulations. It compares the occupational distribution of Australia resident Maori and others including Australians of different birthplaces, New Zealand born and not New Zealand born New Zealand residents and New Zealand residents of different total response ethnicity. Bedford et al (2004) examined internal migration of populations of Maori ethnicity in New Zealand and Maori Ancestry in Australia between 1996 and 2001 using Australia and New Zealand census data. They found larger proportions of “stayers” (those who hadn’t moved internally in the last five years), although the analysis was not corrected for the higher concentration of the Australia resident Maori than New Zealand residents in the younger mobile agegroups which will account for at least some of the differences observed. The analysis identified the need to recognise and understand better the international distribution of Maori. Hamer (2007) suggests that economic opportunities are the main factor in attracting those of Maori Ancestry to Australia. He identified common occupations of Maori in Australia as including “construction, mining, security, driving, community services and various trades”.

Earlier work on this project by Newell (2008) and a related working paper (Newell, 2009) confirmed Hamer’s conclusions. They showed that Australian residents of Maori Ancestry in 2006 were more concentrated in unskilled and semi-skilled occupations, notably machine operators, drivers etc. than Australians as a whole. But these papers make no direct comparisons between the occupational distribution of Australian-resident Maori and those of New Zealand residents of Maori ethnicity.

This paper takes this earlier work a step further. It compares the occupational distribution of Australians with Maori Ancestry and others including Australians of different birthplaces, New Zealand residents of various birthplaces and those of different ethnicity.

## 1.3 Data and Methods

This paper uses three nested sets of methodologies. First, it uses simple proportions to look at distributions within and between the populations concerned. But, secondly, it turns to indices of dissimilarity to provide an analysis of the effects on the labour force of gender, age and other factors<sup>1</sup>. Thirdly, it reviews the contribution of differences in employment in individual occupations to the differences between the Australia resident Maori and selected Australasian subpopulations.

Both levels of analysis recognise the overwhelming importance of demographic factors in any labour force analysis. Different age groups have different occupational

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<sup>1</sup> More refined distributions (eg by Australian State) were not available at the time of writing our PANZ paper.

profiles as do men and women, compositional effects that may confound unrefined analyses. Therefore it is important to know of any difference in the gender balance and age distribution of two subpopulations to guide comparative analysis, and thus we compare age and gender groups.

To simplify the analysis, age groups are amalgamated into a series of categories that are constructed to have some correspondence to school to retirement vocational / career / working life stages while also recognising the differences between New Zealand's and Australia's effective retirement ages. These are as follows :

- (1) 15 to 24 yrs – “post school vocational transition”
- (2) 25 to 34 yrs – “career transition”
- (3) 35 to 49 yrs – “early career”
- (4) 50 to 59 yrs – “late career”
- (5) 60 to 69 yrs – “elder career”
- (6) 70 yrs or over – “retirement stage”

These broadly fit those used in Davey's (2003) most recent updates in the “birth to death” series of social monitoring reports. But they are amended for better synchronisation with key stages of the life cycle sequence from school through any post-school education and training into working life and then retirement. They also pay attention to the increasing participation of older persons in the labour force at ages 60-69 years. The separation of the 60 to 69 years age group also eases comparisons with the Australian “retirement” transition, which features a much more extensive exit from the labour market around age 60 amongst the Australia resident population (Newell, 2009 refers).

A simple index of dissimilarity is used to compare the occupational distribution of Australia resident Maori and that of a range of other Australasian subpopulations. An index of dissimilarity provides a summary of the differences in occupational distribution between these different groups. The simple form of index of difference used – applied widely across a range of disciplines, is the index of dissimilarity ( $D$ ). Applied to the analysis of the comparative occupational distribution this can be represented as below.

$$D = (1/2) \sum_j |(P_j / P) - (Q_j / Q)|. \quad (1)$$

Where  $P$  and  $Q$  denote the number of employees in the  $j$ th occupational attainment category for two subpopulations being compared. The **index of dissimilarity** provides an overall picture of the net contribution to occupational distribution “distance” reflecting the occupational category probability density function for the respective subpopulations. As argued by Watts (1998) the measures obtained for such an index are very sensitive to the level of disaggregation of the data. In this case the data is mainly analysed at occupation major group level in order to simplify the analysis but this also focuses on the differences in broad occupational selection strategy and minimises the country specific nuances of occupational detail that start to increase in importance with increasing occupational disaggregation of the analysis .

The Australasian subpopulations compared in this paper are :  
 Australian residents

- Australian born
  - New Zealand Born
  - Born elsewhere
  - Australia Total
- New Zealanders resident in Australia by ancestry
- Australia resident Maori
  - NZ Born not Maori
- New Zealand residents by birthplace
- New Zealand NZ Born
  - New Zealand not NZ Born
  - New Zealand Total
- New Zealand residents by ethnicity (Total Response)
- European/Pakeha
  - Maori
  - Pasifika
  - Asian.

The “Australia resident NZ Born not Maori” subpopulation is made by mixing differently derived statistics; Maori Ancestry is by direct reporting, but the non-Maori New Zealand born is an estimate that takes the New Zealand born minus persons reporting Maori Ancestry (here referred to in most cases as “Australia resident Maori”). Maori ancestry data also include Maori born in Australia, and thus underestimates the non-Maori, but the effects of this will be relatively limited as the Maori Ancestry workforce, particularly at the older ages is overwhelmingly composed of New Zealand born Maori, whereas increasingly the Australian Maori Ancestry population comprises children born in Australia.

It should be noted that the use of total response data introduces a significant interpretation issues into the analysis, as any person reporting more than one ethnic affiliation is recorded for each and every such ethnic group. This produces a summed population of a size in excess of 100%, but more importantly it totally confounds all bi- or multi-variate analyses. It also means that one can not compare over time with earlier classification systems that used, in New Zealand’s case, prioritisation (based on a hierarchical system of coding, privileging Maori). But, by chance, for Maori prioritisation this yields a result that is directly comparable to total response. Thus Maori total reponse, and by deduction, Non-Maori ( $= \text{Total} - \text{Maori}$ ), remain more or less definitionally consistent over time.

The working population as defined here includes those working full or part time using which is essentially the same definition used for both countries. The occupational classification used for both countries is the recently introduced “Australia and New Zealand Standard Classification of Occupations 2006”. Occupation based statistics here are presented variously for major, sub-major and minor groups of that classification, which correspond to one digit (major group of level 1), two digits (sub-major group, level 2) and three digit (minor group, level 3) levels in that standard classification.

## 2 Results

### 2.1 Age composition of the subpopulations

The age distributions of the working members of the selected Australasian subpopulations vary with some age groups being much more heavily represented in some subpopulations. Persons aged 15 to 24 years make up only 11.4% of the New Zealand born Australia residents compared with 21.1% of Maori Australia residents (Table 1, Appendix 1). Further, 27.8% of the Australia resident working Maori population is aged 25-34 years compared only 22.9% of working NZ born Australia residents as a whole and 23% of working NZ residents of Maori TR ethnicity. The occupation mix of those working varies with age which means that age compositional effects can account for differences unless comparisons are made using like age groups.

**Table 1 : Age distribution (%) of working members of the selected Australasian sub-populations in 2006 (each row adds to 100)**

Subpopulation	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60-69 yrs	70 pl yrs
<b>AUSTRALIA RESIDENTS</b>						
Australia born	19.6	22.3	34.8	17.3	5.2	0.9
New Zealand born	11.4	22.9	40.3	19.5	5.4	0.5
Other birthplace	8.3	18.8	40.2	23.8	7.9	1.0
Australia total	16.7	21.4	36.2	18.9	5.9	0.9
<b>New Zealanders in Australia by Ancestry</b>						
Australia resident Maori	21.1	27.8	36.0	12.2	2.6	0.2
New Zealand born not Maori	9.3	21.9	41.2	21.0	6.0	0.6
<b>NEW ZEALAND RESIDENTS</b>						
<b>New Zealand residents by birthplace</b>						
New Zealand born	17.0	19.0	35.2	19.2	7.9	1.7
Not New Zealand born	12.7	20.7	39.6	18.1	7.4	1.5
New Zealand total	15.9	19.3	36.2	19.0	7.9	1.7
<b>New Zealand residents by ethnicity</b>						
European/Pakeha	15.2	18.2	35.7	20.3	8.8	1.9
Maori	22.7	23.0	35.0	13.7	4.7	0.8
Pasifika	22.4	26.4	35.2	12.1	3.4	0.5
Asian	20.0	26.7	39.1	11.5	2.4	0.4

## 2.2 Gender ratios of the subpopulations

There are also strong gender differences in occupational distribution. Comparison of the sex ratios of the working members of different subpopulations shows some major differences in sex ratios (actual numbers in each working sub-population by age and sex are shown in Appendices 2a and 2b). For example, the sex ratio of working Australia resident Maori aged 15 to 59 years is 1.24 but that of NZ residents of Maori ethnicity is only 1.08. To correct for these age compositional and gender ratio related differences the main analysis here is made on those age 25 to 34 years of age separately for males and females.

**Table 2 : Sex ratios<sup>1</sup> by age group of working members of the selected Australasian sub-populations in 2006**

	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60-69 yrs	70 pl yrs	15-59 yrs
<b>AUSTRALIA RESIDENTS</b>							
Australia born	1.028	1.180	1.123	1.148	1.562	2.003	1.139
New Zealand born	1.068	1.291	1.189	1.247	1.715	2.174	1.232
Other birthplace	1.028	1.197	1.179	1.287	2.075	2.454	1.247
Australia total	1.031	1.188	1.137	1.188	1.703	2.096	1.165
<b>New Zealanders in Australia by Ancestry</b>							
Australia resident Maori	1.146	1.354	1.167	1.277	1.848	1.525	1.239
New Zealand born not Maori	1.034	1.274	1.195	1.249	1.714	2.252	1.232
<b>NEW ZEALAND RESIDENTS</b>							
<b>New Zealand residents by birthplace</b>							
New Zealand born	1.113	1.136	1.054	1.073	1.372	1.780	1.106
not New Zealand born	1.028	1.063	1.091	1.199	1.526	1.797	1.123
New Zealand total	1.102	1.122	1.067	1.100	1.401	1.754	1.113
<b>New Zealand residents by total response ethnicity</b>							
European/Pakeha	1.069	1.101	1.059	1.084	1.405	1.808	1.101
Maori	1.182	1.117	0.997	1.053	1.184	1.269	1.081
Pasifika	1.187	1.211	1.106	1.160	1.244	0.988	1.162
Asian	0.984	1.030	1.010	1.234	1.738	1.481	1.047

<sup>1</sup> The sex ratio as defined here is the number of males per female

### 2.3 Identifying the Australia resident components share of the Australasian “New Zealand” population

Another observation of relevance is the comparative size of the Australia resident Maori versus New Zealand resident Maori ethnicity and Australia residents that are New Zealand born versus numbers NZ born resident in New Zealand (Table 3). This shows that Australia residents are most concentrated compared with their NZ resident counterparts at age 25 to 34 than others and a slightly higher proportion of the respective male than female subpopulations are located in Australia. For example, the number of male Australia resident Maori aged 25 to 34 years make up 20.4% or one in five of the combined New Zealand and Australia resident Maori working population of this age. The number of male NZ born Australia residents aged 25 to 34 years is 17.6% of the combined New Zealand and Australia resident NZ born working population – just over one in six. The working Australia resident Maori community makes up a significant share of the Australasian working Maori population. Work by Hamer (2009) estimated that as many as one in six Maori lived in Australia in 2006.

**Table 3 : Working Australian sub-population as a percent of the combined working Australasian sub-population by age and sex in 2006**

	Males		Females		Total	
	Australia resident Maori <sup>2</sup>	NZ born Australians <sup>3</sup>	Australia resident Maori	NZ born Australians	Australia resident Maori	NZ born Australians
15-24 yrs	15.1	9.9	7.7	10.1	15.3	10.1
25-34 yrs	20.4	17.6	9.1	16.7	19.1	16.7
35-49 yrs	17.8	16.8	8.5	16.0	16.7	16.0
50-59 yrs	16.0	15.3	7.1	14.5	14.7	14.5
60-69 yrs	11.3	11.0	3.7	10.2	9.7	10.2
70 pl yrs	5.4	5.3	2.1	4.9	5.1	4.9
15-59 yrs	17.3	15.0	8.1	14.5	16.7	14.8

<sup>2</sup> As a percent of the combined Australia resident working population of Maori Ancestry and New Zealand resident working population of Total Response Maori Ethnicity

<sup>3</sup> As a percent of the combined Australia resident New Zealand born working population and New Zealand resident New Zealand born working population

## 2.4 Overall occupational Distributional differences between Australasian subpopulations

Tables 4 and 5 which follow provide a broad indication of the occupational distributions of Maori and other sub-populations in Australia and New Zealand. For Maori the results are very clear. Detailed breakdown of the data are provided in Appendices 3 and 4. Maori in Australia are far more likely to be drawn to less skilled occupations, but these may be ones with very high wage incomes. This differentiates them from other Australians, and from the Maori population in New Zealand, as well as other New Zealand populations. The closest resemblance is to the Pasifika population in New Zealand.

**Table 4 : Occupational distribution (% of working population), males, selected sub-populations, broad occupational groupings of major group categories, Australia and New Zealand, 2006 (each row adds to 100)**

<b>Males</b>	Skilled	Clerical, Sales and Service	Manual
<b>AUSTRALIA RESIDENTS</b>			
Australia born	57	19	24
New Zealand born	53	16	31
Other birthplace	60	18	22
Australia total	57	19	24
<b>New Zealanders in Australia by Ancestry</b>			
Australia resident Maori	35	14	51
New Zealand born not Maori	57	17	26
<b>NEW ZEALAND RESIDENTS</b>			
<b>by birthplace</b>			
New Zealand born	58	17	25
not New Zealand born	62	19	19
New Zealand total	59	18	24
<b>by total response ethnicity</b>			
European/Pakeha	62	17	21
Maori	42	16	42
Pasifika	37	20	44
Asian	56	25	19

**Table 5 : Occupational distribution (% of working population), females, selected sub-populations, broad occupational groupings of major group categories, Australia and New Zealand, 2006 (each row adds to 100)**

<b>Females</b>	Skilled	Clerical, Sales and Service	Manual
<b>AUSTRALIA RESIDENTS</b>			
Australia born	37	54	9
New Zealand born	36	51	13
Other birthplace	40	46	14
Australia total	38	52	10
<b>New Zealanders in Australia by Ancestry</b>			
Australia resident Maori	24	51	25
New Zealand born not Maori	38	51	11
<b>NEW ZEALAND RESIDENTS</b>			
<b>by birthplace</b>			
New Zealand born	41	47	11
not New Zealand born	45	43	12
New Zealand total	42	46	12
<b>by total response ethnicity</b>			
European/Pakeha	44	47	9
Maori	34	46	20
Pasifika	27	48	25
Asian	41	45	14

## **2.5 Index of Occupational Dissimilarity : a measure of overall occupational compositional differences between Australasian subpopulations**

In the remainder of this analysis, results are tabulated for major, sub-major and minor group levels of the ANZSCO06 occupational breakdown of index of occupational dissimilarity, but a detailed analysis is carried out at occupation major group level for simplicity of presentation and interpretation. The level of disaggregation in the data affects the index of dissimilarity result. In most cases the Australia resident Maori population is most similar in its occupational mix to “New Zealand resident Pasifika” rather than to “New Zealand resident Maori” (Tables 6 and 7). The only instance where the Australia resident Maori occupational mix is closer to the “New Zealand resident Maori” than the “New Zealand resident Pasifika” is for males aged 15 to 24 years. It is also notable that the dissimilarity between the occupational mix of Australia resident Maori females and the “New Zealand resident Pasifika” is much lower than for males.

**Table 6 : Occupational dissimilarity (major group level) between working male Australia resident Maori and other Australasian sub-populations by age in 2006**

	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60-69 yrs	70 pl yrs	15-59 yrs
<b>AUSTRALIA RESIDENTS</b>							
Australia born	0.246	0.276	0.276	0.337	0.343	0.563	0.273
New Zealand born	0.116	0.186	0.220	0.265	0.267	0.452	0.212
Other birthplace	0.319	0.340	0.294	0.309	0.282	0.467	0.299
Australia total	0.244	0.278	0.277	0.317	0.308	0.535	0.274
<b>New Zealanders in Australia by Ancestry</b>							
Australia resident Maori	0.000	0.000	0.000	0.000	0.000	0.000	0.000
New Zealand born not Maori	0.177	0.239	0.261	0.297	0.292	0.485	0.257
<b>NEW ZEALAND RESIDENTS</b>							
<b>New Zealand residents by birthplace</b>							
New Zealand born	0.210	0.279	0.307	0.349	0.320	0.444	0.294
not New Zealand born	0.338	0.334	0.346	0.373	0.325	0.410	0.347
New Zealand Total	0.231	0.291	0.316	0.354	0.319	0.435	0.305
<b>New Zealand residents by total response ethnicity</b>							
European/Pakeha	0.235	0.322	0.348	0.381	0.336	0.441	0.332
Maori	0.103	0.133	0.133	0.144	0.149	0.341	0.120
Pasifika	0.147	0.119	0.077	0.079	0.115	0.374	0.091
Asian	0.419	0.371	0.350	0.379	0.379	0.519	0.367

**Table 7 : Occupational Dissimilarity (major group level) between working female Australia resident Maori and other Australasian sub-populations by age in 2006**

	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60-69 yrs	70 pl yrs	15-59 yrs
<b>AUSTRALIA RESIDENTS</b>							
Australia Born	0.145	0.172	0.214	0.263	0.336	0.478	0.186
New Zealand Born	0.095	0.118	0.161	0.208	0.276	0.423	0.150
Other birthplace	0.150	0.211	0.157	0.191	0.263	0.430	0.169
Australia total	0.143	0.177	0.196	0.237	0.312	0.460	0.174
<b>New Zealanders in Australia by Ancestry</b>							
Australia resident Maori	0.000	0.000	0.000	0.000	0.000	0.000	0.000
New Zealand born not Maori	0.139	0.149	0.190	0.231	0.299	0.469	0.181
<b>NEW ZEALAND RESIDENTS</b>							
<b>New Zealand residents by birthplace</b>							
New Zealand born	0.110	0.206	0.209	0.249	0.273	0.389	0.176
not New Zealand born	0.140	0.221	0.243	0.237	0.291	0.393	0.208
New Zealand total	0.115	0.209	0.214	0.245	0.275	0.385	0.183
<b>New Zealand residents by total response ethnicity</b>							
European/Pakeha	0.127	0.234	0.236	0.271	0.295	0.390	0.198
Maori	0.075	0.114	0.121	0.122	0.169	0.408	0.103
Pasifika	0.059	0.069	0.078	0.109	0.134	0.357	0.053
Asian	0.181	0.218	0.239	0.215	0.230	0.438	0.215

Why is it that Australia resident Maori are most similar in their occupational mix to that of New Zealand residents of Pasifika ethnicity? A number of factors could explain this.

One factor could be selective net trans-Tasman migration of Maori with different skills and occupational specializations – selecting against those with professional qualifications and for those with lower educational attainment but a disposition towards the driving, machine operating and other occupations / jobs which are likely to be well paid in the Australian mining sector and support industries.

Another possibility could be that there is some coding of those with Pasifika ancestry as New Zealand Maori. Coding of Cook Island Maori as of NZ Maori ancestry is a possibility but the cross-coding of Pasifika peoples as Maori would need to be widespread for this to explain the results – and this appears unlikely.

Another possibility is that Maori in Australia are concentrated in a peripheral casualised lower skill labour market as a migrant population analogous to Pasifika ethnicity New Zealand residents as a recent migrant population in the New Zealand labour market.

It is important to note that the concentration of Australia resident Maori in particular occupations is likely to reflect the relative wage rates compared with comparable New Zealand jobs. It may be that those with skills and experience in professional or managerial occupations in New Zealand may have found it more financially rewarding to switch to jobs in “machinery operators and drivers” and other occupations than to traditional higher skill or professional roles. The extent of any such a “down-skilling” to less skilled occupations could be tested by looking at the

highest educational attainment level of Australia resident Maori working in these occupations with their New Zealand resident counterparts.

The scale dependent nature of the dissimilarity index is illustrated by Tables 8 and 9 for the age group 25 to 34 years. The lower the level of disaggregation of the occupational mix tested for dissimilarity, the larger the relative scores for the dissimilarity index. However, the relative dissimilarity rankings shift from the New Zealand resident Pasifika as the least dissimilar towards the Australian NZ born (which includes the Maori Ancestry group to a large degree) and the Australian resident New Zealand born non Maori subpopulation as the level of disaggregation of ANZSCO occupation increases. The explanation of this is likely to be that at lower levels of disaggregation, the fine scale distinctive occupational differences between the New Zealand and Australian economies and labour markets start to become differentiated and this is reflected in increasing country specific nuances in the occupational dissimilarities between subpopulations.

**Table 8 : Occupational dissimilarity by level between working Australia resident Maori aged 25 to 34 years and other Australasian sub-populations in 2006**

	Major Group	Sub-major Group	Minor Group
<b>AUSTRALIA RESIDENTS</b>			
Australian born	0.232	0.261	0.283
New Zealand born	0.160	0.174	0.181
Other birthplace	0.268	0.301	0.319
Australia total	0.231	0.259	0.280
<u>New Zealanders in Australia by Ancestry</u>			
Australia resident Maori	0.000	0.000	0.000
New Zealand born not Maori	0.203	0.221	0.231
<b>NEW ZEALAND RESIDENTS</b>			
<u>New Zealand residents by birthplace</u>			
New Zealand born	0.255	0.301	0.328
not New Zealand born	0.287	0.319	0.345
New Zealand total	0.263	0.300	0.327
<u>New Zealand residents by total response ethnicity</u>			
European/Pakeha	0.290	0.332	0.357
Maori	0.136	0.215	0.257
Pasifika	0.096	0.183	0.227
Asian	0.295	0.356	0.394

**Table 9 : Occupational dissimilarity by level between working Australia resident Maori aged 25 to 34 years and other Australasian sub-populations by sex in 2006**

	Major Group	Males Sub-major Group	Minor Group	Major Group	Females Sub-major Group	Minor Group
<b>AUSTRALIA RESIDENTS</b>						
Australia born	0.276	0.292	0.320	0.172	0.210	0.230
New Zealand born	0.186	0.193	0.205	0.118	0.155	0.165
Other birthplace	0.340	0.388	0.412	0.211	0.243	0.258
Australia total	0.278	0.298	0.324	0.177	0.210	0.223
<u>New Zealanders in Australia by Ancestry</u>						
Australia resident Maori	0.000	0.000	0.000	0.000	0.000	0.000
New Zealand_born not Maori	0.239	0.249	0.263	0.149	0.195	0.207
<b>NEW ZEALAND RESIDENTS</b>						
<u>New Zealand residents by birthplace</u>						
New Zealand born	0.279	0.339	0.376	0.206	0.263	0.291
not New Zealand born	0.334	0.384	0.419	0.221	0.258	0.296
New Zealand total	0.291	0.343	0.378	0.209	0.258	0.288
<u>New Zealand residents by total response ethnicity</u>						
European	0.322	0.374	0.412	0.234	0.291	0.313
Maori	0.133	0.232	0.284	0.114	0.197	0.248
Pasifika	0.119	0.213	0.262	0.069	0.184	0.230
Asian	0.371	0.452	0.493	0.218	0.254	0.300

## **2.6 Occupational compositional factors associated with the overall differences between the Australia resident Maori and other subpopulations**

The percent breakdown by occupation major group for males and females is detailed in Appendices 3 and 4 respectively. The differences between the occupational distribution of each Australasian subpopulation and that of Australia residents Maori is detailed in Appendices 5 and 6 for males and females respectively. The comparison with the New Zealand resident Maori and Pasifika ethnicity occupational distributions and that of Australia resident Maori by sex is summarised in Table 10. The difference between the “distance” of each of these New Zealand resident subpopulations shows what differences are associated with the lower dissimilarity between the NZ Pasifika than the NZ and Australia resident Maori populations.

For males, the largest contributor is that both NZ resident Pasifika and Australia resident Maori workers are much less likely to be engaged in a management occupation and much more likely to be engaged in a “machinery operators and drivers” occupation than their NZ resident Maori ethnicity counterparts. Of lesser importance but also contributing to the result is lower representation in the “professionals” and “technicians and trades workers” occupational groups. This is partly counterbalanced by those males of New Zealand Pasifika ethnicity being less represented in the “clerical and administrative”, “community social and personal services” and more represented in the labourers occupational group than both New Zealand and Australia resident Maori.

For females, the largest contributor is that both NZ resident Pasifika and Australia resident Maori workers are much less likely to be engaged in a “professional”, “management” and more likely to be engaged in the “machinery operators and drivers” occupations than their NZ resident Maori ethnicity counterparts. Of lesser importance but also contributing to the result is lower representation in the “clerical and administrative” and “labourers” occupational groups. This is partly counterbalanced by those females of New Zealand Pasifika ethnicity being less represented in the “technicians and trades workers”, “sales workers” occupational groups than both New Zealand and Australia resident Maori.

**Table 10 : Differences in the (major group level) occupational distribution of those workers of Australia resident Maori and New Zealand workers of New Zealand Maori and Pasifika ethnicity age 15 to 59 years by sex in 2006**

	Males			Females		
	New Zealand Maori TR Ethnicity	New Zealand Pasifika TR Ethnicity	Relative Difference in Contribution to Dissim Index	New Zealand Maori TR Ethnicity	New Zealand Pasifika TR Ethnicity	Relative Difference in Contribution to Dissim Index
Managers	-5.7	-1.2	-4.5	-2.9	0.3	-2.6
Professionals	-3.7	-2.2	-1.5	-7.2	-3.9	-3.3
Technicians and Trades Workers	3.0	1.8	-1.2	0.0	0.9	0.9
Community and Personal Service Workers	-1.2	-1.8	0.6	-0.2	0.0	-0.2
Clerical and Administrative Workers	0.1	-1.9	1.8	5.3	3.7	-1.6
Sales Workers	-1.4	-2.1	0.7	0.4	-1.1	0.7
Machinery Operators and Drivers	8.9	5.1	-3.8	3.0	0.3	-2.7
Labourers	-0.1	2.2	2.1	1.5	-0.4	-1.1

### 3 Conclusions

This analysis shows that one in five Maori working males and one in six Maori working females aged 25 to 34 lives in Australia. For the wider and larger 35 to 49 age group one in six working Maori males lives in Australia. 28% of the working Australia resident Maori population is aged 25 to 34 year compared with only 21% of the New Zealand resident working Maori. This compares with estimates by Hamer (2009) that as many as one in six Maori overall live in Australia.

At major group level of the 2006 standard NZ and Australian occupational classification (ANZSCO), the 2006 occupational mix of Australia resident Maori is most similar to that of New Zealand residents of Pasifika total response ethnicity across a wide range of age and gender combinations. In most cases the Maori Australia residents have an occupational distribution next most similar to New Zealand residents of Maori total response ethnicity followed by that of New Zealand born Australia residents.

As the level of disaggregation of the index of occupational dissimilarity is increased, the dissimilarity between Australia resident Maori decreases much more rapidly with respect to the New Zealand resident Pasifika and Maori populations than to the Australia resident subpopulations. This shift in occupational comparability as the occupational picture becomes more refined, reflecting the detailed structural differences in specialisation within the major occupational groups that are specific to the industrial structures of New Zealand and Australia and reflected in the nuances of occupational demand.

At the high levels of aggregation within the structure of the occupational classification, the picture is most revealing of generic strategies associated with the trans-Tasman movement of labour. With increasing disaggregation of the level of occupational analysis, details of the industrial specialisations distinguishing the two economies and other labour market differences become more important in determining the overall “distance” between the detailed occupational distributions.

For males, the explanation for the closer correspondence at major group level of occupational dissimilarity analysis with the NZ resident Pasifika than Maori working occupational mix is that the former are much less likely to be engaged in a management occupation and much more likely to be engaged in a “machinery operators and drivers” occupation than their NZ resident Maori ethnicity counterparts. Of lesser importance but also contributing to the result is lower representation in the “professionals” and “technicians and trades workers” occupational groups. This is partly counterbalanced by those males of New Zealand Pasifika ethnicity being less represented in the “clerical and administrative”, “community social and personal services” and more represented in the “labourers” occupational group than both New Zealand and Australia resident Maori.

For females, the explanation for the closer correspondence with the NZ resident Pasifika than Maori workers is that the former are much less likely to be engaged in a “professional”, “management” and more likely to be engaged in the “machinery operators and drivers” occupations than their NZ resident Maori ethnicity counterparts. Of lesser importance but also contributing to the result is lower

representation in the “clerical and administrative” and labourers occupational groups. This is partly counterbalanced by those females of New Zealand Pasifika ethnicity being less represented in the “technicians and trades workers”, “sales workers” occupational groups than both New Zealand and Australia resident Maori.

In summary, the general picture shows that Maori in Australia are under-represented in the skilled occupational groups such as management, professions in particular. In contrast there tends to be heavy over-representation in “machinery operators and drivers” and “labourers” and “sales workers”, and this is more marked amongst males than females. Both male and female Maori in Australia also have markedly different occupational distributions from Maori in New Zealand.

This suggests that Australia resident Maori are selecting for jobs in a peripheral lower skill segment of the labour market similar to the role of those of Pasifika ethnicity in the New Zealand labour market.

Although these statistics might be interpreted to mean that there is a disproportionate migration of Maori with lower skills to Australia to take up the assumed higher wages and better conditions offered in corresponding Australian occupations, it may be that the high wage rates of some Australian jobs in the “machinery operators and drivers” occupations for example may be drawing on skilled as well as unskilled Maori. The extent to which this is occurring would be possible to explore by comparing the educational attainment levels of Maori working in corresponding New Zealand and Australian occupations.

This analysis and comparison of occupational dissimilarities between Australasian subpopulations has been limited to one period, 2006 and to those subpopulations for which the requisite statistics were available at the time of writing and to the national statistics rather than for subnational areas such as states, regions of labour market catchments. It would be useful to extend this analysis to other subpopulations – most notably to Australian aboriginals and to those of Pasifika ancestry Australia residents. It would also be interesting to explore how occupational segregation and subpopulation dissimilarities have changed over time.

Maori are certainly highly concentrated in many industries associated with the mining boom but these occupations in themselves make up a small proportion of the total working Maori ancestry Australia resident population. A larger number of jobs in non-mining related occupations are likely to be an indirect result of the mining boom within local communities or at a national level. That form of analysis would require detailed sub-national Australian data and is beyond the scope of this national level analysis.

The analysis here has been confined to New Zealand and Australia but it would be interesting to assemble some statistics on NZ born and Maori subpopulations resident for example in the UK if that is possible.

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## APPENDICIES

### **Appendix 1 : Age distribution of working members of the selected Australasian sub-populations in 2006**

	15 - 24 yrs	25 - 34 yrs	35 - 49 yrs	50 - 59 yrs	60 - 69 yrs	70 pl yrs	15 pl yrs
<b>AUSTRALIA RESIDENTS</b>							
Australia born	1,303,575	1,483,058	2,310,487	1,146,783	344,719	57,376	6,645,998
New Zealand born	28,471	57,191	100,549	48,554	13,372	1,298	249,435
Other birthplace	167,225	379,774	813,641	481,987	160,141	19,399	2,022,167
Australia total	1,518,146	1,948,230	3,299,367	1,722,754	534,201	81,486	9,104,187
<u>New Zealanders in Australia by Ancestry</u>							
Australia resident Maori	9,281	12,233	15,835	5,338	1,136	103	43,925
New Zealand born not Maori	19,190	44,958	84,714	43,216	12,236	1,195	205,510
<b>NEW ZEALAND RESIDENTS</b>							
<u>New Zealand residents by birthplace</u>							
New Zealand born	253,959	284,142	526,512	287,610	118,689	24,987	1,495,896
not New Zealand born	59,460	96,885	185,688	85,047	34,602	7,059	468,735
New Zealand total	316,455	383,634	718,527	377,676	156,246	33,240	1,985,778
<u>New Zealand residents by ethnicity</u>							
Maori	51,246	51,891	78,945	30,825	10,551	1,896	225,357
Pasifika	21,558	25,326	33,873	11,607	3,225	510	96,090
Asian	31,557	42,147	61,827	18,225	3,723	585	158,067
European/Pakeha	244,686	291,768	573,135	325,686	140,994	30,309	1,606,581

**Appendix 2a : Age distribution of male working members of the selected Australasian sub-populations in 2006**

	15 - 24 yrs	25 - 34 yrs	35 - 49 yrs	50 - 59 yrs	60 - 69 yrs	70 pl yrs	15 pl yrs
<b>AUSTRALIA RESIDENTS</b>							
Australia born	660,833	802,647	1,222,424	612,792	210,171	38,271	3,547,138
New Zealand born	14,701	32,233	54,616	26,949	8,447	889	137,835
Other birthplace	84,777	206,939	440,314	271,271	108,061	13,783	1,125,145
Australia total	770,589	1,057,731	1,755,672	935,374	336,597	55,162	4,911,128
<u>New Zealanders in Australia by Ancestry</u>							
Australia resident Maori	4,956	7,032	8,529	2,997	732	61	24,317
New Zealand born not Maori	9,745	25,201	46,087	23,952	7,715	828	113,518
<b>NEW ZEALAND RESIDENTS</b>							
<u>New Zealand residents by birthplace</u>							
New Zealand born	133,782	151,107	270,186	148,845	68,649	15,996	788,559
not New Zealand born	30,144	49,920	96,882	46,368	20,904	4,533	248,757
New Zealand total	165,876	202,824	370,839	197,871	91,182	21,174	1,049,769
<u>New Zealand residents by ethnicity</u>							
Maori	11,697	13,872	17,787	6,231	1,788	252	51,630
Pasifika	15,654	21,387	31,065	10,068	2,367	351	80,889
Asian	126,441	152,907	294,768	169,401	82,359	19,512	845,391
European/Pakeha	660,833	802,647	1,222,424	612,792	210,171	38,271	3,547,138

**Appendix 2b : Age distribution of female working members of the selected Australasian sub-populations in 2006**

	15 - 24 yrs	25 - 34 yrs	35 - 49 yrs	50 - 59 yrs	60 - 69 yrs	70 pl yrs	15 pl yrs
<b>AUSTRALIA RESIDENTS</b>							
Australia born	642,742	680,411	1,088,063	533,991	134,548	19,105	3,098,860
New Zealand born	13,770	24,958	45,933	21,605	4,925	409	111,600
Other birthplace	82,448	172,835	373,327	210,716	52,080	5,616	897,022
Australia total	747,557	890,499	1,543,695	787,380	197,604	26,324	4,193,059
<u>New Zealanders in Australia by Ancestry</u>							
Australia resident Maori	4,323	5,193	7,310	2,346	396	40	19,610
New Zealand born not Maori	9,447	19,765	38,623	19,259	4,529	369	91,990
<b>NEW ZEALAND RESIDENTS</b>							
<u>New Zealand residents by birthplace</u>							
New Zealand born	120,180	133,038	256,329	138,765	50,040	8,988	707,337
not New Zealand born	29,316	46,962	88,809	38,673	13,701	2,523	219,978
New Zealand total	150,576	180,804	347,685	179,808	65,061	12,069	936,009
<u>New Zealand residents by ethnicity</u>							
Maori	9,855	11,454	16,086	5,370	1,437	255	44,460
Pasifika	15,906	20,760	30,762	8,157	1,362	237	77,178
Asian	118,248	138,864	278,367	156,285	58,638	10,794	761,190
European/Pakeha	642,742	680,411	1,088,063	533,991	134,548	19,105	3,098,860

**Appendix 3 : Distribution of jobs (%) held by males aged 15 to 59 years with identified occupations (major group) for a range of Australasian subpopulations in 2006**

	Managers	Professionals	Technicians and Trades Workers	Community and Personal Service Workers	Clerical and Administrative Workers	Sales Workers	Machinery Operators and Drivers	Labourers	
<b>AUSTRALIA RESIDENTS</b>									
Australia born	16.4	16.4	23.8	5.4	6.5	7.5	11.2	12.7	100
New Zealand born	14.9	14.8	23.4	4.8	5.6	5.9	16.0	14.6	100
Other birthplace	15.6	22.5	21.6	4.9	7.0	6.1	10.6	11.8	100
Australia total	16.2	17.6	23.3	5.2	6.6	7.1	11.3	12.6	100
<b><u>New Zealanders in Australia by Ancestry</u></b>									
Australia resident Maori	6.9	6.0	22.2	5.5	4.5	3.8	26.1	24.9	100
New Zealand born not Maori	16.7	16.7	23.7	4.6	5.9	6.3	13.8	12.4	100
<b>NEW ZEALAND RESIDENTS</b>									
<b><u>New Zealand residents by birthplace</u></b>									
New Zealand born	23.1	15.1	20.0	4.7	5.0	7.5	10.2	14.5	100
not New Zealand born	19.5	22.7	20.1	5.1	5.9	7.9	8.0	10.9	100
New Zealand total	22.2	16.8	20.0	4.8	5.2	7.6	9.8	13.7	100
<b><u>New Zealand residents by total response ethnicity</u></b>									
European/Pakeha	24.3	17.6	20.3	4.5	5.0	7.6	8.5	12.3	100
Maori	12.6	9.7	19.2	6.7	4.4	5.2	17.2	25.0	100
Pasifika	8.1	8.2	20.4	7.3	6.4	5.9	21.0	22.7	100
Asian	18.2	20.0	18.1	5.2	7.5	12.2	7.5	11.3	100

**Appendix 4 : Distribution of Jobs (%) held by females aged 15 to 59 years with identified occupations (major group) for a range of Australasian subpopulations in 2006**

	Managers	Professionals	Technicians and Trades Workers	Community and Personal Service Workers	Clerical and Administrative Workers	Sales Workers	Machinery Operators and Drivers	Labourers	
<b>AUSTRALIA RESIDENTS</b>									
Australia born	10.0	22.7	4.6	13.6	26.0	14.5	1.2	7.4	100
New Zealand born	10.4	20.3	5.0	13.5	26.3	11.3	2.9	10.3	100
Other birthplace	9.4	25.9	4.9	12.5	23.6	10.1	2.4	11.2	100
Australia total	9.9	23.2	4.7	13.4	25.4	13.4	1.5	8.4	100
<u>New Zealanders in Australia by Ancestry</u>									
Australia resident Maori	7.5	11.4	5.2	15.3	23.2	12.5	6.2	18.6	100
New Zealand born not Maori	11.1	22.1	5.0	13.1	27.0	11.0	2.1	8.6	100
<b>NEW ZEALAND RESIDENTS</b>									
<u>New Zealand residents by birthplace</u>									
New Zealand born	13.7	22.6	5.1	12.5	22.2	12.7	1.9	9.3	100
not New Zealand born	13.0	26.8	5.2	11.9	19.0	12.2	2.6	9.3	100
New Zealand total	13.5	23.5	5.1	12.4	21.4	12.6	2.1	9.4	100
<u>New Zealand residents by total response ethnicity</u>									
European/Pakeha	14.2	24.5	5.1	12.1	22.4	12.4	1.6	7.8	100
Maori	10.4	18.6	5.2	15.5	17.9	12.1	3.2	17.1	100
Pasifika	7.2	15.3	4.3	15.3	19.5	13.6	5.9	19.0	100
Asian	12.8	22.0	6.1	11.1	16.7	17.3	3.4	10.6	100

**Appendix 5 : Difference between the distribution of jobs (%) held by male Australia resident Maori aged 15 to 59 years and that for a range of other Australasian subpopulations in 2006**

	Managers	Professionals	Technicians and Trades Workers	Community and Personal Service Workers	Clerical and Administrative Workers	Sales Workers	Machinery Operators and Drivers	Labourers
<b>AUSTRALIA RESIDENTS</b>								
Australia born	-9.5	-10.4	-1.6	0.1	-2.0	-3.7	14.9	12.2
New Zealand born	-8.0	-8.8	-1.2	0.7	-1.1	-2.1	10.1	10.3
Other birthplace	-8.7	-16.5	0.6	0.6	-2.5	-2.3	15.5	13.1
Australia Total	-9.3	-11.6	-1.1	0.3	-2.1	-3.3	14.8	12.3
<u>New Zealanders in Australia by Ancestry</u>								
New Zealand born not Maori	-9.8	-10.7	-1.5	0.9	-1.4	-2.5	12.3	12.5
<b>NEW ZEALAND RESIDENTS</b>								
<u>New Zealand residents by birthplace</u>								
New Zealand born	-16.2	-9.1	2.2	0.8	-0.5	-3.7	15.9	10.4
not New Zealand born	-12.6	-16.7	2.1	0.4	-1.4	-4.1	18.1	14.0
New Zealand total	-15.3	-10.8	2.2	0.7	-0.7	-3.8	16.3	11.2
<u>New Zealand residents by total response ethnicity</u>								
European/Pakeha	-17.4	-11.6	1.9	1.0	-0.5	-3.8	17.6	12.6
Maori	-5.7	-3.7	3.0	-1.2	0.1	-1.4	8.9	-0.1
Pasifika	-1.2	-2.2	1.8	-1.8	-1.9	-2.1	5.1	2.2
Asian	-11.3	-14.0	4.1	0.3	-3.0	-8.4	18.6	13.6

**Appendix 6 : Difference between the distribution of jobs (%) held by female Australia resident Maori aged 15 to 59 years and that for a range of other Australasian subpopulations in 2006**

	Managers	Professionals	Technicians and Trades Workers	Community and Personal Service Workers	Clerical and Administrative Workers	Sales Workers	Machinery Operators and Drivers	Labourers
<b>AUSTRALIA RESIDENTS</b>								
Australia born	-2.5	-11.3	0.6	1.7	-2.8	-2.0	5.0	11.2
New Zealand born	-2.9	-8.9	0.2	1.8	-3.1	1.2	3.3	8.3
Other birthplace	-1.9	-14.5	0.3	2.8	-0.4	2.4	3.8	7.4
Australia total	-2.4	-11.8	0.5	1.9	-2.2	-0.9	4.7	10.2
<u>New Zealanders in Australia by Ancestry</u>								
New Zealand born not Maori	-3.6	-10.7	0.2	2.2	-3.8	1.5	4.1	10.0
<b>NEW ZEALAND RESIDENTS</b>								
<u>New Zealand residents by birthplace</u>								
New Zealand born	-6.2	-11.2	0.1	2.8	1.0	-0.2	4.3	9.3
not New Zealand born	-5.5	-15.4	0.0	3.4	4.2	0.3	3.6	9.3
New Zealand total	-6.0	-12.1	0.1	2.9	1.8	-0.1	4.1	9.2
<u>New Zealand residents by total response ethnicity</u>								
European/Pakeha	-6.7	-13.1	0.1	3.2	0.8	0.1	4.6	10.8
Maori	-2.9	-7.2	0.0	-0.2	5.3	0.4	3.0	1.5
Pasifika	0.3	-3.9	0.9	0.0	3.7	-1.1	0.3	-0.4
Asian	-5.3	-10.6	-0.9	4.2	6.5	-4.8	2.8	8.0