Labour & Immigration Research Centre

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Labour Market Integration of Recent Migrants in New Zealand

Findings from the three waves of the Longitudinal Immigration Survey: New Zealand

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LisNZ is a partnership between the Department of Labour and Statistics New Zealand. Statistics New Zealand conducted the fieldwork for LisNZ, and Migration Research at the Department of Labour analysed the data. The Department of Labour was responsible for all data analysis and the production of this report.

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EXECUTIVE SUMMARY

This report presents findings from the Longitudinal Immigration Survey: New Zealand (LisNZ). The LiSNZ interviewed the same cohort of migrants at 6 months (Wave 1), 18 months (Wave 2), and 36 months (Wave 3) after gaining permanent residence in New Zealand.

This report is based on 5,144 migrants who took part in the three waves of the survey. Respondents were approved for residence from November 2004 to October 2005, and the third and final interview was carried out between November 2007 and October 2009.

The successful settlement of migrants is largely attributable to their ability to integrate into the receiving country, both socially and economically.

One of the Government's priorities is to attract and retain migrants who will contribute to the employment needs of New Zealand's changing economy. This report focuses on the economic integration of recent migrants. While integration into the labour market does not guarantee social integration, it is a major contributor to migrants' ability to function as autonomous members of the host country.

Economic integration is assessed in two main areas: labour market integration (labour force participation and seeking work rates), and income and earnings.

Understanding how migrants interact with the labour market is central to designing effective immigration policy and settlement services. Most migrants are likely to participate in the labour market at some stage. How readily they integrate into the labour market and the skills they bring are significant factors in delivering and maximising economic benefits to New Zealand, and in migrants achieving independence and building a successful life in New Zealand.

This report examines key predictors of economic integration including immigration approval category, region of origin, and prior New Zealand work experience. It also examines the role of other demographic characteristics including age and sex, English language proficiency, qualifications, region of settlement and household composition.

Migrants' labour market integration and income and earnings varied by immigration approval category.

This research compares outcomes across the various immigration approval categories, with an emphasis on principal applicants approved for residence through the Skilled Migrant Category.

As would be expected, principal applicants from the Skilled and Pacific categories, both requiring a job or job offer to gain residence approval, integrated immediately into the labour market. Migrants approved under these two categories also maintained the highest labour force participation rates across each of the three waves (in excess of 90 percent). Principal applicants from the Business and Family Partner categories and secondary migrants from the Skilled category were less likely than Skilled principal and Pacific category migrants to

participate in the labour market immediately, but tended to show overall improvements over time.

Skilled secondary migrants experienced the most improvement in participation rate from Waves 1 to 3, increasing from 67 percent to 74 percent, and demonstrated a significant decrease in their seeking-work rate over time.

Labour force participation rates for Family Partner migrants were unchanged across the three waves (90 percent for males, 67 percent for females by wave 3); this category experienced significant decreases in their seeking-work rate. Principal migrants from the Business, Family Partner, and Skilled secondary categories all had around 75 percent participation by Wave 3, with rates converging between Waves 1 and 2. This compares favourably to the labour force participation rate of the general population during the time of the survey .[1]

Principal applicants from the Skilled Migrant Category earned considerably higher wages and had a higher annual income than migrants from other immigration categories.

That Principal applicants from the Skilled Migrant Category earned considerably higher wages and had a higher annual income than migrants from other immigration categories; this finding is largely a reflection of New Zealand's selection policy usually requiring Skilled principal migrants to have a job offer and qualifications in a skilled area.

Pacific category migrants had very high labour market participation rates, second only to Skilled principal migrants, but they had the lowest hourly wages. This is attributable to the Pacific category's requirement of a job offer, but with a low income threshold.

Skilled secondary migrants experienced the largest increases in median income over the three waves, which is likely to reflect an increase in the number of these migrants in paid work. While Skilled principal applicants gain immediate employment as a result of skilled migrant policy settings, Skilled secondary migrants, who accompany them and do not require an offer of employment, make fast and successful gains into the labour market.

These findings demonstrate positive labour market outcomes, particularly for New Zealand's skilled migration programme, and support the effectiveness of the country's migration programme overall. This reflects the efficacy of New Zealand's migration policies in recent years and their role in producing early labour market successes, particularly for principal migrants approved under the Skilled Migrant Category.

Migrants from some regions tended to be less likely to participate in the labour market than migrants from other regions.

Labour force participation rates for migrants from North Asia were significantly lower than those migrants from the UK/Irish Republic; this effect was consistent for men and women and across the three waves. Across the waves, seeking-work rates were also relatively higher for migrants from North Asia than for

[1] The 2006, 2007, and 2008 Household Labour Force surveys showed that the labour force participation rate for New Zealanders over 15 years of age was approximately 68 percent.

those from other regions, while migrants from the UK/Irish Republic had the lowest seeking-work rates at each wave.

Migrants from North Asia who were not participating in the labour market were more likely than migrants from other regions to be studying or caring for dependants.

The median income of Skilled principal migrants varied considerably by region of origin.

Skilled principal migrants from the UK/Irish Republic, the Rest of Europe, South Africa, and North America had the highest median annual income at Wave 3 (more than $60,000). Skilled migrants from North Asia, South Asia, and South Africa had the biggest relative increases between Waves 1 and 3 (25 percent, 22 percent, and 16 percent respectively). Migrants from the UK/Irish Republic, South Africa, and North America earned higher hourly wages at Waves 1 and 3 than did migrants from Asia, although the gap started to lessen by Wave 3.

This region of origin result is consistent with other New Zealand and international research demonstrating that migrants from visible minorities tend to have more difficulty integrating into the labour market and tend to earn less on average than their counterparts from European origin or native-born New Zealanders. Generally these difficulties tend to remain even after taking account of other factors that could explain these differences in employment rates or wages (for example, the current research controlled for effects due to age, sex, qualifications, English language proficiency, local work experience, region of settlement, and household composition). These findings may be attributable to other unobservable variables or possibly to employer preferences in recruiting migrants from traditional source countries that are culturally and/or linguistically congruent to New Zealand.

New Zealand work experience is a significant factor in gaining initial entry into the labour market but this effect disappears over time.

Migrants with some work experience in New Zealand before gaining permanent residence approval were more likely to participate in the labour force and less likely to be seeking work at Wave 1 than were migrants who had not been to New Zealand before residence approval, and this finding is particularly strong for females. At Wave 3, however, having New Zealand work experience before residence approval was no longer a significant predictor of labour market integration. This finding highlights the importance of collecting longitudinal information on migrant integration patterns over time. Wave 1 results suggested that New Zealand work experience played a key role in the direct entry of migrants into the labour force. The longitudinal results, however, suggest there is no medium-term economic benefit to gaining New Zealand work experience prior to taking up residence; by 3 years post-residence, migrants with local work experience no longer demonstrate higher labour force participation rates or earnings than those with no prior experience. While this finding lends support to skilled selection policy rewarding bonus points to migrants for previous New Zealand work experience this effect appears to be short term may warrant further investigation.

Migrants aged 25–54 years had the highest participation rates at each of the three waves.

The youngest (16–24 years) and oldest (55–64 years) working age groups of migrants had the lowest participation rates at wave 3 (67 and 40 percent, respectively); these figures for the total New Zealand population are similar for youngest age group (64 percent) but much higher for the oldest age group (73 percent). Participation rates for migrants from the other age groups (25–54 years) were at least 80 percent at each of the three waves, which is comparable to the participation rates for the New Zealand population over this time period.

Male migrants aged 55–64 had the lowest participation rate and the highest seeking-work rate at both waves and this may be linked to there being few skilled migrants and a larger proportion of migrants from the Family Parent category in this group. Participation rates for females did not change significantly for any age group between Waves 1 and 3, although the seeking-work rate for females aged 35–44 decreased significantly from Waves 1 to 3. Overall, migrants aged 25–44 earned more than other migrants by Wave 3.

Overall, male migrants had higher participation rates than female migrants.

Labour force participation rates were about 15–20 percentage points higher for males than females, and this trend was generally consistent across the three waves. The unemployed and seeking-work rate was higher for females (5.0 percent) than for males (3.3 percent) at Wave 1 but this difference converges to similar levels by Wave 3 (2.2 percent and 2.7 percent, respectively), with females' seeking-work rate dropping significantly. Female migrants with children under the age of 14 were significantly less likely to participate in the labour market.

When focusing on immigration category, there was a decrease in participation between Waves 1 and 3 for female principal applicants in the Skilled category (dropping by 4 percentage points to 90 percent), whereas there were large and significant increases in participation between waves for both males and females in the Skilled secondary category. Conversely, female migrants from the Skilled secondary and family partner categories had significant decreases in their seeking-work rate between Waves 1 and 3. The largest increases in participation between Waves 1 and 3 were for females from South Asia and male migrants from the Pacific.

The median annual income and hourly earnings of male Skilled principal migrants was higher than for the equivalent group of females, although both groups' incomes increased by the same percentage between waves.

English language proficiency did not significantly affect employment outcomes for male migrants.

Female migrants experienced a significant negative impact if their English language proficiency was poor or good to moderate compared with those females who spoke English as a main language.

The lack of this affect for men may, in part, be attributable to the self-reported measures used to assess English language proficiency. Indeed, analysis of data in Australia confirms that migrants may overestimate or underestimate their host-country language proficiency.

Migrants who spoke English as a main language earned the most, with earnings reducing progressively with a decline in English language proficiency over time.

Analysis of the influence of English language proficiency on migrant wage rates at Waves 1 and 3 indicates that migrants with poor English language proficiency earned less than half those who spoke English as a main language. Moreover, not only did migrants with better language skills earn considerably higher wages than those reporting moderate or poor proficiency, but this gap widened over time.

Qualification level was not a key predictor of labour market participation for migrants, although those with tertiary qualifications earn higher wages.

Qualification level was not generally a significant predictor of labour market participation. The exception was for female migrants who held only a school qualification and had significantly lower participation rates.

Migrants with a bachelor's degree or higher degree earned considerably more than migrants with lower qualifications at Waves 1 and 3. Those with post-school qualifications of any type earned more than those with no qualifications or only a school qualification.

Small regional differences in labour force participation were found for migrants settling in broad geographic areas.

Men settling in the North Island outside of the two main centres (Auckland and Wellington) were less likely to participate in the labour market compared to those in Auckland, while females who settled in Wellington and Canterbury were less likely to be seeking work than those in Auckland at Wave 3.

Migrants in Wellington had the highest hourly earnings at Waves 1 and 2. Migrants in the Auckland region reported an income just below the median for all migrants, while the general population in Auckland has considerably higher income than the populations of other regions.

The LisNZ research programme will continue to assess the settlement outcomes and needs of migrants and inform the Government's priority areas.

Achieving a positive economic outcome is undoubtedly important to a migrant's ability to integrate and settle in New Zealand, and the LisNZ research programme will continue to examine other contributing factors. This research will provide valuable information on the economic integration of migrants and extend these findings to examine the role of community linkages and family (spouses/partners and children) settlement on the labour market outcomes and retention of migrants.

Additional research in these areas will provide further information into understand the key drivers of labour market integration, as well as how best to attract, select, and retain migrants who will contribute effectively to a productive labour market.

The relationships between various aspects of the integration and settlement process merit particular attention. For example, previous research has suggested that social ties not only contribute to the social integration of new migrants, but also play a significant role in their economic integration. Research has shown that greater opportunities for economic integration exist in regions with ethnic community networks. The current findings and on-going research in this area are in line with recent interest in the impact of migrants' social and cultural capital on their employment success.

Results from the LisNZ research will be further enhanced and expanded through the Integrated Data Infrastructure (IDI), an administrative data source which will create an integrated data environment with longitudinal microdata about individuals, households, and firms. This data will enable research and policy to support informed decision-making by allowing for the systematic tracking of information on migrant cohorts over time.

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1 BACKGROUND TO THE LONGITUDINAL IMMIGRATION SURVEY: NEW ZEALAND

1.1 Purpose

The purpose of the Longitudinal Immigration Survey: New Zealand (LisNZ) is to provide reliable, authoritative data on the settlement experiences of migrants in their first 3 years in New Zealand. By identifying the key factors that contribute to migrants' settlement experiences and outcomes, it is possible to know more about the net benefits of migration and to be able to develop more effective immigration policies.

The information collected from LisNZ provides a unique insight into migration and settlement processes. This information includes the extent to which people from different approval categories experience different outcomes, and how this and individual attributes (such as region of origin, language proficiency, qualifications, skill level, sex, and previous work experience) contribute to the economic and social integration of recent migrants.

1.2 Survey sample

The survey sample was selected from migrants aged 16 and over who were approved for permanent residence in New Zealand from 1 November 2004 to 31 October 2005. Wave 1 interviews were conducted from 1 May 2005 to 30 April 2007, Wave 2 interviews from 1 May 2006 to 30 April 2008, and Wave 3 interviews from 1 November 2007 to 31 October 2009. The survey achieved 5,144 completed interviews at Wave 3.

1.3 Objectives

The objectives addressed in LisNZ were determined through an extensive consultation process before the survey's development. The Department of Labour held workshops and meetings with a wide variety of internal and external agencies, receiving submissions on the information needs of 85 agencies, groups, and academics. The objectives and criteria used to assess each objective are explained in *LisNZ Objectives and Information Needs*.[3]

The objectives of LisNZ were to:

- describe key individual, family, household, and other general characteristics of migrants
- describe the reasons for migration, migration information sources used, locations chosen within New Zealand, and perceptions of and satisfaction with New Zealand
- describe the types of housing used by migrants, problems experienced in accessing suitable housing, and expectations of and satisfaction with housing in New Zealand
- describe migrants' labour market experiences and identify issues associated with labour market integration

[3] Department of Labour. 2005. *LisNZ Objectives and Information Needs.* Wellington: Department of Labour. www.dol.govt.nz/research/migration/lisnz/research.asp

- describe the characteristics of migrants involved in business and the nature of their business activities
- describe levels of personal and business assets brought to New Zealand, and levels of migrant income and expenditure
- identify levels of English language proficiency, issues relating to language proficiency, and English language acquisition and training for migrants
- describe levels of schooling and qualifications on arrival, factors affecting use of qualifications, participation in schooling and further education and training in New Zealand, and issues related to schooling in New Zealand
- identify migrants' need for and use of government and/or community social services and health services, issues relating to service use, and unmet needs in the provision of these services
- describe the social networks which migrants develop, identify factors affecting the establishment of these networks, and investigate initial indicators of settlement
- identify migrants' perceptions of their health status
- collect key information on the partners of migrants.

This report focuses on two of these objectives: to describe migrants' labour market experiences and identify issues associated with labour market integration, and to describe levels of personal and business assets brought to New Zealand, and levels of migrant income and expenditure.

1.4 Study design

LisNZ is a longitudinal survey that tracked and interviewed the same cohort of migrants at 6 months (Wave 1), 18 months (Wave 2), and 36 months (Wave 3) after taking up permanent residence. A small pilot survey was undertaken before the final methodology for the survey was agreed.[4] The sampling design for the main survey was a stratified random sample using strata based on three variables:

- immigration approval category
- region of origin
- whether the residence application was made offshore or onshore.

Participants were sampled from the population of principal and secondary applicants aged 16 and over who were approved for permanent residence in New Zealand from 1 November 2004 to 31 October 2005.

Participants were sampled from Immigration New Zealand's Application Management System records for those application categories leading to permanent residence. Temporary visitors were not included in the sample, nor were migrants from Australia, Niue, the Cook Islands, and Tokelau, because they do not require approval to reside in New Zealand.

[4] Detailed technical notes on methodology are in Appendix A.

Five broad immigration approval categories were investigated in this report.

- The *Skilled category* includes the Skilled Migrant Category, which is the main path to residence in New Zealand, enabling people aged 55 or under who meet standards of health, character, and English language proficiency to gain permanent residence according to employment and capacity-building factors.
- The *Business category* leads to residence and is designed to contribute to economic growth and attract capital and business expertise to New Zealand.
- The *Family category* allows partners, parents, and other family members of New Zealand citizens or residents to achieve residence.
- The *Pacific category* comprises the Pacific Access Category and Samoan Quota, which enable some citizens of Samoa, Kiribati, Tuvalu, and Tonga to apply for residence.
- The *Other category* includes applicants granted residence through various categories not included above, including a small number of migrants approved through the International/Humanitarian Stream (but excluding refugees).[5]

Migrants were interviewed face to face using an electronic questionnaire administered by an interviewer on a laptop computer. Bilingual interviewers conducted the interviews in seven designated survey languages (English, Mandarin, Cantonese, Samoan, Korean, Hindi, and Punjabi). Wave 1 interviews were conducted from 1 May 2005 to 30 April 2007, Wave 2 interviews from 1 May 2006 and 30 April 2008, and Wave 3 interviews from 1 November 2007 to 31 October 2009. The survey achieved 5,144 completed interviews at Wave 3.

This report focuses on the 5,144 participants who were interviewed at all three waves of LisNZ and presents the main indicators of labour market success for these migrants.

1.5 Contents of this report

The results reported here provide insight into the economic integration of migrants in their first 3 years after gaining permanent residence in New Zealand.

Economic integration is assessed in two main areas: labour market participation and employment, and earnings and income. The research examines and compares these two indicators for the various immigration approval categories, focusing on migrants approved for residence through the Skilled Migrant Category. Skilled migrants comprise over half of all migrants to New Zealand and are selected based on their ability to provide skills and human capital to meet the labour market needs of the country.

In addition to examining differences attributable to immigration approval category, the research also examined the impact of region of origin and English language proficiency on migrants' economic integration, controlling for the effects of age, sex, formal education, and prior New Zealand work experience.

[5] Appendix B defines the immigration approval categories used in this report (Skilled, Business, Family Partner, Pacific, and Other categories). Other important terms used in this report are defined in Appendix C.

Many of these attributes are often targeted by changes in migration assessment criteria, so are likely to be of particular interest to policy makers.

This report examines the labour market activity and income of recent migrants. First, it presents a series of descriptive results from the three waves of LisNZ data, then a set of multivariate analyses in which regression models are used to identify the influence of particular migrant characteristics on their labour market participation and income levels. Presenting descriptive data allows the reader to examine differences in the labour market outcomes of migrants broken down by various characteristics, but multivariate models provide more complete information by allowing us to identify the most significant underlying factors contributing to changes in labour market and income-related factors. This report advances the understanding gained through the descriptive cross-sectional reports of labour market participation and earnings of migrants generated at each of the three waves of data collection.[6]

As a supplement to the main survey, semi-structured qualitative interviews were conducted with a subsample of Skilled principal migrants from the full LisNZ sample 5 years post-residence in New Zealand. These people were living in Auckland, Wellington, Dunedin, Nelson, and Napier and represented the main migrant groups in each location. Independent analyses have been undertaken to further explore why and how migrants settle in New Zealand.[7] In this report the data are used to further explain and give meaning to the statistical patterns emerging from the survey data set.

1.6 Structure of this report

Section 2 briefly considers the context of LisNZ in terms of immigration policy, the labour market in New Zealand, and international research on the labour market outcomes of migrants.

Section 3 describes the representativeness of the LisNZ population in relation to the trends in New Zealand's current national population of migrants, highlighting relevant differences. This section goes on to examine key demographic variables for the LisNZ population, focusing on both group variables (nationality, immigration approval category, and region of settlement) and individual

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[6] Statistics New Zealand. 2008. *Longitudinal Immigration Survey: New Zealand – Wave 1*. Wellington: Statistics New Zealand. www.stats.govt.nz/browse_for_stats/population/migration/longitudinalimmigrationsurveynewzealand_hotpwave1.aspx; Statistics New Zealand. 2009. *Longitudinal Immigration Survey: New Zealand – Wave 2, 2008.* Wellington: Statistics New Zealand. www.stats.govt.nz/browse_for_stats/population/Migration/LongitudinalImmigrationSurveyNewZealand_HOTPW208.aspx; Statistics New Zealand. 2010. *Longitudinal Immigration Survey: New Zealand – Wave 3, 2009*. Wellington: Statistics New Zealand. www.stats.govt.nz/browse_for_stats/population/migration/lisnz.aspx; A-M Masgoret, P Merwood, and M Tausi. 2009. *New Faces, New Futures: New Zealand – Findings from the Longitudinal Immigration Survey: New Zealand (LisNZ) – Wave one*. Wellington: Department of Labour. www.dol.govt.nz/publications/research/lisnz

[7] Further research has been conducted based on this data: International Migration, Settlement, and Employment Dynamics Research. 2010. *Why Wellington? Chance and choice in migrants' decisions to come to and then remain in or leave Wellington*. Wellington: Department of Labour. www.dol.govt.nz/publications/research/why-wellington/why1.asp; Labour and Immigration Research Centre. 2011. *Why Auckland? Advice and opportunity: A study of why migrants settle in Auckland*. Wellington: Department of Labour. www.dol.govt.nz/publications/research/why-auckland/why1.asp

characteristics (age, sex, education, language proficiency, New Zealand work experience, and household composition).

Section 4 focuses on non–earnings-related measures of economic integration, examining the employment activities of recent migrants and changes in employment status over time. Section 5 focuses on migrants' income and earnings, examining their access to financial resources and the financial contributions they provide. Both sections present a descriptive analysis of outcomes broken down by various characteristics, then use statistical models to identify the factors most important in describing the way outcomes vary between migrants.

Section 6 discusses the implications of the analyses from the earlier sections.

1.7 Values presented in figures and tables

The values in the figures and tables are based on proportions calculated from weighted population estimates. These weighted estimates, which are based on the data collected from the 5,144 migrants who completed interviews in all three waves, enable us to make inferences about the migrant population from the results of the survey.[8] The weighting methodology and sampling errors are discussed in Appendix A.

Values with weighted estimates of fewer than 20 people have been suppressed to protect the confidentiality of participants. These values, as well as the proportions based on them, appear as 'S' (suppressed) in the tables.

[8] The weights used to obtain these estimates take into account the sample selected in LisNZ, non-response information, and benchmarking information on the actual number and composition of migrants who were approved for residence during the selection period (November 2004 to October 2005).

2 MIGRATION CONTEXT

2.1 Immigration policy context in New Zealand

In 2006, 23 percent of all New Zealanders were born overseas. This proportion amounts to 25 percent of New Zealand's working-age population.[9]

People who wish to migrate permanently to New Zealand to work and live must apply through one of the residence streams of the New Zealand Residence Programme: the Skilled/Business Stream, the Family Sponsored Stream (which includes the Parent Sibling Adult Child Stream and the Uncapped Immediate Family Category), or the International/Humanitarian Stream. Each stream contains various categories or policies.

Around 60 percent of all people granted permanent residence in New Zealand came through the Skilled/Business Stream, with most gaining residence through the Skilled Migrant Category. The Skilled Migrant Category is a points-based policy that allows people to gain permanent residence if they have the requisite skills, qualifications, and experience to contribute to New Zealand economically and socially. Points are awarded for a skilled job or job offer, work experience, qualifications, and age. Bonus points are granted in certain circumstances to recognise factors such as partners' employment and experience, New Zealand qualifications, and employment outside of Auckland. Applicants who obtain at least 100 points submit an expression of interest into a pool and those meeting selection criteria may be invited to apply for residence through the Skilled Migrant Category. This policy came into effect in 2003, and since then over half of all migrants granted permanent residence each year come through the Skilled Migrant Category.

New Zealand's skilled migrant selection policies use the Long Term Skills Shortage List to align migrants' skills with the needs of the New Zealand labour market .This list allows continuous monitoring to ensure migration flows are meeting the changing needs of the labour market. Annual net permanent and long-term migrant arrivals have been positive since 2001/02. However, since 2009/10, the global economic slowdown has had a significant impact on migration flows, especially those driven by labour demand.[10]

2.2 Research on labour market outcomes for migrants

Since the late 1990s, many OECD countries, including New Zealand, Australia, and Canada, have increasingly developed policies to attract skilled migrants using selection criteria relating to English language proficiency, qualifications, and prior work experience. There have been numerous studies of the effectiveness of these policies in different jurisdictions, but many have been cross-sectional correlation studies or time-series studies. However, in Australia, Canada, and New Zealand, longitudinal studies have been undertaken, with the

[9] G Nana and K Sanderson. 2008. *Migrants and Labour Market Outcomes.* Economic Impacts of Immigration Working Paper Series. Wellington: Department of Labour. www.dol.govt.nz/publications/research/migrant-types

[10] Department of Labour. 2012. *Migration Trend and Outlook 2009/10*. Wellington: Department of Labour. www.dol.govt.nz/publications/general/migration-trends-outlook/2009-2010

most substantial amount of research being reported in *Competing for Skills: Migration policy and trends in New Zealand and Australia*.[11]

A significant amount of international research has focused on the labour market integration of new migrants into receiving countries. Since the 1970s, two key features have been confirmed. First, immigrants experience an initial entry disadvantage and have poorer outcomes when they first arrive than comparable native-born workers. Second, the labour market outcomes of migrants improve the longer they remain in the host country. Longitudinal cohort studies have been important in establishing the robustness of these findings and ensuring that labour market improvements have not been wholly because of changes in the 'quality' of migrant cohorts over time.

Various explanations have been put forward for the phenomenon of entry disadvantage and subsequent relative improvement. One argument has been that migrants enter with low levels of human capital and the subsequent growth reflects their acquisition of local skills and knowledge. Additionally, the relative improvement in labour market outcomes for migrants over time may be due to the tendency of new migrants to enter lower paying occupations than they would have undertaken in their source country, and then to move into higher paying occupations. This may be more characteristic of migrants from non–English-speaking backgrounds who move into English-speaking countries.[12]

Different mechanisms underpinning migrant labour market outcomes may be at play. Research has investigated the importance both of shifting between occupations (occupational sorting) and of wage growth within occupations. Studies have suggested that shifts between occupations are more important for migrants from non–English-speaking backgrounds among whom individuals with higher pre-immigration experience enter lower paid occupations. On the other hand, for migrants from English-speaking backgrounds 'occupational sorting enhances the returns to their pre-immigration experience'.[13] The relative importance of shifting between and within occupations differs across countries. For instance, wage adjustment dominates in the United States, employment adjustment dominates in Australia, and results for Canada fall between the other two countries.[14] Different labour market policies have also been shown to be important in explaining differences across OECD countries and researchers have suggested that welfare policies are also important.[15]

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[11] L Hawthorne. 2011. *Competing for Skills: Migration policy and trends in New Zealand and Australia.* Wellington: Department of Labour. www.dol.govt.nz/publications/research/competing-for-skills/at-a-glance/page-1.asp

[12] Australia rather than United States, see, for example, S Stillman and D Maré. 2009. *The Labour Market Adjustment of Immigrants in New Zealand.* Wellington: Department of Labour. www.dol.govt.nz/publications/research/lmainz

[13] S Stillman and D Maré. 2009. *The Labour Market Adjustment of Immigrants in New Zealand.* Wellington: Department of Labour, p 9. www.dol.govt.nz/publications/research/lmainz

[14] H Antecol, P Kuhn, and S Trejo. 2006. *Assimilation via Prices or Quantities? Sources of immigrant earnings growth in Australia, Canada, and the United States*. CReAM discussion paper 03/06. London: Centre for Research and Analysis of Migration, Department of Economics, University College London. http://ideas.repec.org/p/crm/wpaper/0603.html

[15] H Antecol, P Kuhn, and S Trejo. 2006. *Assimilation via Prices or Quantities? Sources of immigrant earnings growth in Australia, Canada, and the United States*. CReAM discussion paper 03/06. London: Centre for Research and Analysis of Migration, Department of Economics, University College London. http://ideas.repec.org/p/crm/wpaper/0603.html

Another approach has been to investigate 'over-education' or whether migrants have higher levels of qualifications than native-born workers in the same occupations; the phenomenon has been found in several countries and interpreted as evidence of the imperfect transferability of immigrant skills.[16]

A Canadian interdisciplinary synthesis of research showed that immigrant employment success is significantly determined by four sets of factors:

- immigrant selection policy and the characteristics and settlement patterns of immigrants
- 'entry' effects and assimilation over time
- the lower value of immigrant human capital
- the ethnic, racial, or national origins of immigrants, and the possibility of discrimination based on such backgrounds.[17]

New Zealand research on these issues generally reflects the international patterns. Studies drawing on census data have confirmed that in New Zealand, as elsewhere, migrants' labour market outcomes improve over the first 5–10 years of residence.[18] After 15 years, and when controlling for qualifications and age, migrants' labour market outcomes are almost indistinguishable from those of the New Zealand born.[19]

A microeconometric analysis of immigrant assimilation in New Zealand published in 1998 and written by Winkelmann and Winkelmann,[20] confirmed the picture that entry disadvantage diminishes with years of residence. As found elsewhere, Winkelmann and Winkelmann found migrants to New Zealand from English-speaking countries had relatively small initial differentials and these tended to disappear within 10–20 years of residence. Asian and Pacific Island immigrants had larger initial differentials, which in some cases were unlikely to disappear. Nana and Sanderson, using arrival card data and the 5-yearly census, found that 'migrant-related characteristics' provided only a relatively small reason for the different labour outcomes of different migrant groups. However, labour market outcomes in New Zealand for migrant groups from some regions of origin 'are significantly different from [those of] the New Zealand born population' although they abate over time.[21]

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[16] S Stillman and D Maré. 2009. *The Labour Market Adjustment of Immigrants in New Zealand.* Wellington: Department of Labour. www.dol.govt.nz/publications/research/lmainz

[17] J Reitz. 2007. 'Immigrant employment success in Canada. Part 1: Individual and contextual causes.' *International Migration and Integration* 8: 11–36.

[18] S Stillman and D Maré. 2009. *The Labour Market Adjustment of Immigrants in New Zealand.* Wellington: Department of Labour. www.dol.govt.nz/publications/research/lmainz

[19] G Nana and K Sanderson. 2008. *Migrants and Labour Market Outcomes.* Economic Impacts of Immigration Working Paper Series. Wellington: Department of Labour. www.dol.govt.nz/publications/research/migrant-types

[20] L Winkelmann and R Winkelmann. 1998. *Immigrants in New Zealand: A Study of Their Labour Market Outcomes*. Occasional paper. Wellington: Department of Labour quoted in S Stillman and D Maré. 2009. *The Labour Market Adjustment of Immigrants in New Zealand.* Wellington: Department of Labour. www.dol.govt.nz/publications/research/lmainz

[21] G Nana and K Sanderson. 2008. *Migrants and Labour Market Outcomes.* Economic Impacts of Immigration Working Paper Series. Wellington: Department of Labour, p 27. www.dol.govt.nz/publications/research/migrant-types

Stillman and Maré found migrants experienced, on average, employment rates 20 percentage points lower than comparable New Zealand–born people, and annual incomes $10,000–15,000 lower.[22] Migrants gained jobs with an occupational rank 5–8 percent lower and hourly wages 10–15 percent lower than for comparable New Zealand–born workers. However, after around 15 years in New Zealand, relative outcomes had improved to the point where employment rates for migrants were about the same level or slightly below those of their New Zealand–born counterparts, and the income difference has halved for men and been eliminated for women.

Not all groups of migrants to New Zealand experience the same adjustment in labour market outcomes.[23] Immigration approval category has been linked to both labour market participation and wages. As might be expected, skilled migrants are more likely to enter the labour market and have higher initial earnings than those selected from non-economic categories.[24] This is because selection policies for skilled migrants are designed to target those skilled-based characteristics that will lead to immediate labour market integration and are often linked directly to employment. Moreover, skilled migrants tend to have significantly more temporary work experience in New Zealand before gaining residence, which further contributes to their employability.

Previous research has shown considerable variation in the labour market outcomes and earnings of skilled migrants from different backgrounds and with different characteristics.[25] While studies using longitudinal data have provided varying levels of support for the relationship between skills-based selection policies and positive labour market outcomes at the onset, the impact of these criteria tends to lessen over time.[26] Cobb-Clark used data from the Longitudinal Survey of Immigrants to Australia to examine the influence of selection policy on the labour market outcomes of new migrants.[27] This research demonstrated that while immigration approval category was positively linked to employment rates for migrants selected through the skill-based categories, this advantage tended to dissipate over time as family-based migrants experienced relatively rapid integration into the labour market over the first 18 months of residence.

Cross-national immigration research on the Australian, Canadian, and United States labour markets examines the role of region of origin in determining the labour market integration of migrants. These studies considered the interactive role played by the source country and the skill level of migrants, and have

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[22] S Stillman and D Maré. 2009. *The Labour Market Adjustment of Immigrants in New Zealand.* Wellington: Department of Labour. www.dol.govt.nz/publications/research/lmainz

[23] S Stillman and D Maré. 2009. *The Labour Market Adjustment of Immigrants in New Zealand.* Wellington: Department of Labour. www.dol.govt.nz/publications/research/lmainz

[24] E Bean, F Ku, L Zimmermann, W Sorenson. 1992. 1992. *Immigrant Categories and the US Job Market: Do they make a difference?* Washington DC: Urban Institute Press.

[25] J Grangier, R Hodgson, and K McLeod. 2011. 'Does the Skilled Migrant Category points system predict the labour market outcomes of skilled migrants?' Unpublished. Wellington: Department of Labour.

[26] H Duleep and M Regets. 1996. 'Admission criteria and immigrant earnings profile.' *International Migration Review* 30(2): 571–590.

[27] D Cobb-Clark. 2006. 'Selection policy and the labour market outcomes of new immigrants.' In D A Cobb-Clark and S Khoo (eds), *Public Policy and Immigrant Settlement (*pp 27–52). Cheltenham, UK: Edward Elgar.

generally found that migrants from traditional source countries, such as the United Kingdom (UK), integrate into the labour market better than migrants from non-traditional source countries such as China.

Strong international evidence has demonstrated that proficiency in the local language is also crucial to the economic integration of migrants. Both Australian and Canadian studies have confirmed that migrants' English language proficiency has become an increasingly significant factor that is consistently linked to better employment outcomes and higher wages. However, entry disadvantage and the need for subsequent improvement is particularly pronounced for migrants from the Asia and Pacific regions, who tend to have poor relative outcomes at the time of arrival and experience no improvement as they spend more years in New Zealand. [28]

[28] B Chiswick. 1987. 'Immigration policy, source countries, and immigrant skills: Australia, Canada, and United States'. In *The Economics of Immigration: Proceedings of conference held at the Australian National University.* Canberra, Australia: Australian Government Publishing Service; G Borjas. 1993. 'Immigration policy, national origin, and immigrant skills: A comparison of Canada and the United States'. In D Card and R Freeman (eds), *Small Differences that Matter: Labor markets and income maintenance in Canada and the United States* (pp 21–44). Chicago, IL: University of Chicago Press.

3 CHARACTERISTICS OF RECENT MIGRANTS TO NEW ZEALAND

3.1 Introduction

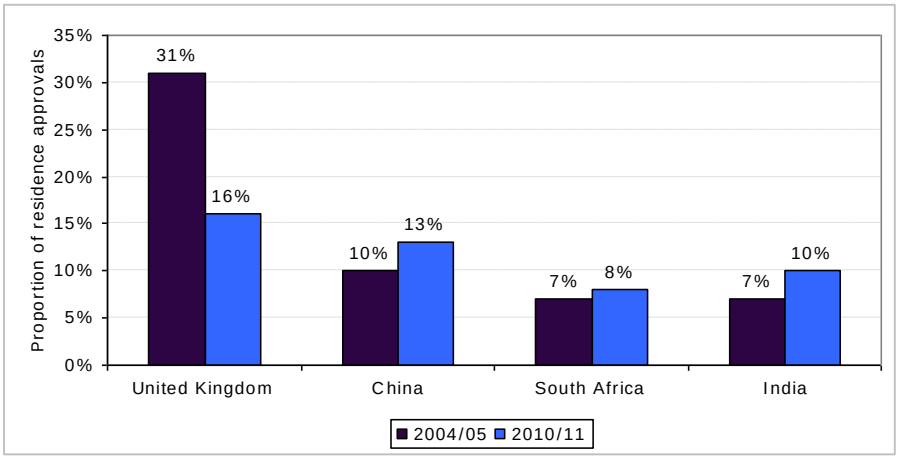
The information collected using LisNZ provides a unique insight into several important questions, including how the economic integration of diverse groups of migrants varies by group and individual characteristics. This section examines how group characteristics, such as immigration approval category and region of origin, relate to the economic integration of recent migrants to New Zealand. It also focuses on the contributing role of other individual attributes such as age, sex, language proficiency, previous work experience, skills, and qualifications. The characteristics described in this section are used as key analysis variables throughout the report.

3.2 Past and present migration flows

LisNZ was designed to represent a cohort of all migrants (excluding refugees) approved for residence from 1 November 2004 to 31 October 2005. The composition of migrants in LisNZ in terms of the proportion of migrants in the various immigration approval categories is nearly identical to current migration flows. However, migrants' main regions of origin have changed since the inception of LisNZ in 2004/05.

The top source countries for all permanent residents in 2010/11 were the UK (16 percent), China (13 percent), India (10 percent), and South Africa and the Philippines (both 8 percent). In 2004/05 migrants from the UK made up the largest proportion of migrants (31 percent) followed by Pacific countries (Fiji, Samoa, and Tonga, collectively 14 percent) and China (10 percent). (See Figure 3.1.)

Figure 3.1: Proportion of permanent residents from the top source countries, 2004/05 and 2010/11

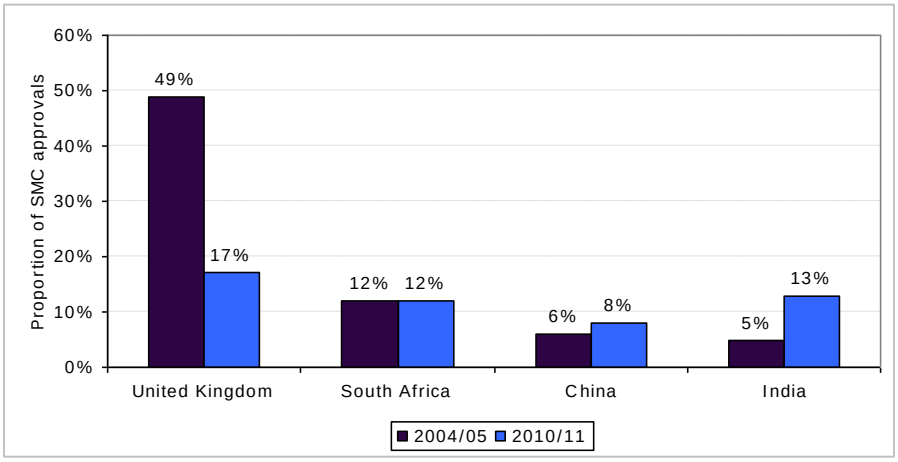


Source: P Merwood. 2005. *Migration Trends 2004/2005.* Wellington: Department of Labour.

In 2010/11, the top source countries for permanent residents approved through the Skilled Migrant Category were the UK (17 percent), India (13 percent), South Africa and the Philippines (both 12 percent), and China and Fiji (both

8 percent). The top source countries for the equivalent group of migrants in 2004/05 were the UK (49 percent), South Africa (12 percent), China (6 percent), and India (5 percent). Compared with current flows, a much larger proportion of the 2004/05 Skilled Migrant Category approvals were from the UK and far fewer came from India. (See Figure 3.2.)

Figure 3.2: Proportion of Skilled Migrant Category (SMC) approvals from top source countries, 2004/05 and 2010/11



The recent increase in migrants from India is due to a growing number of former Indian international students transitioning to temporary work and then to permanent residence. Although the UK is still the top source country for migrants to New Zealand, the migration of UK citizens to New Zealand has been decreasing since 2004/05. The decrease in UK migrants to New Zealand may be partially explained by trends in the decline in the number of UK citizens leaving the UK and the impact of the global economic downturn.

Ninety percent of 2010/11 Skilled Migrant Category principal applicants had a job or job offer (compared with 87 percent in 2004/05) and 70 percent gained points for recognised work experience (80 percent in 2004/05). In 2010/11, 85 percent of Skilled Migrant Category principal applicants were approved onshore compared with 79 percent in 2004/05.

Overall, some changes in migrant composition, migration flows and policy settings have not changed significantly since the initiation of LisNZ, so the results can be applied meaningfully to the current migration context.

3.3 Characteristics of migrants in the survey cohort

This section describes some of the demographic and immigration-related characteristics for the weighted population of migrants in LisNZ who were interviewed at all three waves of the survey. The characteristics described in this section are used as the main analysis variables in sections 4 and 5. The characteristics are:

- *immigration approval category* - this often reflects different criteria for labour market experience and activities
- *region of origin* - factors such as pre-migration exposure to English and the acquisition of transferable educational and skills are likely to impact on migrants' labour market integration

- *English language proficiency, qualifications, and prior work experience in New Zealand* - these characteristics are expected to increase migrants' employability and thus their labour market integration
- *region of settlement* - the availability of employment and wages are likely to be affected by geographic region
- *age* - younger and older people are less likely to be in employment
- *sex and household composition* - since women are more likely to be out of the labour market taking care of dependants.

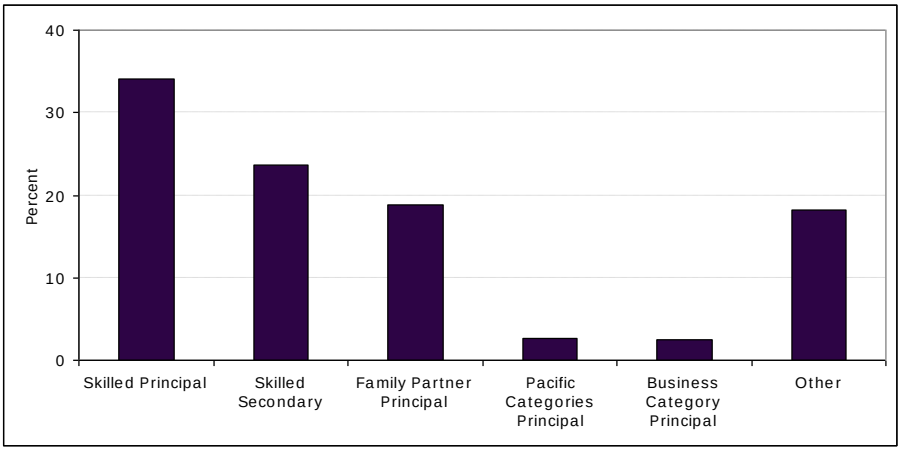
3.3.1 Immigration approval category

The largest group of migrants (57.8 percent) was approved through the Skilled category.[29] Family Partner principal applicants were the second largest group (18.9 percent). The remaining migrants were approved through the categories Business principal (2.5 percent), Pacific principal (2.7 percent), and Other (18.2 percent).[30] (See Figure 3.3.)

Skilled principal and secondary migrants

In New Zealand, Skilled principal migrants are selected through skills-based policies, and Skilled secondary migrants are their partners and dependent children. Since Skilled principal and Skilled secondary migrants are expected to demonstrate different levels of participation and outcomes in the labour market, migrants approved through the Skilled category have been divided into two subgroups: Skilled principal migrants (34.1 percent) and Skilled secondary migrants (23.7 percent). In the LisNZ cohort, 85 percent of Skilled secondary migrants were partners and 15 percent were children aged over 15. Examining Skilled principal and Skilled secondary migrants separately enables assessment of each subgroup's labour market performance independently and over time.

Figure 3.3: Immigration approval categories of migrants in the LisNZ cohort



[29] The categories are explained in Appendix B.

[30] The Other category consists of a small number of secondary migrants (other than Skilled secondary migrants), migrants approved through the Family Parent, Family Sibling, and Family Adult Child Categories, and a small number approved through the International/Humanitarian Stream.

Immigration approval category has been linked to labour market participation and wages.

Immigration approval category has been linked to both positive labour market participation and wages. As mentioned previously, Skilled migrants are more likely to enter the labour market and have higher initial earnings than are migrants who enter through non-economic categories. Since selection policies for Skilled migrants target skilled-based characteristics that will lead to immediate and successful labour market integration and are often linked directly to employment, it is not surprising that these migrants integrate more readily than migrants selected through family-based policies who possess similar characteristics.

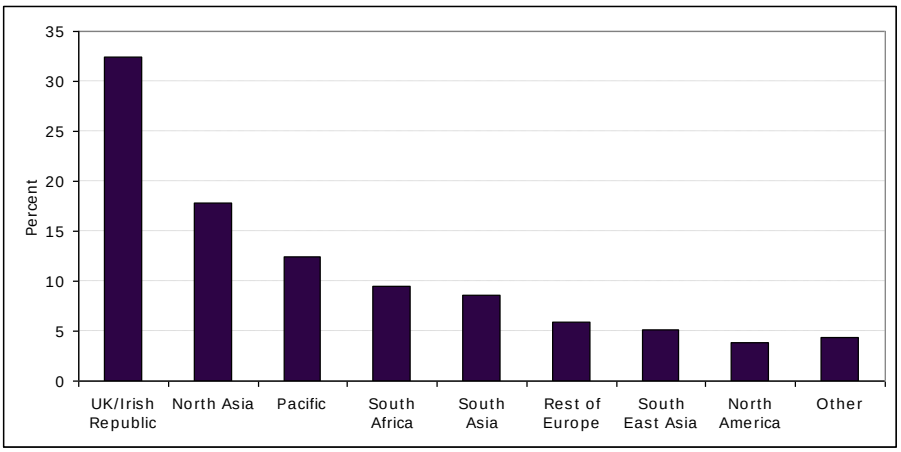
However, while international research has demonstrated that there are often relatively large differences in the initial economic outcomes for migrants selected through skill-based policies, many of these differences tend to be attributable to the underlying characteristics of the migrants rather than to their immigration approval category per se.[31]

Research has also demonstrated that while immigration categories are positively linked to employment rates for migrants selected through skill-based categories, this advantage tends to dissipate as family-based migrants experience relatively rapid integration into the labour market over their first 18 months of residence.

3.3.2 Region of origin

Overall, migrants from the UK/Irish Republic made up the largest proportion of migrants (32.4 percent), followed by those from North Asia (17.8 percent) and the Pacific (12.4 percent) (see Figure 3.4). See Appendix C for an explanation of the region of origin groupings.

Figure 3.4: Region of origin of migrants



The source countries of the migrants in LisNZ who were approved for residence between November 2004 and October 2005 largely reflect New Zealand's overall

[31] D Cobb-Clark. 2000. 'Selection criteria make a difference? Visa category and the labor market status of immigrants to Australia.' *The Economic Record* 76(232): 15–31; D Cobb-Clark. 2003. 'Public policy and the labor market adjustment of new immigrants to Australia.' *Journal of Population Economics* 16(6): 655–681.

source countries in recent years. Since the 1980s, the number of migrants coming to New Zealand from Europe and Asia has tended to increase, and the number coming from Australia and the Pacific has tended to decrease. Since the introduction of stricter English language requirements in 2002 and the Skilled Migrant Category in 2003, a greater proportion of migrants have come from the UK/Irish Republic, the Rest of Europe, and South Africa and a smaller proportion from Asia.

At the time of LisNZ, a large proportion of principal and secondary skilled migrants were from the UK/Irish Republic (39.3 percent and 46.6 percent), followed by North Asia (15.0 percent and 9.3 percent) and South Africa (12.7 percent and 15.2 percent). Although the largest proportion of principal applicants from the Pacific region applied through the Pacific category (22 percent), a significant proportion of Pacific migrants were granted residence through the approval categories Skilled principal (9 percent), Skilled secondary (7 percent), Family Partner (13 percent), and Other (47 percent).[32] Business migrants were predominantly from North Asia (57 percent).

Family migration was more diverse in respect of source countries. The largest regions of origin of Family Partner migrants were the UK/Irish Republic (28.8 percent) and North Asia (21.0 percent).

As mentioned in section 2.2, studies focusing on the Australian, Canadian, and United States labour markets have examined the role of region of origin in determining the labour market integration of migrants.[33] These studies indicate that migrants from traditional source countries tend to integrate into the labour market better than migrants from non-traditional source countries.

3.3.3 English language proficiency

Most migrants who gain residence through skilled and business policies must have a minimum standard of English language.[34] This requirement is reflected in the large proportion of migrants with strong English language proficiency (88.5 percent), with 60 percent of all migrants reporting English as one of the languages they spoke best,[35] 18.6 percent reporting very good English language proficiency, and 9.9 percent reporting good English language proficiency. Only 11.6 percent of all migrants reported their English language proficiency to be moderate or poor.

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[32] The Other category consists of a small number of secondary migrants (other than Skilled secondary migrants), migrants approved through the Family Parent, Family Sibling, and Family Adult Child Categories, and a small number approved through the International/Humanitarian Stream.

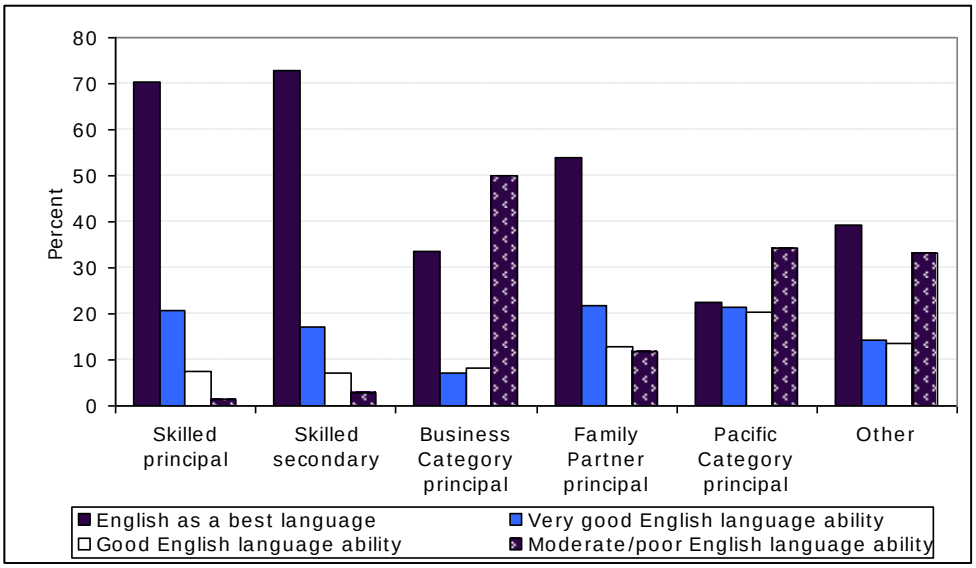
[33] B Chiswick. 1987. 'Immigration policy, source countries, and immigrant skills: Australia, Canada, and United States.' In *The Economics of Immigration: Proceedings of conference held at the Australian National University.* Canberra, Australia: Australian Government Publishing Service; G Borjas. 1993. 'Immigration policy, national origin, and immigrant skills: A comparison of Canada and the United States.' In D Card and R Freeman (eds), *Small Differences that Matter: Labor markets and income maintenance in Canada and the United States* (pp 21–44). Chicago, IL: University of Chicago Press.

[34] There is no minimum standard of English language skills for principal applicants applying for residence through the Talent Visa Category and Long Term Skills Shortage List.

[35] Respondents could report up to two languages when answering 'Which language do you speak best?'.

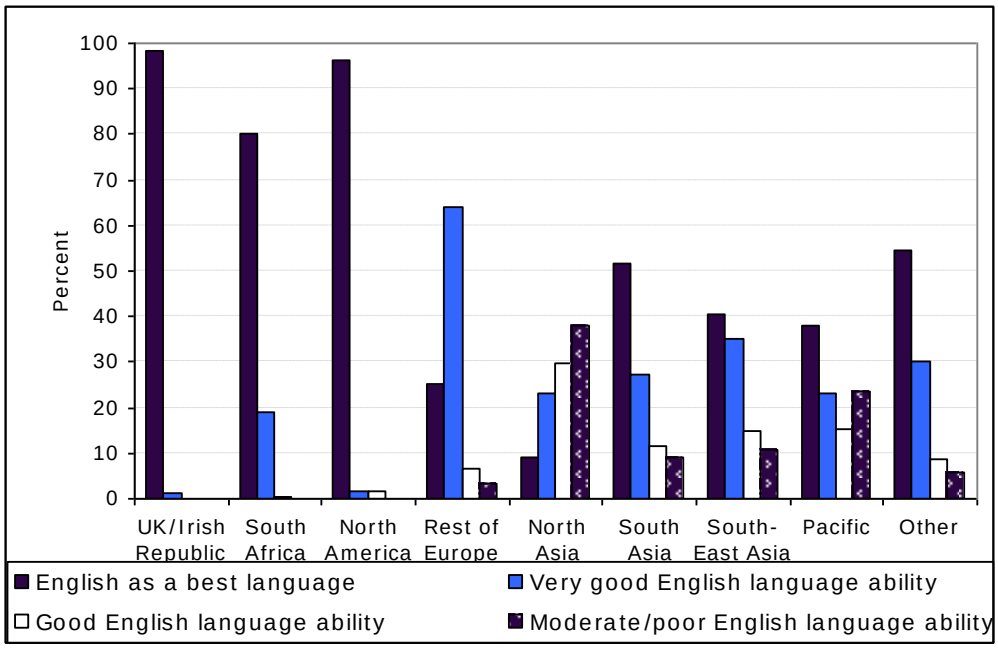
As would be expected, Skilled migrants were most likely to report English as a language they spoke best (70.2 percent of Skilled principal and 72.9 percent of Skilled secondary migrants), followed by Family Partner migrants (53.8 percent). Pacific category migrants were the least likely to report English as a language they spoke best (22.6 percent). Only 1.5 percent of Skilled principal migrants and 2.9 percent of Skilled secondary migrants rated their English language proficiency as moderate or poor, whereas half the Business migrants reported having moderate or poor English language proficiency (see Figure 3.5).

Figure 3.5: English language proficiency of migrants by immigration approval category



Not surprisingly, regional differences in English language skills were evident, with migrants from English-speaking countries reporting the highest proficiency. About a quarter (25.2 percent) of the European migrants (excluding UK/Irish Republic migrants) reported English as a language they spoke best and 64.1 percent of this group reported having very good English language proficiency. Just over half (51.7 percent) the South Asian migrants reported English to be a language they spoke best and over a quarter (27.4 percent) of this group reported speaking very good English. Migrants from North Asia reported the lowest levels of English language proficiency, followed by those from the Pacific. (See Figure 3.6.)

Figure 3.6: English language proficiency of migrants by region of origin



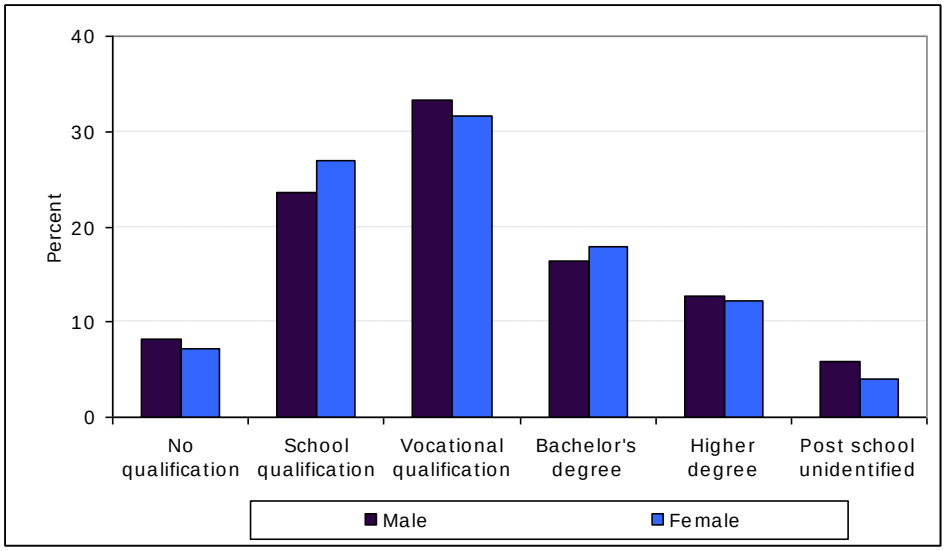
3.3.4 Qualifications

At Wave 1, 67 percent of all migrants held a post-school qualification. As would be expected, most Skilled principal migrants held some form of post-school qualification (92 percent), with 38 percent of all Skilled migrants holding a vocational degree and 48 percent a bachelor's degree or higher.

Sixty-three percent of Skilled secondary and 68 percent of Family Partner migrants held a post-school qualification, with 28 percent and 25 percent respectively holding a bachelor's or higher degree. Pacific category migrants had the lowest qualifications: 15 percent had no qualification and 54 percent held a school qualification and 26 percent a vocational qualification as their highest level of study. Interestingly, Business migrants also held relatively low levels of qualifications with the largest proportion (44 percent) reporting their highest level of study to be a school qualification.

Qualification levels also tended to differ by region of origin. Migrants from North America had the highest level of qualifications with 61 percent holding a bachelor's or higher degree. Migrants from Europe (including the UK/Irish Republic), South Africa, North Asia, and South Asia were most likely to hold a vocational qualification, while migrants from the Pacific region were most likely to report having no qualification (22 percent) or holding only a school qualification (48 percent). Females and males had similar qualification levels (see Figure 3.7).

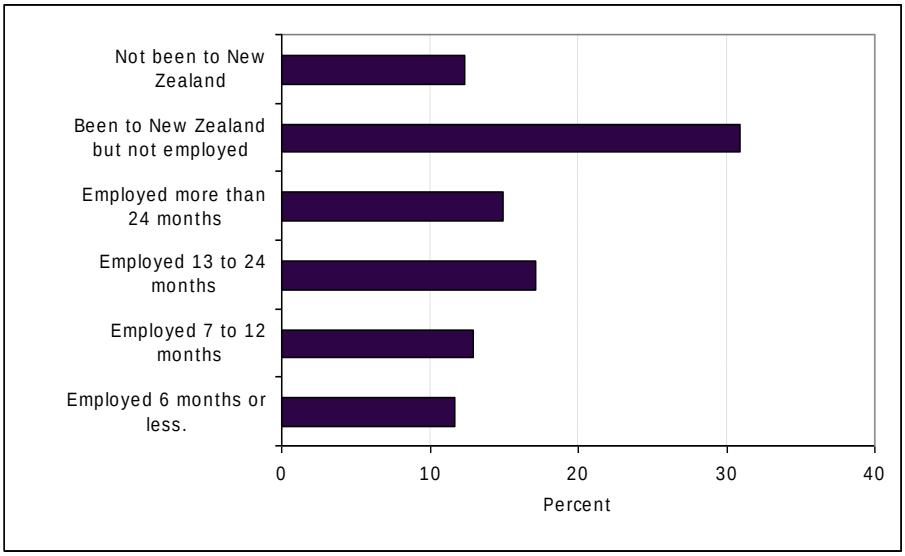
Figure 3.7: Highest qualification of migrants by sex



3.3.5 Prior work experience in New Zealand

Many migrants choose to visit, study, and/or work in New Zealand before gaining permanent residence (see Figure 3.8). Most migrants (87.6 percent) in the survey had been to New Zealand before and over half (56.7 percent) had held a temporary work permit and had gained New Zealand work experience before taking up permanent residence.

Figure 3.8: Work experience in New Zealand before residence



Skilled principal (75.2 percent), Business (72.1 percent), and Family Partner (64.9 percent) migrants were the most likely migrants to have been employed in New Zealand before gaining permanent residence, while Pacific category (38.8 percent) and Skilled secondary (45 percent) migrants were the least likely to have previous New Zealand work experience. Interestingly, a large proportion of Business migrants (67.4 percent) had been employed in New Zealand for 24 months or more before gaining permanent residence in New Zealand; this compares with only 19.2 percent of Skilled principal and 15.6 percent of Family Partner migrants. In contrast, 56 percent and 49.3 percent of these migrants respectively had been employed for 24 months or less.

> *"So then I decided okay and started work here then started work, after a few months. I like the place so I thought I'll settle here I'm going to stay, the atmosphere, the climate, the people, everything I like here, so."*

Migrants from South Africa (67.4 percent) and the rest of Europe (67.3 percent, excludes the UK/Irish Republic) were the most likely migrants to have been previously employed in New Zealand, followed by migrants from South-East Asia (64.3 percent) and North Asia (61.7 percent). Migrants from the Pacific (59.3 percent) and UK/Irish Republic (49.4 percent) were the least likely to have had previous work experience in New Zealand.

3.3.6 Region of settlement

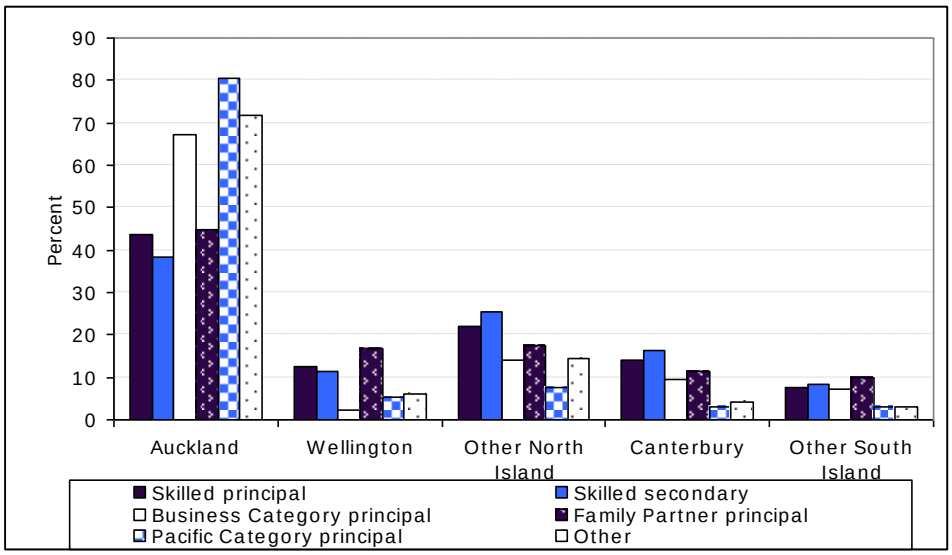
At Wave 1, almost half (49.3 percent) the migrants were living in the Auckland region, followed by 12 percent in the Canterbury region, and 11.4 percent in the Wellington region. The proportion of migrants living in the Auckland region was comparable with the proportion of the total overseas-born population living there. The 2006 Census of Population and Dwellings showed that 52 percent of overseas-born people in New Zealand lived in the Auckland region.[36]

> *"In terms of employment and things like that, there's more variety in Auckland than there is in any other centre in New Zealand. My friends are here, the fact that you can jump in a car and be at the beach, or in the bush, or in the mountains or whatever in an hour or two that's great."*

Most Business category (67.1 percent) and Pacific category (80.6 percent) migrants settled in the Auckland region. A quarter of Skilled and Family Partner migrants settled in the Wellington and Canterbury regions. (See Figure 3.9.)

[36] Statistics New Zealand. No date. 'Census 2006.' www.stats.govt.nz/Census/2006CensusHomePage.aspx

Figure 3.9: Region of settlement by immigration approval category



At each wave, migrants were asked about where they lived and whether they had moved. This provided useful information about movements within and between regions between Waves 1 and 3.

By Wave 3, three-quarters (74.9 percent) of migrants had lived at more than one address since gaining permanent residence. By Wave 3, 37.0 percent of migrants had resided at three or more addresses, 38.0 percent at two addresses, and only 25.1 percent had lived at the same address over the 2½ years between Waves 1 and 3.

At Wave 3, 49.3 percent of migrants lived in the Auckland region, 31.5 percent lived in the rest of the North Island, and 19.3 percent lived in the South Island. Between Waves 1 and 3 there was relatively little movement between these three regional areas with 94.2 percent of migrants living in the same region at Waves 1 and 3. (See Table 3.1.)

Table 3.1: Movement of migrants between and within regions between Waves 1 and 3

	Region at Wave 3			
	Auckland	Other North Island	South Island	Total
Region at Wave 1	Percentage (%)			
Auckland	95.8	2.9	1.4	100.0
Other North Island	4.7	92.8	2.5	100.0
South Island	4.8	2.9	92.5	100.0
Total(1)	49.3	31.5	19.3	100.0

Notes

Wave 1 interviews were from 1 May 2005 to 30 April 2007, and Wave 3 interviews were from 1 November 2007 to 31 October 2009.

Due to rounding, individual figures may not sum to the totals.

(1) Excludes responses where region was not specified.

3.3.7 Age and sex

Most migrants were aged under 45, with 35.6 percent aged 25–34 and 30.7 percent aged 35–44 (see Figure 3.10).

The mean age of migrants was 36.1 (median 34) for all migrants with little difference between males (mean 36.6, median 35) and females (mean 35.6, median 34).

Note, however, that age restrictions apply to applicants through residence categories such as the Skilled Migrant Category, Pacific Access Category, and Samoan Quota.[37]

Figure 3.10: Age and sex of migrants

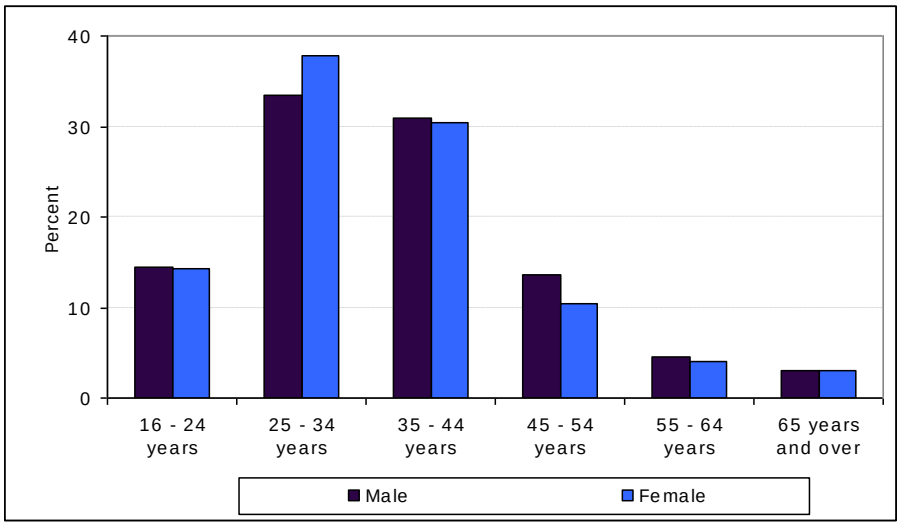


Table 3.2 shows the distribution of migrant age groups by immigration approval category.

Table 3.2: Age of migrants by immigration approval category

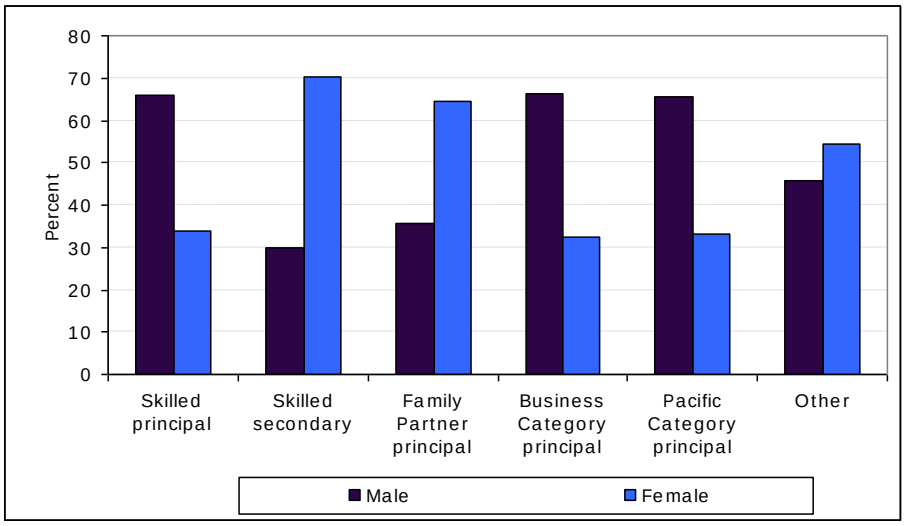
Age (years)	Immigration approval category (%)						
	Skilled		Business	Family Partner	Pacific	Other	Total
	Principal	Secondary					
16–24	6.6	18.0	S	11.2	19.4	28.5	14.4
25–34	42.9	28.8	12.8	53.7	48.4	13.7	35.6
35–44	36.7	39.8	36.0	22.7	28.0	15.3	30.7
45–54	12.5	12.1	40.7	9.2	4.3	10.7	11.9
55–64	1.0	1.2	8.1	2.3	S	16.2	4.2
65 & over	S	0.2	S	0.8	S	15.4	3.1
Mean	35.4	34.5	44.6	33.4	32.1	41.4	36.1
Median	35.0	35.0	45.0	35.0	32.0	40.0	34.0
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[37] Skilled Migrant Category principal applicants are awarded points for age. Those aged 20-29 can claim the maximum points for this factor, with points for age decreasing after this. Migrants approved through the Skilled Migrant Category have an age limit of 55 years, and principal applicants approved through the Pacific Categories must be between the ages of 18-45.

Note: S = suppressed for confidentiality reasons.

Overall, female migrants slightly outnumbered male migrants (51.9 percent compared with 48.1 percent), but this result varied by immigration approval category. The proportion of females was higher for Skilled secondary (70.1 percent) and Family Partner (64.4 percent) migrants, but Skilled principal (66.0 percent), Business principal (66.3 percent), and Pacific principal (65.6 percent) migrants tended to be male. (See Figure 3.11.)

Figure 3.11: Migrants by immigration approval category and sex

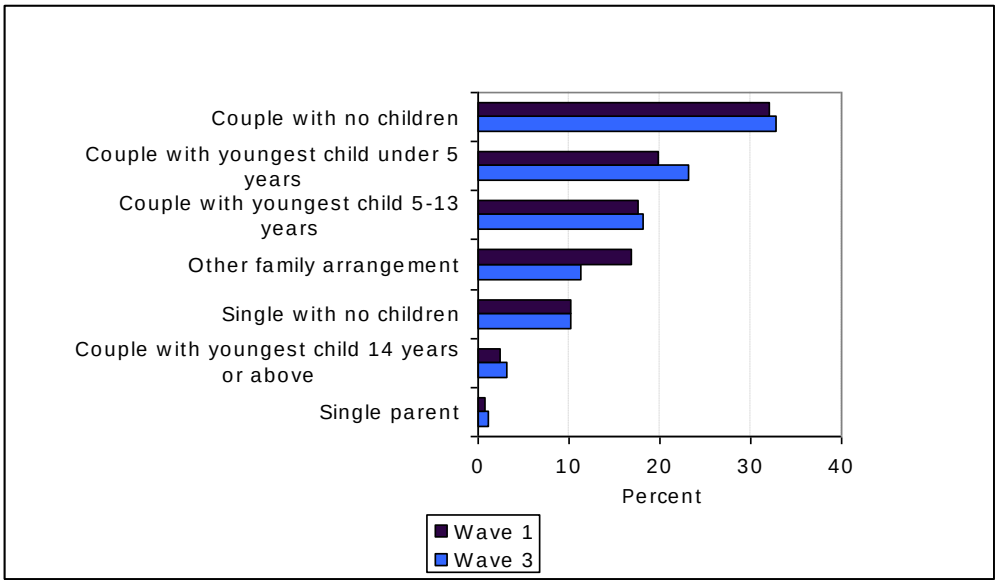


3.3.8 Household composition

Household composition can play a significant role in the labour market activities of individuals, particularly if a family unit includes dependent children. Most migrants (90 percent) were living with other family members at both waves, while about 10 percent were not living with other family members, and 1 percent were single parents. At Wave 3, 44 percent of migrants were living with a partner and children (compared with 40 percent at Wave 1), and about a third were in a couple with no children at both waves (32 percent at Wave 1 and 33 percent at Wave 3). Eleven percent of migrants had other family arrangements at Wave 3 (compared with 17 percent at Wave 1).[38] (See Figure 3.12.)

[38] Other family arrangements included migrants who were living in a couple with extended family only; living in a couple with dependent children and extended family; living with family and non-relatives; living with non-relatives only; or living with a sponsor who is not a dependant or an extended family member, such as a parent living with an adult child, or adult siblings living in the same dwelling.

Figure 3.12*:* Household composition at Waves 1 and 3



Migrants' household composition varied according to their immigration approval category. At Wave 1, Skilled Principal migrants were most likely to live in a couple with dependents aged under 14 (37 percent), in a couple with no dependents (31 percent), or alone (21 percent). By contrast, at Wave 3 a larger proportion of this group reported living with children aged under 13 (42 percent), and fewer migrants reported living in a couple with no dependent children (33 percent) or alone (15 percent).

Family Partner migrants were most likely to live in a couple with no children at Wave 1 (44 percent), but this proportion declined by Wave 3 (36 percent) while the proportion of Family Partner migrants with children aged under 5 increased significantly to 41 percent.

The largest proportion of Skilled secondary migrants (51 percent at Wave 1 and 52 percent at Wave 3) lived with their spouse or partner and children aged under 14. Pacific category migrants were the most likely to live with their spouse or partner and children aged under 14 at both waves (48 percent at Wave 1 and 59 percent at Wave 3). A much larger proportion of Pacific category migrants reported living in other family arrangements at Wave 1 (40 percent) than at Wave 3 (16 percent) with some having shifted into living in a couple with young children or no children aged under 14.

3.4 Measuring migrants' economic integration

The remainder of the report measures migrants' economic integration by studying their labour force participation and employment (section 4) and earnings and other income (section 5). Sections 4 and 5 describe outcomes broken down by various characteristics, and use regression analysis to explain the most important factors affecting outcomes between migrants.

4 LABOUR MARKET INTEGRATION: LABOUR MARKET PARTICIPATION AND EMPLOYMENT

Migrants bring their skills and experience to New Zealand. How well do they connect with the New Zealand labour market? What are the predictors of positive labour market outcomes?

4.1 Introduction

The successful settlement of migrants in New Zealand depends largely on their economic integration. Immigrants provide essential benefits to New Zealand's economic development by contributing needed skills, resources, and international connections from which trade opportunities can be developed.

Migrants' successful economic integration can be measured in several ways, including through labour force and employment participation rates as well as earnings and other income. This section focuses on non−earnings-related measures of economic integration, while section 5 examines migrant earnings and income. Both sections present a descriptive analysis of outcomes broken down by various characteristics before using statistical models to identify the factors most important in describing the way outcomes vary between migrants.

As discussed, international and New Zealand research has identified several factors that are characteristic of migrants who are more likely to succeed in the labour market (for example, migrants' age, sex, immigration approval category, region of origin, previous work experience in New Zealand, and English language proficiency − see section 2.2).

Understanding how migrants interact with the labour market is central to designing effective immigration policy and settlement services. Most migrants are likely to participate in the labour market at some stage. How readily they integrate into the labour market and the skills they bring are significant factors in delivering and maximising economic benefits to New Zealand. These factors are also significant in migrants achieving their personal goals for a successful life in New Zealand.

This section focuses on those participants who specified a labour force status in all three waves, This enables us to examine changes in status over time as well as labour market status at given points in time.

4.2 Key findings

4.2.1 Labour market participation

The key findings from the research into migrant labour market participation indicate that:

- participation varied considerably by immigration approval category with Skilled principal and Pacific category principal migrants having the highest rates, probably because both categories have job-related requirements
- participation rates were broadly similar across regions of origin, although migrants from North Asia tended to be less likely to participate than those from other regions, possibly because they were more likely to be granted

residence through the Other and Business categories (which have lower participation rates)

- the youngest and oldest age groups had the lowest participation rates, at least in part because of the age restrictions in the Skilled category
- male migrants had higher participation rates than females.

The key predictors of labour force participation are immigration approval category, family composition, English language proficiency, and prior work experience.

4.2.2 Unemployment

The key findings from the research into migrant unemployment are:

- Overall, migrants groups had low seeking-work rates because a large majority of migrants were in the labour market
- Skilled secondary migrants experienced the largest decrease in the seeking-work rate between waves
- male and female migrants from North Asia had high seeking-work rates that remained high between waves
- male migrants aged 55–64 had the highest seeking-work rates, but this may be linked to few migrants from the Skilled category being in this group.

The main predictors of unemployment are sex, immigration approval category, region of origin, family composition, qualifications, English language proficiency, and New Zealand work experience.

4.3 Migrants' labour market activity: Participation, employment, and unemployment

LisNZ collected information on migrants' labour force activities since taking up permanent residence in New Zealand. LisNZ also collected information about the labour force activities of migrants who had spent time in New Zealand in the 2 years immediately before their residence approval and migrants who had lived in another country in the 2 years before residence.

The three labour force measures described in this section are the:

- **labour force participation rate**—the proportion of the migrant population working or looking for work, excluding unspecified responses
- **employment rate**—the proportion of the migrant population employed or self-employed
- **seeking-work rate**—the proportion of migrants not working but looking for work out of the total labour force (that is, out of those working or looking for work).

These measures were derived from migrants' labour force status. Migrants were classified as employed, not employed but looking for work, or not in the labour force (see Table 4.1). The definitions of labour force status are similar to those of the International Labour Organization.[39] For this reason, we use the

[39] As used by Statistics New Zealand in the Household Labour Force Survey to derive official labour force statistics for New Zealand.

expression 'seeking-work rate' rather than 'unemployment rate'. The questions are expected to provide similar responses, however, so should be broadly comparable.

Table 4.1: Labour force status classification of migrants

Labour force status	Labour force classification
Paid work	Employed
Unpaid work(1)	Employed
Casual work	Employed
Combination of paid and casual work	Employed
Combination of unpaid and casual work	Employed
Looking for work	Seeking work
Overseas	Not in the labour force
Other activity(2)	Not in the labour force

Notes

(1) Working without pay in a family business or farm.

(2) Neither working nor looking for work.

Statistics New Zealand and the Department of Labour have published the analysis of findings from the individual waves of LisNZ. [40] The following analysis summarises migrants' labour market outcomes for the longitudinal participants who specified a labour force status in all three waves.

This report has a greater focus on labour force participation rates than on the seeking-work rate, because the seeking-work rate is low and does not differ substantially across the migrant population. Therefore, labour force participation rates and employment rates are very similar, so employment rates are not reported.

The analysis in this section is broadly structured around three questions.

- Which migrants are more likely to participate in the labour market?
- Of those migrants not in the labour market, what activities are they most likely to be doing?
- Which migrants are likely to be unemployed and looking for work?

[40] For example, see Statistics New Zealand (www.stats.govt.nz/browse_for_stats/population/migration/lisnz.aspx) and the Department of Labour (www.dol.govt.nz/publications/research/lisnz) websites for these LisNZ information releases and published reports.

4.4 Labour market participation

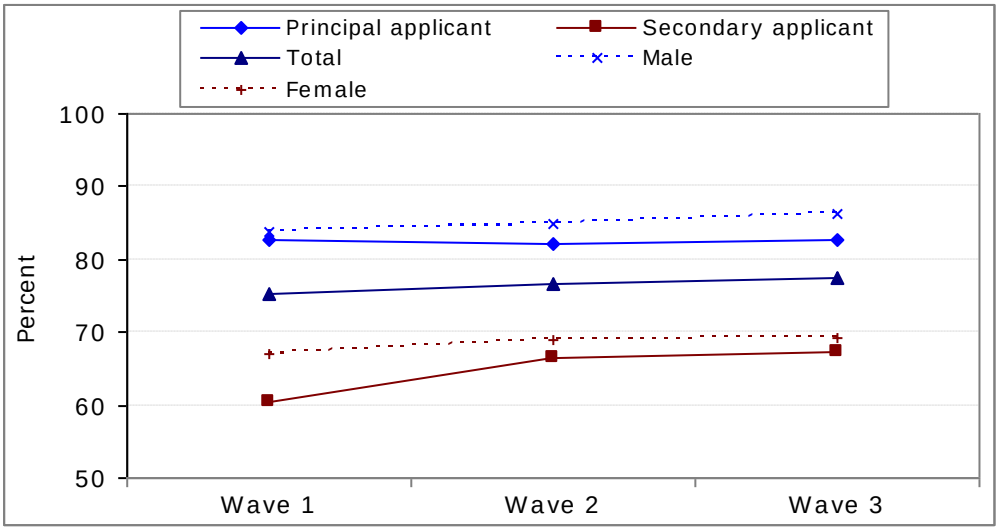
4.4.1 Which migrants are most likely to participate in the labour market?

Male and principal applicants most likely to participate in the labour market

The labour force participation rate overall was high in Wave 1 (77.2 percent) (see Figure 4.1). This rate compares favourably with the New Zealand working-age population's seasonally adjusted labour force participation rate of 68.8 percent reported for the June 2006 quarter.[41] The rate improved to 79.7 percent in Wave 3.[42]

Figure 4.1 breaks down labour force participation rates by sex and by whether the migrant was a principal or secondary applicant. A strong association exists between these factors; in most categories principal migrants are far more likely to be male than female.[43] (See Figure 3.11.) As a result, it is not surprising that principal applicants and male applicants had similar labour force participation rates at Wave 1, as did secondary applicants and female applicants. The upward trend in participation between Waves 1 and 3 is most evident for secondary applicants.

Figure 4.1: Labour force participation rates by sex and principal/secondary applicant in all three waves



Labour force participation varied considerably by immigration approval category

Figure 4.2 presents a more detailed view of outcomes by immigration approval category (including distinguishing between Skilled principal and Skilled secondary applicants). Skilled principal and Pacific category principal migrants

[41] Statistics New Zealand. 2006 'Household Labour Force Survey: Information releases.' www.stats.govt.nz/~/media/Statistics/Browse%20for%20stats/HouseholdLabourForceSurvey/previous-releases/household-labour-force-survey-jun06qtr-hotp.pdf

[42] Interviewing for Wave 1 was undertaken between 1 May 2005 and 30 April 2007, and for Wave 3 between 1 November 2007 and 31 October 2009. Labour force participation varied little over this period with quarterly unadjusted rates of 67–70 percent from June 2007 to December 2009.

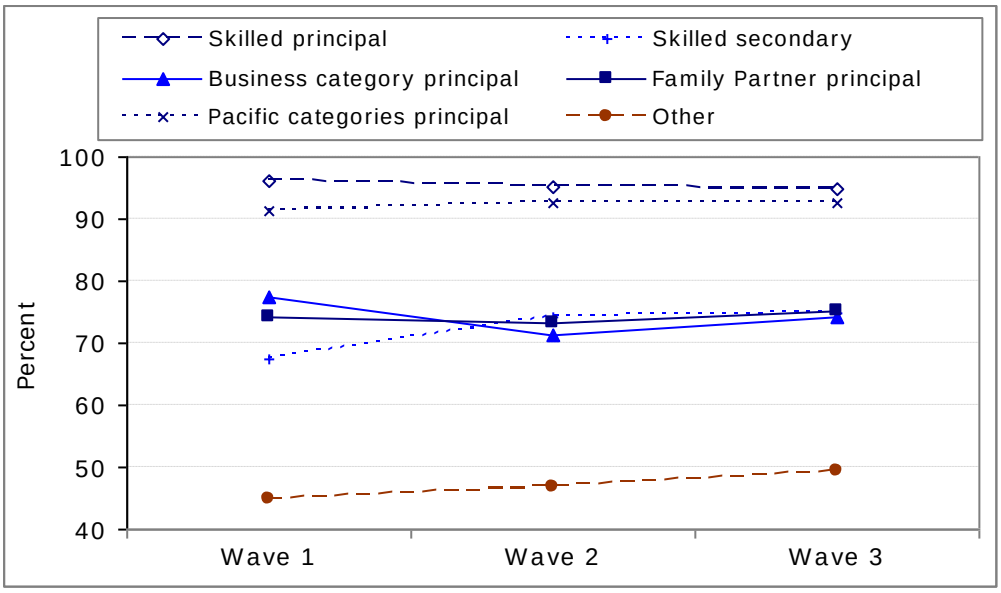
[43] The main exception is Family Partner migrants of whom over 60 percent are female.

had the highest labour force participation rates across each of the three waves (in excess of 90 percent). This is probably because of the policy settings for these two categories. Applicants through the Skilled Migrant Category (who make up most of the Skilled category) are selected through a points-based system designed to ensure people have the skills, qualifications, and work experience that New Zealand needs. In most cases, applicants have a job offer when their application is lodged with Immigration New Zealand. A job offer is required for applicants to be approved through the Pacific category.

Business principal, Family Partner, and Skilled secondary migrants all had around 75 percent participation by Wave 3, with rates converging between Waves 1 and 2. Between Waves 1 and 2 the labour force participation rate for Skilled secondary migrants increased from 67 percent to 74 percent, although confidence intervals overlapped slightly, and the change may not be statistically significant. Labour force participation rates for Family Partner migrants were unchanged across the three waves.

Labour force participation rates were lowest in the Other category, which includes diverse smaller groups such as migrants granted residence under family policies other than Family Partner, and secondary applicants granted residence across a variety of categories (other than those under the Skilled category). Fewer than half of these migrants were in the labour force at all three waves.

Figure 4.2: Labour force participation rates by immigration approval category in all three waves



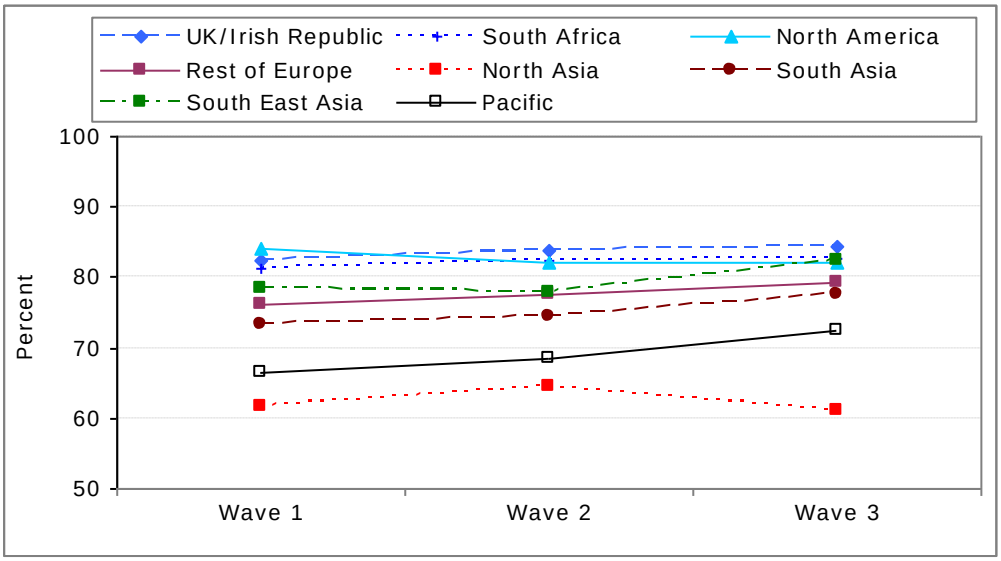
Migrants from some regions were less likely to participate in the labour market

Labour force participation rates were broadly similar across regions of origin, although migrants from North Asia tended to be less likely to participate in the labour market than those from other regions (see Figure 4.3). By Wave 3 migrants from all other regions of origin had significantly higher labour force participation rates than those from North Asia. This may be because migrants from North Asia are more likely to be granted residence in the Other category as well as the Business category (both of which have relatively low labour force

participation rates). Most migrants from North Asia who were not in the labour force were studying or at home caring for dependants.

Migrants from the Pacific also had a relatively low labour force participation rate at Wave 1 (66 percent). While the rate increased to 72 percent in Wave 3, the confidence intervals overlap, so the change may not be statistically significant.

Figure 4.3: Labour force participation rates by region of origin in all three waves



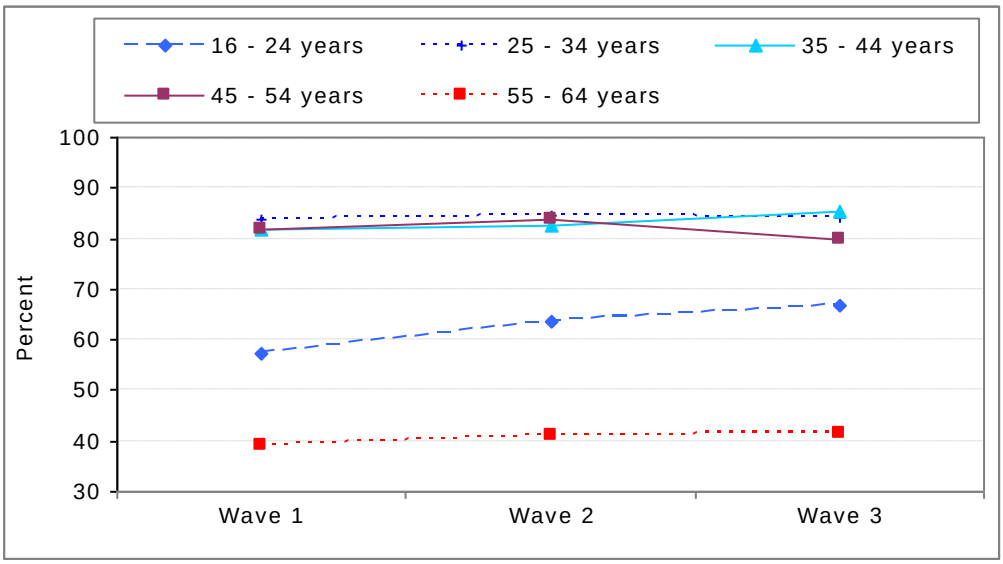
Age restrictions in some policies might affect labour force participation

Labour force participation was lowest in the youngest and oldest age groups (see Figure 4.4). Around 40 percent of migrants aged 55–64 at Wave 1 were participating in the labour market at each wave, while participation rates among those aged 16–24 at Wave 1 rose from 57 percent at Wave 1 to 67 percent at Wave 3. Participation rates in the other age groups were around 80 percent or higher at each wave.

As noted earlier, a job offer or current employment is important for gaining residence under the Skilled and Pacific categories. These categories also include age restrictions,[44] so most migrants approved under these categories were aged 25–44 at Wave 1. Over 40 percent of all migrants aged 25–54 were approved through these two categories, while few of those aged 16–24 or 55–64 were approved. This is likely to be the reason, at least in part, for the large differences in participation by age.

[44] Under the Skilled Migrants Category, principal migrants are awarded points for age, with maximum points being given to migrants aged 20 to 29. This category has an age limit of 55 years. Principal applicants who came through the Pacific category needed to be aged 18 to 45.

Figure 4.4: Labour force participation rates by age



Patterns of labour market participation different for males and females

Labour force participation rates are high for migrants overall (see Table 4.2), and approximately 15–20 percentage points higher for males than females (see Figure 4.1). Although many trends for males and females are similar across waves, the differences are worth noting.

Table 4.2: Labour force participation rates by sex for selected characteristics, Waves 1–3

Characteristic	Male			Female		
	Wave 1 (%)	Wave 3 (%)	Change (ppt)	Wave 1 (%)	Wave 3 (%)	Change (ppt)
Immigration approval category						
Skilled principal	97.2	97.2	0.0	93.5	89.5	-4.0
Skilled secondary	76.1	84.0	7.9	63.6	71.2	7.6
Business principal	77.2	77.2	0.0	75.0	64.3	-10.7
Family Partner principal	90.0	90.1	0.0	65.4	66.9	1.5
Pacific principal	96.7	100.0	3.3	80.6	80.6	0.0
Other	47.7	55.1	7.3	42.4	44.2	1.8
Total	83.9	86.4	2.5	67.2	69.1	2.0
Region of origin						
UK/Irish Republic	91.2	92.1	0.9	72.9	76.0	3.1
South Africa	85.6	88.0	2.4	75.9	76.5	0.6
North America	91.7	91.7	0.0	76.4	76.4	0.0
Rest of Europe	89.0	89.0	0.0	69.2	74.4	5.3
North Asia	67.6	70.7	3.1	57.4	55.0	-2.3
South Asia	83.3	85.2	1.9	60.7	68.9	8.1
South-East Asia	84.9	90.4	5.5	74.5	77.5	2.9
Pacific	75.8	83.3	7.5	56.4	61.0	4.6
Other	86.7	90.0	3.3	71.0	70.5	-0.5
Age at Wave 1						
16–24 years	54.6	72.4	17.8	60.2	61.5	1.3
25–34 years	95.5	95.3	-0.2	74.3	75.3	1.1
35–44 years	93.2	95.3	2.1	71.5	75.7	4.2
45–54 years	93.3	88.4	-4.9	68.4	70.6	2.1
55–64 years	48.6	55.4	6.8	31.9	27.8	-4.2

Note: ppt = percentage points.

When broken down by immigration approval category, Skilled principal migrants of both sexes, as well as male Pacific principal migrants all had labour force participation rates of 90 percent or higher at Wave 1. Meanwhile, there were large and significant increases in labour force participation between Waves 1 and 3 for both males and females in the Skilled secondary category (by 8 percentage points each).

Although female participation rates decreased between Waves 1 and 3 in two categories, the decrease was only significant for female Skilled principal migrants (dropping 4 percentage points to 90 percent).

The biggest increases in labour force participation between Waves 1 and 3 were for female migrants from South Asia (increasing 8 percentage points to 69 percent), and male migrants from the Pacific (increasing 8 percentage points to 83 percent).

Reflecting the overall findings, labour force participation rates were highest for male and female migrants aged 25−54 and lowest for migrants aged 55−64, linking with age restrictions for the Skilled Migrant Category.[45] Male migrants aged 16−24 at Wave 1 had the largest increase in participation between Waves 1 and 3 (18 percentage points), while males aged 45−54 had a significant decrease of 5 percentage points over the same period. Female migrant labour force participation did not change significantly for any age group.

Young male migrants may have been entering the labour market for the first time following study between Waves 1 and 3, but this does not seem to hold for young female migrants.

Controlling for the way different characteristics interact

We have examined the way participation in the labour market differs according to sex, immigration approval category, age, and region of origin. Although this is useful in understanding migrant behaviour and outcomes, a migrant's ability to integrate into the labour market can be affected by other factors. It is also possible that these characteristics are associated with other confounding factors, that is other dynamics that may be driving the outcomes observed. Regression modelling techniques go some way to teasing out these issues. These techniques allow us to include different characteristics, and examine the association of a particular characteristic with outcomes while holding the influence of other characteristics constant.

Figure 4.1 showed that females were less likely than males to participate in the labour market overall, but it is also evident that a variety of characteristics impact on labour market participation among males and females. Regression models identified the influence of different characteristics on migrants' labour market outcomes at Waves 1 and 3 for females and males separately.[46] Models are discussed for labour force participation only because of the low predictive power (less than 10 percent) of the employment and unemployment models. Results of the regression models for employment are presented in Appendix D. Models were calculated using logistic regression, and marginal effects were calculated for ease of interpretation.[47]

The models include characteristics that are thought to be related to migrants' labour market decisions and outcomes. In addition to the characteristics described in Table 4.1, other factors might be expected to be associated with labour force participation. The regression model incorporated family composition, highest qualification and English language proficiency, work experience in New Zealand, and region of settlement.

[45] Under the Skilled Migrants Category, principal migrants are awarded points for age, with maximum points being given to migrants aged 20 to 29. This category has an age limit of 55 years.

[46] Characteristics seem to have a different relationship with labour market participation for males and females, so it is important to look at them separately.

[47] Logistic regression models are 'non-linear', which means the impact of a particular characteristic on the outcome of interest (in this case labour force participation) differs depending on the other characteristics. Marginal effects provide an easier way of interpreting the results of the model. To calculate marginal effects, we calculated the effect of a characteristic in percentage terms, while holding all other characteristics constant at the average for the population of migrants. The marginal effect can be interpreted as the effect of a particular characteristic for a migrant who is 'average' in their other characteristics.

Household composition is commonly linked to labour market participation, because the existence of children creates caring demands that one parent may meet by moving out of the labour market. The age of the youngest child is included in the breakdown to control for the different caring demands made on parents at different stages of their children's lives. At age 5, free schooling is available, and most children in New Zealand enter the school system at that age. At age 14, most children are in secondary school education, and legally may be left on their own. Children aged 14 and over are not considered in the model.

Educational qualifications and *language proficiency* are indicators of human capital. They may be linked with the choices available to migrants, as well as with the labour market decisions they make.

Many migrants have *prior experience working in New Zealand* before gaining residency status. The extent to which this experience influences migrants' labour market outcomes after gaining permanent residence is of particular interest in understanding the time it takes to successfully integrate in the New Zealand labour market. For this reason, we included information about whether a migrant had been to New Zealand before, and if so, how much New Zealand work experience they had had before taking up permanent residence.

The New Zealand *region of settlement* has been shown to be linked to attitudes of the New Zealand community, as well as to migrant experiences.[48] Migrants may have different outcomes in different regions, so we included a broad 'region' variable in the model.

An additional variable indicates *whether the migrant lived in their source country in the last 2 years* and was included to control for the effect of a migrant living in their source country before migrating to New Zealand.

4.4.2 What are the key predictors of labour force participation, controlling for other characteristics?

Marginal effects from the regression model of characteristics associated with the labour market participation of all migrants in Waves 1 and 3 are reported by sex in Table 4.3. The focus is on identifying the characteristics that influence labour market participation, and the extent to which these characteristics change between Waves 1 and 3. The findings from the models are discussed below.

[48] C Ward, A-M Masgoret, and M Vauclair. 2011. *Attitudes towards Immigrants and Immigrant Experiences: Predictive models based on regional characteristics*. Wellington: Department of Labour. www.dol.govt.nz/publications/research/attitudes-towards-immigrants-experiences-regional/report.asp

Table 4.3: Marginal effects from logistic regression models of labour force participation by sex, Waves 1 and 3

	Male						Female					
	Wave 1			Wave 3			Wave 1			Wave 3		
Characteristic	**Est**	**Sig**	**SE**	**Est**	**Sig**	**SE**	**Est**	**Sig**	**SE**	**Est**	**Sig**	**SE**
Immigration approval category (compared to Skilled principal)												
Skilled Secondary	-10.0	**	2.6	-6.5	**	2.3	-21.4	**	3.2	-17.4	**	3.4
Business Category Principal	-22.0	**	5.0	-9.4	*	4.2	-14.3		9.0	-12.8		7.6
Family Partner Principal	-9.0	**	3.0	-5.1	*	2.3	-19.1	**	3.2	-12.8	**	3.0
Pacific Categories Principal	1.9		2.4	2.9		1.9	-1.0		4.9	-5.1		6.0
Other	-13.1	**	3.3	-9.6	**	2.6	-14.3	**	3.7	-19.8	**	4.5
Region of origin (compared to UK/ Irish Republic)												
South Africa	3.1		3.1	4.4	*	2.1	1.5		4.8	2.3		4.5
North America	1.7		3.9	1.9		3.2	-3.5		5.8	0.3		5.8
Rest of Europe	-3.2		5.5	-4.6		4.4	-8.8		5.4	-1.3		5.5
North Asia	-10.0	*	3.9	-10.1	**	3.9	-12.4	**	3.9	-12.7	**	4.7
South Asia	1.2		2.3	-3.4		2.6	-8.4	*	3.9	1.1		3.8
South-East Asia	-1.9		3.1	0.6		2.9	-2.0		3.0	1.5		4.0
Pacific	-2.8		2.6	-0.6		2.1	-5.3		3.3	-2.3		3.7
Other	-4.2		3.7	-2.5		2.5	0.0		4.8	0.4		5.0
Household composition (compared to couple with no children)												
Couple with youngest child aged under 5	-3.0		2.7	-1.5		2.0	-29.0	**	3.1	-31.9	**	2.9
Couple with youngest child aged 5−13	-6.2	**	2.2	-3.7		2.3	-8.1	**	2.7	-6.2	*	3.2
Couple with youngest child aged 14 or over	0.6		3.9	-7.1		5.9	8.1	*	3.9	6.0		3.7
Single with no children	-1.9		3.1	-8.5	**	3.2	-2.6		3.4	-1.0		4.0
Single parent	11.4	**	1.5	7.7	**	1.1	-12.1		8.1	-27.6	**	10.1
Other family arrangement	-3.5		2.9	-2.2		2.4	-7.3		3.8	-6.3		3.8

Characteristic	Male						Female					
	Wave 1			Wave 3			Wave 1			Wave 3		
	Est	Sig	SE	Est	Sig	SE	Est	Sig	SE	Est	Sig	SE
Highest qualification (compared to bachelor's degree)												
Higher degree	-4.0		2.9	2.5		2.4	3.6		3.9	4.8		4.3
Vocational qualification	-1.0		2.4	0.4		2.1	-3.5		2.7	2.7		3.4
Post-school qualification undefined	-0.9		3.3	-0.4		3.9	0.4		5.4	0.3		6.5
School qualification	0.0		2.6	-0.2		2.3	-8.2	**	3.0	2.1		3.4
No qualification	-1.9		3.7	-5.5		3.7	-6.0		4.1	0.8		4.8
Region of settlement (compared to Auckland)												
Wellington	0.8		2.3	0.9		1.9	-2.3		3.0	-5.4		3.7
Canterbury	-2.7		2.4	0.3		2.3	-2.5		3.2	-1.4		3.3
Other North Island	-0.8		2.1	-4.6	*	2.1	-0.9		2.7	0.0		2.6
Other South Island	3.3		3.1	-2.1		3.6	-3.5		3.9	-6.4		4.3
English language proficiency (compared to English is a main language spoken)												
Very good English language ability	-4.8		2.5	-0.9		1.9	0.1		3.0	-4.0		3.2
Good English language ability	0.8		2.4	-4.6		2.5	-10.3	**	3.9	-9.0	*	3.9
Moderate or poor English language ability	0.9		2.5	-2.7		2.8	-7.3		3.9	-16.2	**	4.7
Work experience in New Zealand before residence (compared to not been to New Zealand)												
Been to New Zealand before but not employed	-4.1		2.7	-6.2	**	2.4	-4.1		3.8	-13.6	**	3.0
Less than 7 months' work experience	2.9		3.9	-0.3		2.6	21.3	**	4.1	0.8		3.5
7–12 months' work experience	12.1	**	3.1	0.9		2.8	25.9	**	4.3	-1.2		3.7
13–24 months' work experience	6.9	*	3.5	2.4		2.8	20.2	**	4.5	-2.1		4.0
More than 24 months' work experience	12.2	**	3.3	-0.6		3.5	31.9	**	4.6	2.2		4.1
In source country 2 years before residency? (compared to yes)												
No	-2.5		2.4	3.1		2.0	-2.8		3.0	4.0		2.7

Note: * = p-value less than 0.05; ** = p-value less than 0.01.

Age and age squared were also included in the model as continuous variables, but marginal effects could not be easily calculated for these, so they are excluded from the table.

Immigration approval category

We might expect the immigration approval category through which migrants are granted residence to be linked to their ability to succeed in the labour market as well as to the choices they make around labour market participation. Immigration policies require applicants to establish their ability to integrate successfully to varying degrees, whether this is through English language requirements, qualification recognition, or requirements to have a New Zealand job offer or work experience.

As in the descriptive analysis above, the regression analysis highlights the high labour market participation rate of migrants from categories with job-related requirements. Pacific principal migrants are not significantly different from Skilled principal migrants. In contrast, migrants from the other approval categories are less likely to participate in the labour market than Skilled principal migrants, regardless of sex.[49] While the effect diminishes in most cases between Waves 1 and 3, this is not likely to be statistically significant.

Region of origin

The descriptive analysis highlighted differences between migrants from different regions of origin in terms of labour market participation. Nevertheless, there are few significant effects once other factors are controlled for.

Migrants from North Asia are less likely than migrants from the UK/Irish Republic to participate in the labour market. The effect is consistent for males and females (10 percentage points and 12 percentage points, respectively), and is unchanged between Waves 1 and 3.

> *"I was almost at a point of, 'Oh I probably can't get a job here, I might need to plan, get a job back in China'. I got my first job near the end of March, that was close, otherwise I will be out of the country. I find it not particularly easy, I didn't get many interviews at all."*

That this effect is only about half the size of the differences observed in the descriptive analysis indicates that much of the low labour force participation among North Asian migrants is due to other factors that are controlled for in the regression (such as age, migration category, and English language proficiency). Nevertheless, other factors are unexplained here. North Asian migrants who are not in the labour market are more likely than migrants from many other groups to be studying or caring for dependants. This may be related to difficulties finding work, which may result in a decision to undertake other activities such as study, or to other cultural factors affecting labour market decision making.

Household composition

Household composition is an important determinant of whether migrants participate in the labour market. While there are some unusual significant results

[49] This is significant in both waves in all cases except the small group of female Business principals.

(particularly for males at Wave 1[50]), the largest effects are for females with young children at Waves 1 and 3.

Females with children aged under 14 were significantly less likely than females without children of this age to participate in the labour market. Not surprisingly, for females living with a partner the effect was greatest when they had children aged under 5 (29 percentage points at Wave 1 and 32 percentage points at Wave 3, compared with those living with a partner but without children). The effect for those with children aged 5–13 was small but significant at both waves (again compared to those without children). Although the difference between female single parents with a child aged under 14 and those in a couple without a child was not significant at Wave 1, it was both large and significant by Wave 3 (single parents having 28 percentage points less chance of being in the labour force).

Qualifications

Once other factors were controlled for, the level of highest qualification was not a significant predictor of labour force participation. The only significant effect was for females at Wave 1, for whom having a school qualification was linked with an 8 percentage point lower likelihood of participation than for female migrants with a bachelor's degree.

Region of settlement

No strong differences in labour force participation existed between those who settled in different areas of New Zealand. However, by Wave 3 males who settled in the North Island outside the two main centres (Auckland and Wellington) were less likely to participate in the labour market than were males who settled in Auckland.

English language proficiency

Given the international evidence of the importance of host language proficiency for migrants' successful settlement, we might expect English language proficiency to be strongly related to the labour market participation of migrants in New Zealand.[51] The regression analysis shows that this does not appear to be the case for male migrants.

Female migrants with an English language proficiency defined as good or moderate or poor were 8–18 percentage points less likely to participate in the labour market than those who spoke English as a main language. In the case of those with the lower level of proficiency, the impact on labour market participation more than doubled between Waves 1 and 3. We are uncertain if this change is statistically significant, but it could indicate that female migrants with poor English who are more distant from the labour market are also less likely to

[50] For example, single male migrants with a child aged under 14 were 11 percentage points more likely to participate in the labour market than those living with a partner with no children. Those male migrants who had an 'unspecified' family composition were also 11 percentage points more likely to be in the labour market.

[51] D Cobb-Clark. 2006. 'Selection policy and the labour market outcomes of new immigrants.' In D A Cobb-Clark and S Khoo (eds), *Public Policy and Immigrant Settlement (*pp 27–52). Cheltenham, UK: Edward Elgar.

improve their English, or that those who fail to improve their English also may struggle to (or choose not to) enter the labour market.

> *"English is our second language but the accent here is very much different so there are things that we cannot understand."*

Work experience in New Zealand

Migrants with some work experience in New Zealand before residence approval were more likely to participate in the labour force at Wave 1 than migrants who had not been to New Zealand before residence approval. This effect was particularly strong for females, with impacts in the order of 20−30 percentage points. Impacts for males were more modest (3−12 percentage points), and were not always statistically significant.[52]

> *"I graduate and find a job and I got a work permit, and I continued working for another 3 years and I got the New Zealand resident. And I, after that I open shop and everything look like it's good."*

By Wave 3, however, having work experience in New Zealand before residence approval was not a significant determinant of participation in the labour market. Furthermore, migrants who had been to New Zealand before residence approval but had not worked in New Zealand were less likely to participate in the labour market at Wave 3 than were migrants who had not been to New Zealand before residence approval (with differences of 6 and 15 percentage points respectively for males and females).

[52] Effects were not significantly different for those with less than 7 months' experience, compared to those who had never been to New Zealand.

Gaining employment in New Zealand

Many migrants to New Zealand transition from temporary to permanent residence. In 2009/10, 95 percent of Skilled Migrant Category principal applicants had previously held a temporary visa.

Most interviewees who came to New Zealand initially as students worked part time while studying. This was often a deliberate strategy to gain valuable New Zealand work experience. These students often transitioned to full-time employment on completion of their studies:

> *I actually starting to looking for a job before I … get the graduation, and luckily I've got a three-month contract … and I guess I did quite well … they actually give me a permanent role.*

For those migrants who came on a temporary work visa, employment was usually found through the traditional channel of job advertisements. For some this was easy:

> *Because the profession I am in … you know, you can get a job anywhere in the world, it's not hard … when I applied I got a job immediately.*

For others, persistence was required:

> *I am actually sending my application, CV you know … So I'm actually doing not a hundred letters every day, but kind of close.*

4.5 Unemployment

4.5.1 Which migrants in the labour market are most likely to unemployed and seeking work?

This section focuses on those who are defined as being in the labour market (that is, working or seeking work), and investigates the key factors that are predictive of whether they are unemployed and seeking work.

The number of migrants looking for work was low across the board, regardless of characteristics. For this reason, we present only a cursory analysis of the seeking-work rate, broken down by broad demographic characteristics for males and females (see Table 4.4). The seeking-work rate was higher for females (5.0 percent) in Wave 1 than for males (3.3 percent) but the confidence intervals overlap, so the difference may not be significant. Rates showed convergence to similar levels by Wave 3 (2.2 percent and 2.7 percent respectively) with seeking-work rates among females dropping significantly.

When broken down by immigration approval category both Skilled secondary and Family Partner female migrants had significant decreases in their seeking-work rate (3.9 percentage points and 2.6 percentage points, respectively). Seeking-work rates were highest for the Other category, at 10.3 percent for males and 8.4 percent for females, with neither rate changing significantly between Waves 1 and 3.

Table 4.4: Seeking-work rates for selected characteristics

Characteristic	Male			Female		
	Wave 1 (%)	Wave 3 (%)	Change (ppt)	Wave 1 (%)	Wave 3 (%)	Change (ppt)
Total	3.3	2.2	-1.1	5.0	2.7	-2.3
Immigration approval category						
Skilled principal	2.0	1.1	-0.9	2.4	0.8	-1.6
Skilled secondary	5.4	2.0	-3.5	6.3	2.5	-3.9
Business principal	S	4.4	S	S	S	S
Family Partner principal	2.9	1.9	-1.0	4.7	2.1	-2.6
Pacific principal	S	S	S	S	S	S
Other	10.3	7.6	-2.7	8.4	9.3	0.9
Region of origin						
UK/Irish Republic	2.9	0.6	-2.3	3.7	0.7	-3.0
South Africa	3.5	1.4	-2.1	7.2	S	S
North America	S	S	S	S	3.6	S
Rest of Europe	S	S	S	2.2	S	S
North Asia	5.4	4.5	-0.8	7.7	8.0	0.3
South Asia	3.0	5.8	2.8	7.3	S	S
South-East Asia	4.8	S	S	2.7	2.6	-0.1
Pacific	3.7	3.3	-0.4	5.1	5.3	0.3
Other	S	S	S	4.7	S	S
Age at Wave 1						
16–24 years	3.9	2.9	-1.0	6.5	5.7	-0.8
25–34 years	1.7	0.9	-0.8	3.8	1.8	-2.0
35–44 years	3.5	1.4	-2.1	4.6	1.7	-2.9
45–54 years	4.8	3.5	-1.3	6.3	3.8	-2.5
55–64 years	14.3	14.6	0.3	13.0	S	S

Note: ppt = percentage points. S = suppressed for confidentiality reasons.

Across the waves, seeking-work rates were relatively high for both male and female migrants from North Asia (around 5 percent and 8 percent respectively), although by Wave 3 male migrants from South Asia had a higher seeking-work rate than those from North Asia (5.8 percent). Migrants from the UK/Irish Republic not only had some of the lowest seeking-work rates at each wave, they were the only group who had a significant decrease in rates between waves (2.3 percentage points for males and 3.0 percentage points for females). Both male and female migrants from the UK/Irish Republic had seeking-work rates of less than 1 percent at Wave 3.

Barriers to finding employment in New Zealand

Finding employment in New Zealand had been difficult for some migrants. A lack of New Zealand work experience in particular was a major barrier to gaining employment:

> *I think most of the Kiwi companies they don't want to … look at immigrants as such, they don't look at people who only have a student permit or open work permit, they want residents, they want New Zealand residents.*
>
> *It's hard to find a very good job in Auckland … you can't find any job … with your master degree, you needed some local qualify-like local experience, and you need very excellent language.'*
>
> *I think it is not just easy to find a job, you know … I applied through some agencies, but they ask for the reference and experience in New Zealand … so you need the first job.*

Because of difficulties finding work, many migrants took lower skilled jobs than they were qualified for; for example, one woman with a master's degree in business was working as a receptionist. Such difficulties were more pronounced for migrants from North Asia and were often coupled with lower English language proficiency.

Seeking-work rates for male migrants were highest among those aged 55–64 at both Waves 1 and 3 (14.3 percent and 14.6 percent, respectively). However, this is likely due to there being a larger proportion of migrants approved through the Family Parent and very few Skilled migrants in this age group. Female migrants in this age group had a seeking-work rate of 13 percent at Wave 1 and very small in Wave 3.[53] All other age groups had relatively low seeking-work rates, which decreased between Waves 1 and 3, although the decrease was statistically significant only for females aged 35–44.

4.5.2 What are the key predictors of unemployment, controlling for other characteristics

Table 4.4 presents some variation in seeking-work rates based on the influence of key migrant characteristics, and examines their contributory role while controlling for other factors. We did this by constructing a logistic regression model similar to that used in section 4.4.

The model did not have very high explanatory power, but several characteristics were significantly associated with migrants seeking work (conditioned on their being in the labour market). Key findings were as follows (all differences cited were significant at the 5 percent level at least). Full results are presented in Appendix D.

- *Immigration approval category*—Male Pacific principal migrants were less likely to be seeking work at Wave 1 than were male Skilled principal migrants, while female Business principal migrants were less likely to be seeking work at both waves than female Skilled principal migrants.

[53] This value has been supressed for confidentiality reasons.

- *Region of origin*—Female migrants from North America were less likely than those from the UK/Irish Republic to be seeking work at Wave 1, while those from the Pacific were more likely to be seeking work than those from the UK/Irish Republic at Wave 3.
- *Family composition*—Single parents were generally less likely to be seeking work than couples with no children, although for females this was not statistically significant at Wave 1.
- *New Zealand region of settlement* —Female migrants in Wellington or Canterbury were less likely to be seeking work than those in Auckland at Wave 3.
- *New Zealand work experience*—People who had worked in New Zealand before residence were less likely to be seeking work at Wave 1 (although the result was not significant for males with less than 7 months experience, or females with 13–24 months' experience). The effect was not significant at Wave 3.

4.6 Non-labour market activities: What are migrants doing if they are not participating in the labour market?

A small number of migrants (around 10 percent) had not been in the labour market in all three waves (see Table 4.5). Not surprisingly, the types of activities being undertaken by migrants who were not in the labour force were strongly determined by their age and sex. Around half of these migrants were at home caring for dependants. Almost two-thirds of females were caring for dependants, while more than half of the males were studying.

There were also strong age-related differences in activities being undertaken. Those aged 16–24 at Wave 1 were almost all studying (85 percent), while the vast majority of those aged 25–34 and 35–44 were caring for dependants. While many of those aged 45–54 and 55–64 were also caring for dependants, more were now engaged in other activities (46 percent and 57 percent, respectively), mainly either retired or at home without dependents.

In terms of the migrants' region of origin, only 9 percent of those not in the labour force from the UK/Irish Republic were studying, while half of those from South-East Asia and Other regions and more than a third of those from the Rest of Europe and North Asia were studying.[54] Skilled secondary and Family Partner migrants were significantly more likely than those in the Other approval category to be caring for dependents. Many of these differences are likely to relate to age and sex differences within these migrant populations.

[54] The proportion from the UK/Irish Republic studying was significantly different from all these regions except the Rest of Europe.

Table 4.5: Non–labour market activities for migrants who have not been in the labour force in all three waves

Characteristic	Studying (%)	Caring for dependants at home (%)	Other activities (%)
Total	28.5	49.3	19.7
Approval category			
Skilled Principal	S	28.6	S
Skilled Secondary	29.5	63.2	7.4
Business Category Principal	S	33.3	41.7
Family Partner Principal	15.9	63.4	18.3
Pacific Categories Principal	S	100.0	S
Other	36.6	34.1	27.4
Region of origin			
UK/Irish Republic	8.7	56.5	30.4
South Africa	S	62.5	12.5
North America	S	45.5	36.4
Rest of Europe	38.9	44.4	11.1
North Asia	38.1	46.8	11.1
South Asia	13.3	56.7	30.0
South-East Asia	50.0	27.8	11.1
Pacific	29.4	45.6	20.6
Other	50.0	37.5	S
Age group at Wave 1			
16–24 years	85.4	12.2	S
25–34 years	21.0	76.5	2.5
35–44 years	10.8	75.9	9.6
45–54 years	10.9	41.3	45.7
55–64 years	2.9	34.8	56.5
Sex			
Male	55.8	14.7	25.3
Female	18.8	61.3	18.0

Note: S = suppressed for confidentiality reasons.

5 LABOUR MARKET INTEGRATION: INCOME AND EARNINGS

Migrants come to New Zealand to make a life for themselves and their families and, in turn, contribute to the New Zealand economy. Where do they source their income from and how much do they earn in New Zealand? What are the predictors of high earnings for migrants in paid work?

5.1 Introduction

The performance of migrants admitted under different immigration approval categories is important to both the New Zealand economy and migrants. Higher earnings are associated not only with higher taxes, but with migrants' realising their skills and experience in the New Zealand context.

Income acts as a proxy for access to financial resources, as well as being an indicator of economic contribution and independence. Once migrant characteristics are controlled for, earnings-related income provides a measure of the extent to which migrants' human capital has been successfully utilised in New Zealand. Human capital characteristics play a large role in the different economic outcomes migrants experience, and this section examines those factors that help determine the income levels of migrants.

Of particular interest is the group of Skilled principal migrants and their partners (secondary migrants). Because the partners are also often skilled, this analysis distinguishes between Skilled principal and Skilled secondary migrants. The income and earnings of Skilled principal migrants are subject to additional analyses. An important objective of the Skilled Migrant Category is to grant residence to people who demonstrate they 'have skills to fill identified needs and opportunities in New Zealand' and 'are able to transfer those skills to New Zealand and link with local needs and opportunities'.[55]

Where appropriate, comparisons with the total New Zealand population are made to provide context to the results. This is undertaken by comparing LisNZ with findings from the New Zealand Income Survey for the June 2008 quarter,[56] which was the point at which about half of the LisNZ Wave 3 interviews had been conducted.

5.2 Key findings

5.2.1 Total income

The key findings from the research into migrant total income are that:

- skilled principal migrants had substantially higher median annual income than migrants in other categories, which is likely to be related to the requirements of the Skilled category

[55] Immigration New Zealand. *2011 Immigration New Zealand Operational Manual*. www.immigration.govt.nz/migrant/general/generalinformation/operationalmanual

[56] See Statistics New Zealand. 2008. 'New Zealand Income Survey: June 2008 quarter – Revised.' www.stats.govt.nz/browse_for_stats/income-and-work/Income/NZIncomeSurvey_HOTPJun08qtr.aspx

- Skilled secondary migrants and Other category migrants experienced the largest increases in median income over the three waves, which is likely to reflect an increase in the number of these migrants in paid work
- the main source of income for most migrants was wages and salaries, although many migrants seek out self-employment once settled
- Business category migrants tended to be self-employed, but the proportion self-employed decreased considerably between waves, with many becoming wage and salary earners
- the median income of Skilled principal migrants varied considerably by region of origin
- the median income of male Skilled principal migrants was higher than for the equivalent group of females, although both groups' incomes increased by a similar percentage between waves
- migrants in the Auckland region reported an income just below the median for all migrants, yet the general population in Auckland has considerably higher income than the populations in other regions
- the income of migrants who spoke English as a main language increased between Waves 1 and 3, and the income of migrants with moderate or poor English decreased.

5.2.2 Earnings from wages and salaries

The key findings from the research into migrant hourly earnings from wages and salaries are that:

- males earned more per hour than females at both waves
- migrants aged 25–44 earned more than migrants from other age groups by Wave 3
- migrants from the UK/Irish Republic, South Africa, and North America earned the highest wages at both waves
- Skilled Principal migrants earner the highest hourly wages, and Pacific principal migrants the lowest
- migrants in Wellington earned the highest hourly earnings
- migrants with a bachelor's or higher degree earned more than migrants with lower qualifications
- migrants who spoke English as a main language earned the most, and earnings fell progressively as English language proficiency declined.

Controlling for other factors, the key predictors of earnings are immigration approval category, region of origin, and English language proficiency. These tend to follow the same patterns discussed above.

5.3 Total income from all sources

Total income (that is, estimated median annual income) from all sources by immigration approval category is presented in Figure 5.1. Section 4 highlighted important differences in labour force participation and (albeit to a lesser degree) employment among migrants granted residence under different categories. As might be expected, similar effects are evident in the income of migrants.

Migrants' estimated median annual income from all sources (that is, wages and salaries, self-employment, overseas income, investments, and government transfers such as social welfare benefits) increased 18.5 percent from $31,848 to $37,736 between Waves 1 and 3. Migrants in all categories experienced an increase in median income from Waves 1 to 3, with the exception of principal migrants from the Business category whose median income decreased by 9.5 percent.

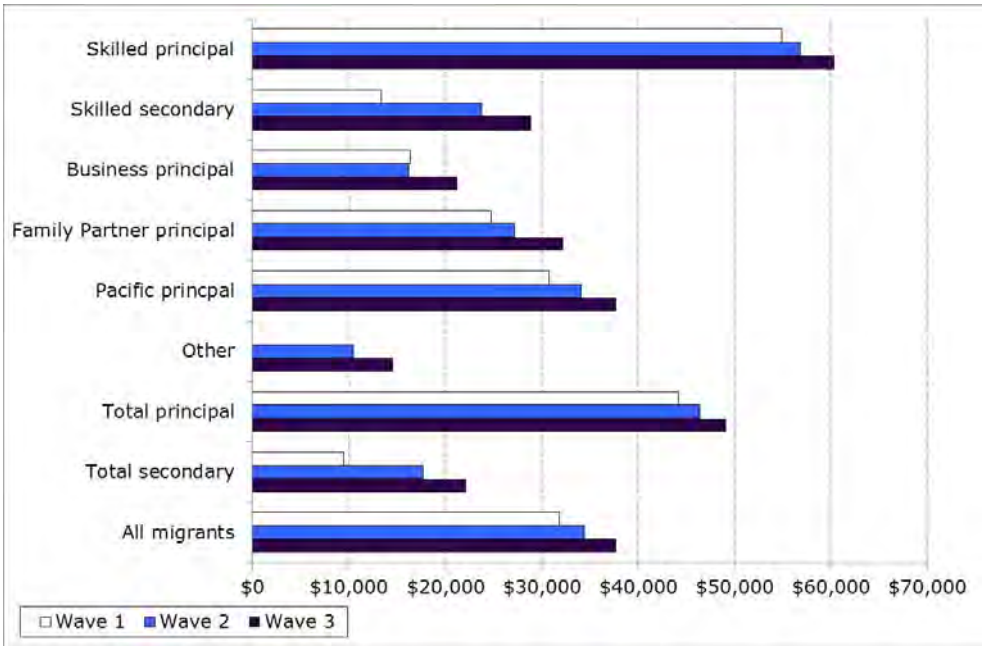
5.3.3 Which migrants have the highest median income?

Skilled and Pacific principal migrants had considerably higher labour force participation and employment rates, but Skilled principal migrants had substantially higher income. The Skilled Migrant Category requires migrants to meet a points threshold based on factors related to human capital and other policy objectives, but Pacific category migrants require only a job offer that meets certain criteria.[57] In Wave 3, the median annual income for Skilled principal migrants was $60,324, which was substantially more than the median income of other categories.

Migrants from the Pacific, Family Partner, and Skilled secondary categories all had median incomes of around $30,000 at Wave 3 ($37,702, $32,181, and $28,861, respectively). Interesting changes to the income of migrants in these categories occurred across the three waves. Skilled secondary migrants and Other category migrants experienced the largest increases in median income over the three waves, with both groups' median annual income increasing by around $15,000 (albeit from a low median of zero income for the Other category). Many more Skilled secondary and Other category migrants were in the labour market at Wave 3 than Wave 1 (10 percentage point and 5 percentage point increases respectively), so the increase in income observed is likely to be attributable primarily to a larger proportion of people being in work.

[57] If the migrant has children, these criteria include an income threshold based on the Unemployment Benefit rate of payment plus the Accommodation Supplement. See Immigration New Zealand. No date. 'Pacific Access Category.' In *Immigration New Zealand Operational Manual.* S1.40. www.immigration.govt.nz/opsmanual/i41786.htm

Figure 5.1: Working-age migrants' median annual income from all sources by immigration approval category



Note: Nominal income has been inflation adjusted to reflect real income in 2011. This figure includes migrants who recorded their income as zero or negative (as is possible for the self-employed). At each wave, 60 percent of LisNZ participants reported a positive income, fewer than 1 percent reported a negative or zero income, and 39 percent did not report any income.

5.3.4 What are the main sources of income for migrants?

What is the main source of average weekly income?

When comparing income across immigration approval categories, it is of interest to also look at the sources of income. reports average and median income by immigration approval category across all three waves, and breaks down average income by source. This table shows that wages and salaries dominated the average weekly income of most migrants, with a far lower reliance on government transfers, overseas income, or self-employment income.

Median income was lower than average income across almost all categories and periods (with the exception of Pacific principal migrants at Wave 3). This indicates that the distribution of migrants' incomes tends to be grouped towards the lower end with a long tail at the higher end, as is common with income data.

How has self-employment income changed?

Shifts into (and out of) self-employment are apparent over the three waves. Most categories showed a relative increase in reported self-employment income, although by Wave 3 income from self-employment still made up less than 10 percent of income for all but Business migrants. On average, 84 percent of Business migrants' income was earned from self-employment at Wave 1, but this had halved to 42 percent by Wave 3 with wages and salaries becoming a slightly more important source of income overall (46 percent).

Table 5.1: Migrant weekly income source by immigration approval category, Waves 1–3

Category	Income source (%)				Average weekly income ($)	Median weekly income ($)
	Wages and salaries	Self-employ-ment	Overseas	Govern-ment transfers		
Skilled principal						
Wave 1	96	3	0	1	1,145	1,055
Wave 2	94	5	0	1	1,183	1,093
Wave 3	90	8	0	2	1,269	1,160
Skilled secondary						
Wave 1	95	2	1	2	420	257
Wave 2	88	7	0	4	520	457
Wave 3	88	7	0	5	613	555
Business principal						
Wave 1	14	84	0	2	528	314
Wave 2	32	57	0	12	443	312
Wave 3	46	42	0	12	402	408
Family Partner principal						
Wave 1	90	6	1	3	551	477
Wave 2	88	5	2	5	598	522
Wave 3	84	9	1	6	688	619
Pacific principal						
Wave 1	90	0	0	10	626	592
Wave 2	92	0	0	8	669	655
Wave 3	91	3	0	6	717	725
Other						
Wave 1	86	7	0	6	276	0
Wave 2	82	4	1	13	325	200
Wave 3	75	5	1	19	399	280
All principal						
Wave 1	93	5	0	1	854	800
Wave 2	91	6	1	3	894	842
Wave 3	88	8	0	4	970	888
All secondary						
Wave 1	92	4	1	3	368	185
Wave 2	87	7	0	6	451	340
Wave 3	85	7	0	8	538	441

Have wages and salaries declined as a proportion of total income (as is usual)?

Wages and salaries as a proportion of total income declined over time for most categories, but this largely relates to increases in the dollar value of other sources of income (such as increases in self-employment income among Skilled principal and secondary migrants).

How has weekly income from government transfers changed?

The average weekly income from government transfers increased as a proportion of all income for all groups except Pacific principal migrants over the three waves. Business principal migrants and Other migrants had the greatest increases between Waves 1 and 3 (from 2 percent to 12 percent and from 6 percent to 19 percent, respectively). This is likely to reflect migrants increasingly becoming eligible for 'top-up' payments such as Working for Families tax credits, as well as migrants increasingly becoming eligible for and accessing social security benefits and student allowances.[58]

5.3.5 How does the income of Skilled principal migrants differ by migrant characteristics?

The following analysis focuses on the largest category of migrants, Skilled principal migrants. As identified earlier, this category reported the highest average incomes, as well as the highest labour force participation and employment rates. This category generally performs well in the labour market, but research has shown considerable variation in the income and earnings of skilled migrants from different backgrounds and with different characteristics.[60] Given the specific economic objectives of skilled migration policy, it is important to understand outcomes for these migrants.

Does skilled migrant income differ by region of origin?

Figure 5.2 presents median income figures across the three waves broken down by the region of origin of the Skilled principal migrant. As established earlier, considerable differences exist between migrants from different regions, especially the category under which they tended to be granted residence, but also in their age, qualifications, and other demographic and human capital characteristics. Many of these differences also hold for Skilled principal migrants. For example, Skilled principal migrants from North Asia had an average age of 31 in Wave 3, while the average ages for migrants from the Rest of Europe and UK/Irish Republic were 38 and 40, respectively. Analysis later in the section attempts to control for some of these differences.

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[58] Working for Families tax credits are available to New Zealand residents who have been in New Zealand continuously for at least 12 months at any time, or where the children being claimed for are resident in New Zealand: Inland Revenue Department. 2010. 'Working for Families tax credits.' www.ird.govt.nz/wff-tax-credits/entitlement/who-qualifies/eligibility (last updated 10 February). Student allowances and most main social security benefits are available to those who have lived in New Zealand for at least 2 years and are ordinarily resident in New Zealand: Studylink (Ministry of Social Development). 2011. 'Student allowance.' www.studylink.govt.nz/financing-study/student-allowance/index.html (last updated 15 November). New Zealand Superannuation is available only after 10 years' residence in New Zealand: Work and Income. No date. 'Residency requirements for New Zealand benefits and pensions.' www.workandincome.govt.nz/individuals/travelling-or-migrating/residency-requirements-for-new-zealand-benefits-and-pensions.html

[60] J Grangier, R Hodgson, and K McLeod, 2011. '*Does the Skilled Migrant Category points system predict the labour market outcomes of skilled migrants?*' Unpublished. Wellington: Department of Labour.

As might be expected given the differences noted above and the differentials in labour force participation rates noted in section 4, median income varies considerably by region of origin. Skilled principal migrants from the UK/Irish Republic, the Rest of Europe, South Africa, and North America had the highest median annual income at Wave 3 (more than $60,000). Skilled migrants from North Asia, South Asia, and South Africa had the biggest relative increases between Waves 1 and 3 (25 percent, 22 percent, and 16 percent, respectively). Migrants from North America, on the other hand, had only a small increase in income over the three waves (1 percent).

Figure 5.2: Skilled principal migrants' median annual income from all sources by region of origin

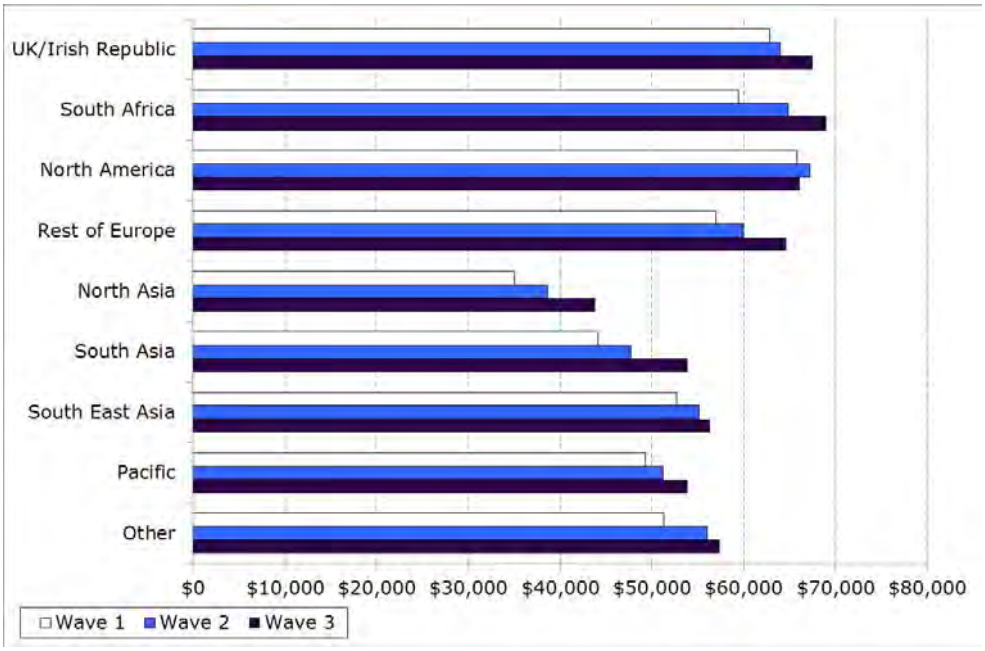


Table 5.2 presents average and median income, broken down by source, for Skilled principal migrants from different regions. Almost all groups experienced an increase in median and average incomes between Waves 1 and 3. The exception was the group of Skilled principal migrants from North America whose average weekly income declined slightly.

Most migrants from all regions increased their average weekly earnings from self-employment across the three waves (the exception being skilled migrants from the Pacific, whose self-employment income remained at zero). This shows a general trend among migrants to seek out self-employment opportunities once settled. For migrants from South Africa, North Asia, and the Rest of Europe, in particular, self-employment became a much more important source of income between Waves 1 and 3, increasing from nothing in each case to 10–12 percent, of average income. Over the same period, the percentage of income from government transfers increased slightly among all groups, but was not a large source of income for any group.

Table 5.2: Skilled principal migrants' sources of income (weekly) by region of origin, Waves 1–3

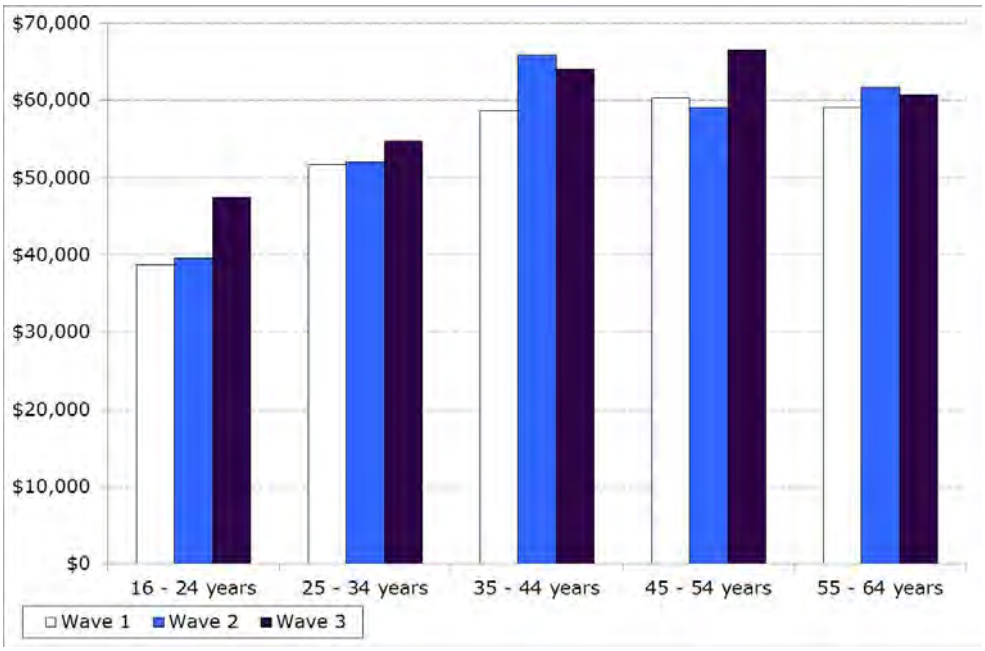
Category	Income source (%)				Average weekly income ($)	Median weekly income ($)
	Wages and salaries	Self-employ-ment	Overseas	Govern-ment transfers		
UK/Irish Republic						
Wave 1	96	3	0	0	1,314	1,209
Wave 2	94	6	0	1	1,329	1,231
Wave 3	92	7	0	1	1,411	1,298
South Africa						
Wave 1	100	0	0	0	1,282	1,142
Wave 2	94	4	0	2	1,361	1,247
Wave 3	87	12	0	1	1,485	1,327
North America						
Wave 1	100	0	0	0	1,642	1,265
Wave 2	100	0	0	0	1,481	1,293
Wave 3	91	9	0	0	1,471	1,272
Rest of Europe						
Wave 1	100	0	0	0	1,305	1,096
Wave 2	87	12	0	1	1,417	1,153
Wave 3	87	11	0	2	1,412	1,243
North Asia						
Wave 1	99	0	0	1	631	674
Wave 2	91	7	0	3	721	743
Wave 3	87	10	0	3	858	842
South Asia						
Wave 1	99	0	0	1	885	848
Wave 2	97	2	0	1	937	917
Wave 3	92	5	0	3	1,056	1,036
South-East Asia						
Wave 1	99	0	0	1	985	1,012
Wave 2	99	0	0	1	1,022	1,060
Wave 3	96	2	0	2	1,056	1,082
Pacific						
Wave 1	99	0	0	1	963	948
Wave 2	98	0	0	2	1,005	984
Wave 3	98	0	0	2	1,048	1,036
Other						
Wave 1	99	0	0	1	1,077	987
Wave 2	96	2	0	1	1,078	1,077
Wave 3	94	4	0	2	1,160	1,102

Note: N is the weighted number of Skilled principal migrants from each region responding to all three waves and includes those who did not report an income.

Does skilled migrant income differ by age group?

Figure 5.3 presents median income across the three waves by age group at Wave 1. Skilled principal migrants aged 35–44, 45–54, and 55–64 at Wave 1 reported the highest median annual income at that wave (around $60,000). The two former groups had large increases across the three waves (9 percent and 10 percent, respectively), while the latter group's median income was fairly static (increasing only 3 percent). The largest increase, however, was for those Skilled migrants aged 16–24 at Wave 1, with a 23 percent ($9,000) increase by Wave 3.

Figure 5.3: Skilled principal migrants' median annual income from all sources by age at Wave 1

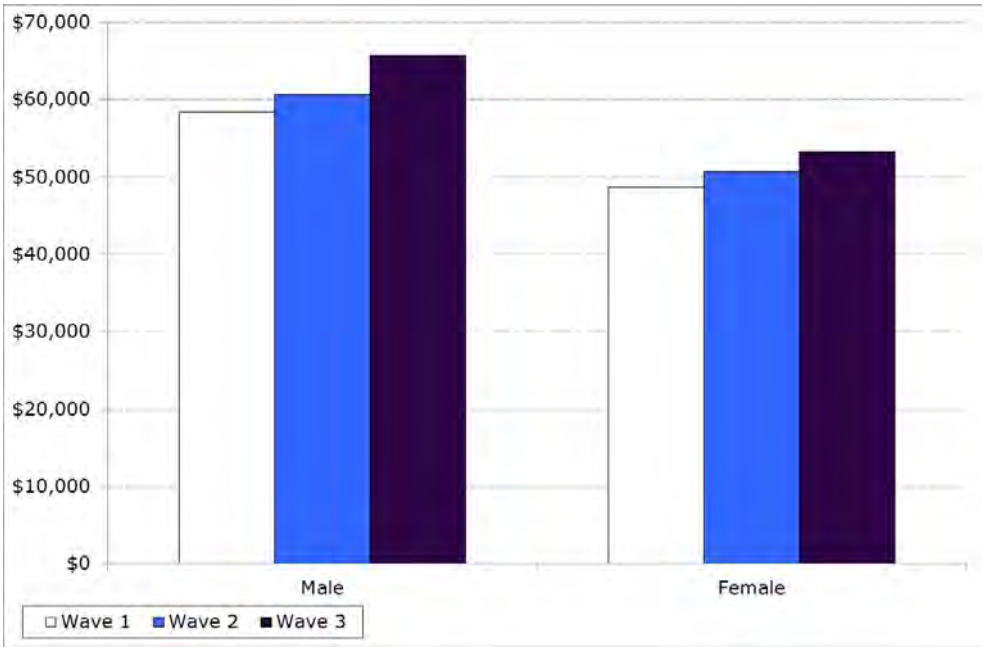


Do male skilled migrants earn more than female skilled migrants?

Consistent with results in the total New Zealand population,[61] the median income of male Skilled principal migrants was 23 percent higher than that of female Skilled principal migrants at Wave 3 ($65,795 compared to $53,308; see Figure 5.4), although the percentage increase in their incomes between Waves 1 and 3 was similar (13 percent and 9 percent, respectively). Some of this difference may be because of other differences in the characteristics of the male and female Skilled Principal migrant populations. Regression models presented later in this section attempt to control for any such differences.

[61] In the results for the June 2008 quarter of the New Zealand Income Survey, males aged 15 and over had a 67 percent higher median income than females. Of those in paid employment aged 15 and over, males had a 35 percent higher median income than females.

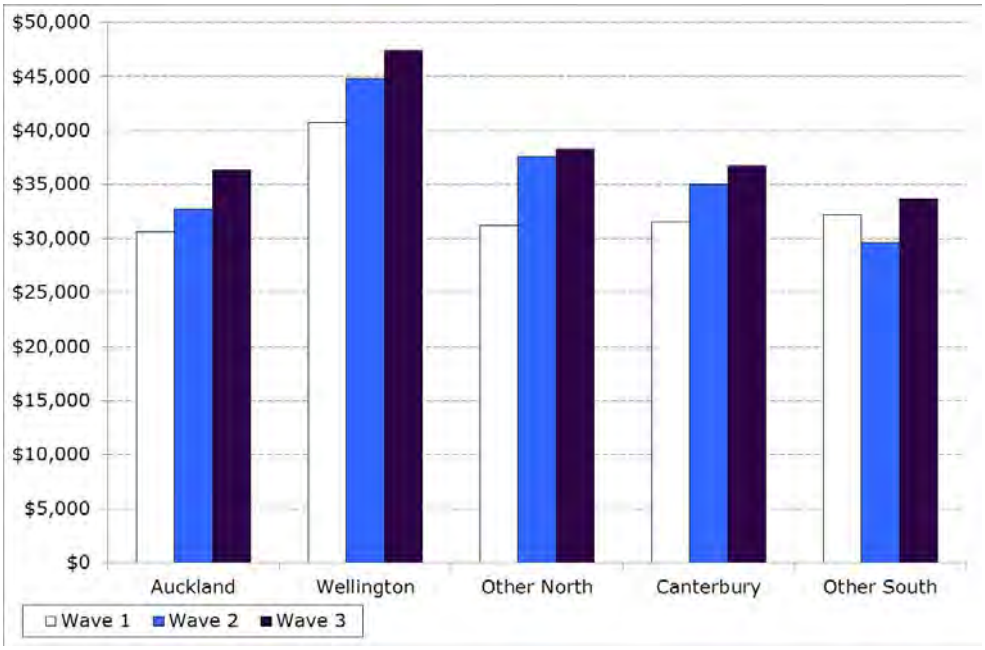
Figure 5.4: Skilled principal migrants' median annual income from all sources by sex



Do migrants in some areas of New Zealand earn more than those in other areas?

As Figure 5.5 shows, migrants living in the Wellington region reported the highest median income of $47,397 at Wave 3. The high income in Wellington is consistent with figures from the New Zealand Income Survey. However, unlike the migrant population, the total population in Auckland had considerably higher income than the populations in other regions.[62]

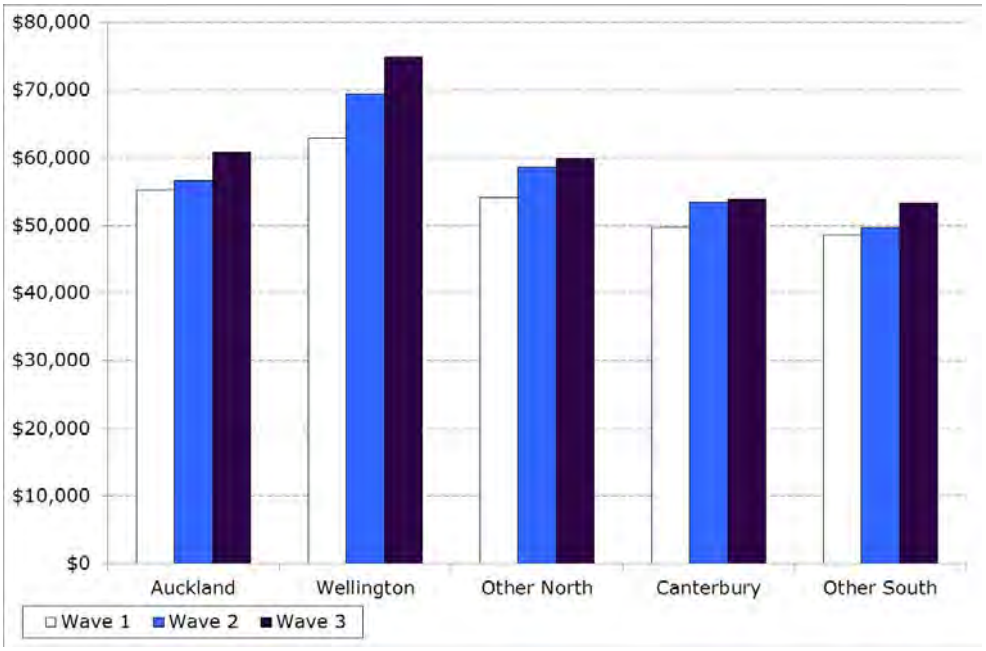
Figure 5.5: All migrants' median annual income from all sources by region of settlement



[62] In June 2008, the median weekly income for those in paid employment in Wellington was $800 and in Auckland $767. The highest median weekly income in other regions was $700.

Figure 5.6 shows that Skilled principal migrants in the Wellington region reported the highest income, with a median annual income of $74,946 at Wave 3. Migrants in Auckland and the rest of the North Island reported similar levels of median income, while Skilled migrants in the South Island reported a somewhat lower median income. Income growth across the three waves was also particularly high in Wellington with income increasing 19 percent.

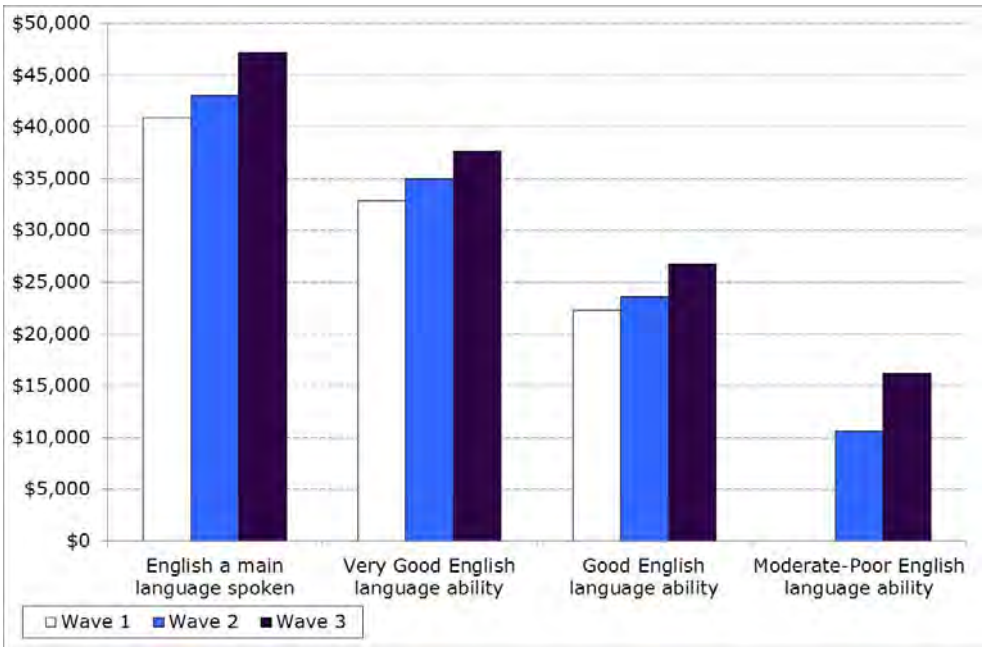
Figure 5.6: Skilled principal migrants' median annual income from all sources by region of settlement



How does average income change with English language proficiency?

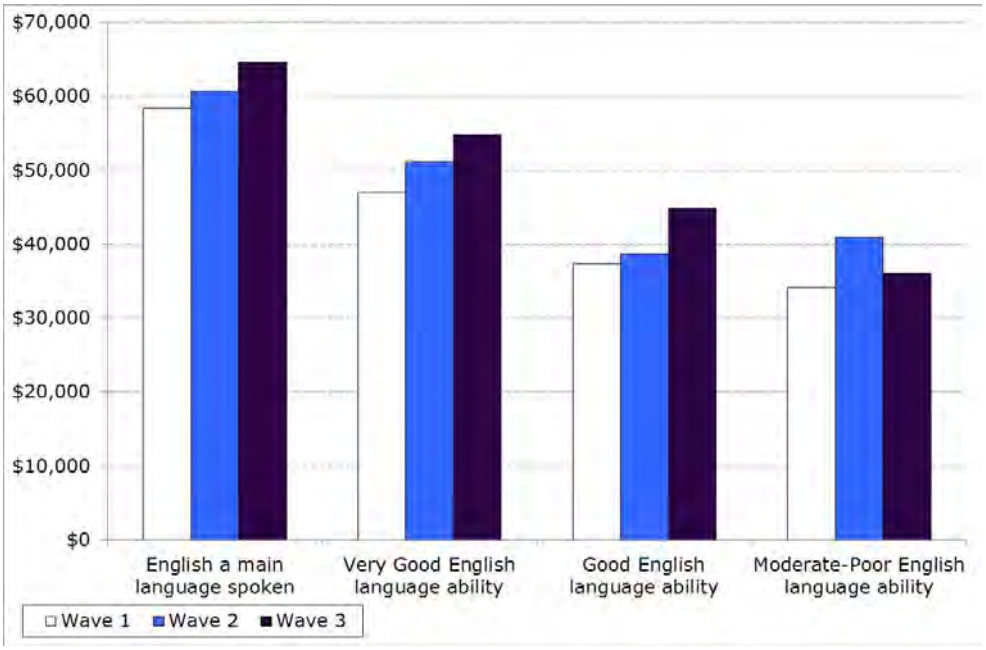
English language proficiency is one aspect of human capital that is likely to affect earnings outcomes. Median income is presented by reported English language proficiency in Figure 5.7. Migrants who said English was a language they spoke best reported a 25 percent higher median income at Wave 3 than those who said their English was very good, and 76 percent more than those who said their English was good. Those with moderate or poor English earned around a third of those with English as a main language.

Figure 5.7: All migrants' median annual income from all sources by English language proficiency



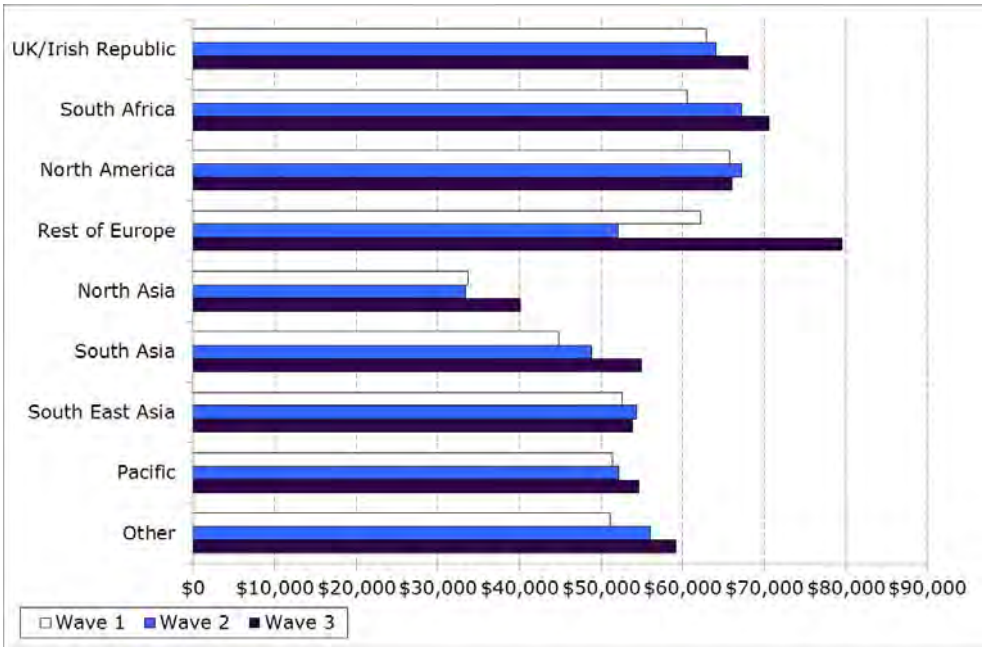
The results are similar for Skilled principal migrants (see Figure 5.8), with migrants who said English was a language they spoke best reporting 18 percent higher median income at Wave 3 than those who said their English was very good, and 44 percent more than those who said their English was good.

Figure 5.8: Skilled principal migrants' median annual income from all sources by English language proficiency



Skilled principal migrants with English as a main language had higher average incomes than those with poorer English (see Figure 5.8). The differences by region of origin are also striking (see Figure 5.9), although much of the difference can be explained by the different English language abilities of migrants from different regions. Migrants from the Rest of Europe earned almost double the income of migrants from North Asia at Wave 3.

Figure 5.9: Skilled principal migrants' median annual income from all sources by region of origin for those with English as a main language



5.4 Earnings from wages and salaries

The main component of migrant income across almost every immigration approval category was earnings from wages and salaries. Only Business principal migrants earned less than three-quarters of their income from wages and salaries, and by Wave 3 this source made up nearly half of the income earned even by this group. As such, it is important to understand the way wages and salaries vary between migrants and the key drivers behind this variation.

The analysis in this section focuses on hourly earnings. Total weekly earnings, as reported earlier in this section, are a useful indicator of tax contribution as well as a proxy indicator of the ability of migrants to meet their daily needs. Hourly earnings, however, provide a better measure of the success migrants have in realising their human capital in New Zealand, because hourly earnings are not dependant on the number of hours worked.

5.4.1 All migrants

Table 5.3 presents median hourly earnings from wages and salaries in Waves 1 and 3 broken down by the demographic and human capital characteristics we expect to be associated with migrant earnings.

Table 5.3: All migrants' median hourly earnings from wages and salaries by selected demographic and human capital characteristics, Waves 1 and 3

Characteristic	Median ($)	
	Wave 1	Wave 3
Sex		
Male	22.59	25.25
Female	18.97	21.19
Age		
15–24 years	14.60	16.33
25–34 years	20.90	24.30
35–44 years	22.81	24.94
45–54 years	23.08	25.13
55–64 years	21.01	18.09
Region of origin		
UK/Irish Republic	25.02	28.33
South Africa	24.76	27.07
North America	25.30	28.95
Rest of Europe	20.85	27.21
North Asia	16.10	18.62
South Asia	16.95	20.72
South-East Asia	17.45	18.94
Pacific	14.55	15.96
Other	21.20	23.58
Immigration approval category		
Skilled principal	25.41	28.95
Skilled secondary	17.45	19.65
Business principal	16.04	17.68
Family Partner principal	17.56	20.41
Pacific principal	13.86	15.58
Other	13.96	15.96
Region of settlement		
Auckland	19.90	22.25
Wellington	23.88	28.19
Canterbury	20.33	23.51
Other North Island	21.07	23.76
Other South Island	18.84	21.92

Characteristic	Median ($)	
	Wave 1	Wave 3
Highest qualification		
Higher degree	22.59	27.44
Bachelor's degree	25.52	30.50
Vocational qualification	21.49	24.41
Undefined post-school qualification	21.77	25.51
School qualification	15.22	16.94
No qualification	14.51	15.79
English language proficiency		
English a main language spoken	23.35	25.73
Very good English language proficiency	19.52	22.11
Good English language proficiency	14.72	17.01
Moderate or poor English language proficiency	12.48	14.15
Work experience in New Zealand before residence		
Not been to New Zealand	16.04	18.11
Been to New Zealand before but not employed	20.62	21.98
Less than 7 months' work experience	20.33	22.96
7–12 months' work experience	21.42	25.89
13–24 months' work experience	22.87	25.51
More than 24 months' work experience	20.02	22.91

The main results shown in Table 5.3 are as follows.

- Almost all groups reported higher earnings at Wave 3 than Wave 1.
- Males earned more per hour than females at both waves.
- Migrants aged 35–44 and 45–54 earned more than younger migrants at Wave 1. By Wave 3, migrants aged 25–34, 35–44, and 45–54 earned more than either younger or older migrants.
- Migrants from the UK/Irish Republic, South Africa, and North America earned higher hourly wages at both waves than migrants from Asia or the Pacific.
- Skilled Principal migrants earned the highest hourly wages at both waves and Pacific principal migrants the lowest. As discussed earlier, this is consistent with the Pacific category's requirement of a job offer, but with a low income threshold.
- Migrants in Wellington earned the highest hourly earnings at both waves.
- Migrants with a higher degree earned considerably more than migrants with lower qualifications at either wave. Those with post-school qualifications of any type earned more than those with no qualifications or only school qualifications.
- Migrants who spoke English as a main language earned the most, with earnings reducing progressively with a decline in English language proficiency.

Why do some migrants earn higher wages than others?

This section describes the main factors associated with the wages migrants received in their first 3 years after taking up permanent residence in New Zealand. Regression models were used to identify the influence of these characteristics on migrants' wages at Waves 1 and 3. In these models, the dependent variable was the log of hourly earnings.[63]

What are the key predictors of migrant earnings?

Immigration approval category, region of origin, and English language proficiency strongly influence migrant wage rates at Waves 1 and 3.

Table 5.4 presents the findings from the regression model of hourly earnings from wages for all migrants working in both Waves 1 and 3.

- Skilled principal migrants had considerably higher wages than principal and secondary migrants in other categories.
- Migrants from the UK/Irish Republic, Europe, South Africa, and North America earned more than those from Asia, although the gap started to lessen by Wave 3.
- Migrants who reported English as a best language spoken earned considerably higher wages than those with moderate or poor English. Over time this gap widens.
- As expected, age, sex, qualifications, and region of origin were also associated with wage rate differentials.

[63] Logs are taken to normalise the distribution of earnings, which is otherwise skewed to the right. This is a standard approach to such analyses. An additional benefit of this approach is that regression coefficients approximate percentage marginal effects, and can be interpreted as such, although negative coefficients underestimate slightly, positive coefficients overestimate, and larger effects underestimate or overestimate to a greater degree than small ones.

Table 5.4: Summary findings of regression model of hourly earnings from wages and salaries for all migrants, Waves 1 and 3

	Wave 1			Wave 3		
Characteristic	**Est**	**Sig**	**SE**	**Est**	**Sig**	**SE**
Immigration approval category (compared to Skilled principal)						
Skilled secondary	-23.1	**	2.2	-21.0	**	2.7
Business Category Principal	-29.3	**	18.2	-13.0		8.7
Family Partner Principal	-18.6	**	2.9	-13.8	**	3.5
Pacific Categories Principal	-17.0	**	5.5	-16.6	**	3.8
Other	-20.7	**	3.9	-17.7	**	4.0
Region of origin (compared to UK/Irish Republic)						
South Africa	-3.2		2.7	-2.5		3.0
North America	2.5		6.2	-1.6		5.0
Rest of Europe	-8.3	*	4.6	-0.3		6.2
North Asia	-31.8	**	4.0	-22.1	**	5.1
South Asia	-31.2	**	3.0	-25.1	**	3.6
South-East Asia	-25.2	**	3.2	-20.0	**	3.6
Pacific	-27.3	**	5.4	-21.5	**	3.1
Other	-18.7	**	3.3	-12.1	**	3.3
Household composition (compared to couple with children)						
Couple no children	-0.6		2.2	-1.7		2.5
Single parent	10.8		17.6	-11.6		7.5
Single no children	-4.2		2.9	-9.4	**	2.9
Other family arrangement	-2.8		3.3	-5.0		3.3
Highest qualification (compared to bachelor's degree)						
Higher degree	7.3	**	3.2	8.7	**	3.5
Vocational qualification	-10.9	**	2.2	-12.0	**	2.6
Post-school qualification undefined	-13.5	**	3.9	-14.2	**	4.8
School qualification	-19.0	**	3.1	-22.0	**	4.3
No qualification	-24.2	**	4.1	-27.8	**	4.0
Region of settlement (compared to Auckland)						
Wellington	-0.6		2.8	6.8	*	2.8
Canterbury	-13.3	**	2.6	-10.0	**	3.8
Other North Island	-10.9	**	2.2	-8.2	**	2.5
Other South Island	-19.1	**	5.6	-11.0	**	4.3
English language proficiency (compared to English is a main language spoken)						
Very good English language ability	-0.1		2.3	-3.7		2.8
Good English language ability	-8.6	**	3.1	-13.8	**	3.0
Moderate or poor English language ability	-11.2	**	4.0	-20.7	**	5.7
Work experience in New Zealand before residence (compared to not been to New Zealand)						
Been to New Zealand before but not employed	8.2	**	2.7	5.0		3.5
Less than 7 months' work experience	9.5	**	3.1	5.2		3.9
7–12 months' work experience	10.1	**	3.3	8.8	*	3.8
13–24 months' work experience	13.5	**	3.5	5.2		4.1
More than 24 months' work experience	12.0	**	4.1	9.9	*	4.7
Age	3.9	**	0.9	2.1	**	0.9
Age squared	0.0	**	0.0	0.0	*	0.0
Sex (compared to male)						
Female	-9.0	**	1.9	-8.8	**	1.9
In source country 2 years before residency? (compared to yes)						
No	-0.6		2.6	-3.4		3.4

Note: Hourly earnings were logged to more closely meet normality assumptions. Coefficients have been converted to percentages using the formula (exp(β)-1)x100.

* = p-value less than 0.05; ** = p-value less than 0.01.

How does immigration approval category relate to income?

Immigration approval category is one of the strongest predicators of migrant income, with Skilled principal migrants earning significantly more than most other categories (the exception being Business principal migrants) at Wave 3. At Wave 1, this difference was 17−29 percent across all categories, but by Wave 3 the difference had fallen to 14−21 percent. Business principal migrants in particular closed the gap on Skilled principal migrant between waves, although many Business migrants did not earn income from wages and salaries (particularly at Wave 1), so the number of them in this analysis was small.[64]

Principal migrants accepted through the Skilled category are, by definition, skilled workers, usually with tertiary qualifications and skilled work experience. The model takes into account many such human capital factors, but unobserved characteristics of Skilled migrants clearly play an additional role in the wages these migrants earn. This could relate to the fact many Skilled migrants:

- are granted residence with a job offer or existing employment in a skilled job
- are more likely to be working in an identified area of skills shortage
- have work experience in a skilled job
- are more likely to have skills that closely match the job they are doing.

What effect does a migrant's region of origin have on income?

Migrants from Asia and the Pacific earned significantly less on average than those from the UK/Irish Republic, even after controlling for other factors. Migrants from North Asia and South Asia earned about 30 percent less than migrants from the UK/Irish Republic at Wave 1 and migrants from South-East Asia and the Pacific earned about 25 percent less. By Wave 3, the differences had reduced slightly, but were still in excess of 20 percent for each of these groups (25 percent in the case of South Asian migrants).

Differences by region of origin were also apparent between the sexes, with differences being generally less pronounced for female migrants than for male migrants. At Wave 3, male migrants from the UK/Irish Republic earned on average 25−35 percent more than those from Asia and the Pacific, and female migrants from the UK/Irish Republic earned around 10−18 percent more than those from Asia and the Pacific.

[64] Weighted N = 65 at Wave 1.

New Zealand and the potential for increased income

Migrants from Asian countries were most likely to report increases in income on migrating to New Zealand. These New Zealand incomes may be lower than those of other skilled migrants, but they were a substantial increase from incomes in the migrant's region of origin. For example, nurses from the Philippines and India reported increased earnings, as well as better general working conditions, in New Zealand:

> *You know, back in the Philippines it's not as good as, you know, in regards to salary … before I'm earning around ten thousand pesos a month and that's equivalent to, some sort of two-day salary here.*
>
> *Unlike in here [New Zealand] you're paid by the hour, in there [the Philippines] you're paid by the day and you receive your salary every month, but then you'll find that the salary is not even enough to support your everyday needs, you have to stretch it.*
>
> *We have good salaries [in New Zealand], especially for nurses, mostly nurses want to come over and live here.*
>
> *Money, I think I got, I got the bigger offer, much higher [in New Zealand].*

What role does English language proficiency play?

Migrants who reported their English as moderate or poor earned 11 percent less on average at Wave 1 than those who spoke English as their main language, while those who reported their English as good earned 9 percent less. Migrants who had not improved their English between Waves 1 and 3 fared particularly poorly, with differences in earnings for those with moderate to poor, or good English at Wave 3 (compared to those with English as a main language) increasing to 21 percent and 14 percent, respectively.

At Wave 1, poor English language proficiency had a particularly strong effect on the wages of female migrants, with those with moderate or poor, or good English earning around 12–16 percent less than those who spoke English as a main language (the equivalent male comparison was not statistically significant). The effect on Wave 3 earnings was similar for both sexes for migrants who still had moderate or poor English at Wave 3 (an effect of 18–22 percent for those with poor English compared to those with English as a main language). By Wave 3 female migrants with good English earned around 19 percent less than those with English as a main language, while for males the difference was still not significant.

How important is it to have New Zealand work experience?

Migrants who had not previously been to New Zealand earned less than those who had been. However, this effect varied little by the extent of this experience with migrants who had been to New Zealand but had not had work experience earning 8 percent more at Wave 1, and those with more than 2 years' work experience earning around 12 percent more, than those who had not been to

New Zealand before. This persisted into Wave 3, but the effect was smaller and in many cases was not significant.

Interestingly, for males, the earnings of those who had been to New Zealand before residence and those who had not were not significantly different, regardless of the extent of work experience in New Zealand. For females, the effect of being in New Zealand before gaining permanent residence status was greater than for males. However, as for males, this did not differ much according to the extent of any work experience.

Do older, potentially more experienced, migrants earn more?

The age effect in the model represents age itself (capturing, for example, the impacts on earnings of ageing and attitudes towards older people), as well as work experience. Age does not measure actual experience, but it can be viewed as a measure of 'potential work experience', and is highly correlated with work experience.[65] As is common in such models, the age effect is positive for all models (indicating that people earn more as they get older). However, the quadratic age effect is negative, indicating that the year-on-year increase in earnings also decreases as people get older, such that the age effect on earnings often becomes negative at a certain point.

At Wave 1, hourly earnings peaked for all migrants aged in their mid-40s, as well as for male and female migrants separately. Interestingly, the effect was somewhat different at Wave 3. The effect across all migrants was similar to that at Wave 1, with earnings peaking for migrants aged 46, but the effect was different when analysed by sex. Female migrants at Wave 3 earned the most at the earlier age of 45, while the age effect for males was not significant.

What other factors influence migrant wages?

Many other factors influence wages. These factors are generally consistent with effects seen in the New Zealand population more generally.

- *Region of settlement*—As expected, those from the Auckland and Wellington regions earned higher wages than those from other regions of New Zealand. This pattern continued to Wave 3, with those from Auckland earning 8 percent more than those from other parts of the North Island (excluding Wellington), 10 percent more than those from Canterbury, and 11 percent more than those from the rest of the South Island.
- *Qualifications*—The returns from a qualification are positive and continue to be a strong indicator of wages by Wave 3. Those who held a higher degree at Wave 3 earned 9 percent more than those with a bachelor's degree, while those with a bachelor's degree earned 22 percent more than those with only a school qualification and 28 percent more than those with no qualification.
- *Sex*—Male migrants earned on average 9 percent more than female migrants at Wave 1. This disparity continued through to Wave 3.

[65] Interpretation of the age effect in the model is further complicated as a quadratic effect is also included. This follows a standard Mincer model specification, but with age instead of experience (J Mincer. 1978. 'Family migration decisions.' *Journal of Political Economy* 86(5): 749–773). Including two highly correlated variables introduces problems with 'multicollinearity' in the model, inflating standard errors and affecting the significance of findings. For this reason, we decided to include only age in the model, and not reported years of work experience.

Whether migrants had lived in their source country in the 2 years before residency did not influence wages on average.

5.4.2 Skilled principal migrants

This section describes the main factors influencing wages for migrants who arrived as principal applicants under the Skilled category. As we saw in Table 5.3, Skilled principal migrants earned more on average than migrants from other categories at each wave, as well as having the largest average increase in earnings between waves. Table 5.5 presents median hourly earnings at each wave, as well as the average dollar change between waves for Skilled Principal migrants.

Table 5.5: Skilled principal migrants' median hourly earnings from wages and salaries for demographic and human capital characteristics, Waves 1 and 3

	Median ($)	
Characteristic	**Wave 1**	**Wave 3**
Sex		
Male	25.91	30.12
Female	24.82	28.36
Age		
15–24 years	18.97	24.37
25–34 years	24.70	28.36
35–44 years	27.89	31.07
45–54 years	26.05	32.11
55–64 years	28.96	28.42
Region of origin		
UK/Irish Republic	27.61	31.78
South Africa	27.89	31.07
North America	29.72	33.84
Rest of Europe	28.27	35.05
North Asia	18.58	22.11
South Asia	20.08	25.89
South-East Asia	25.10	27.90
Pacific	23.15	24.37
Other	24.43	26.93
Region of settlement		
Auckland	25.88	28.59
Wellington	29.12	35.11
Canterbury	24.13	27.96
Other North Island	24.95	29.00
Other South Island	21.71	24.31

Characteristic	Median ($)	
	Wave 1	Wave 3
Qualification		
Higher degree	27.47	32.01
Bachelor's degree	26.06	28.95
Vocational qualification	25.41	28.62
Post-school qualification not specified	23.43	27.21
School qualification	22.31	27.62
No qualification	22.31	20.25
English language proficiency		
English a main language spoken	26.78	30.23
Very good English language proficiency	23.15	28.06
Good English language proficiency	17.96	20.72
Moderate or poor English language proficiency	18.67	15.54
Work experience in New Zealand before residence		
Not been to New Zealand	26.17	32.01
Been to New Zealand before but not employed	28.05	32.37
Less than 7 months' work experience	24.73	29.92
7–12 months' work experience	25.91	28.48
13–24 months' work experience	26.38	29.09
More than 24 months' work experience	22.45	24.47

The key results shown in Table 5.5 are as follows.

- *Sex*—Male migrants earned more per hour than female migrants, but the difference was smaller than for migrants overall and may not be significant.
- *Age*—Skilled principal migrants aged 35–44 and 45–54 earned more than younger skilled migrants at Wave 3.
- *Region of origin*—Skilled principal migrants from North Asia earned considerably less than skilled principal migrants from most other regions at both waves.
- *Region of settlement*—Skilled principal migrants in Wellington had the highest hourly earnings at both waves.
- *Qualification*—Skilled principal migrants with a higher degree earned more than those with lower qualifications. However, the differential was not as high as for all migrants.
- *English language proficiency*—Skilled principal migrants who spoke English as a main language earned the most, with earnings reducing progressively with lower English language proficiency.

Which Skilled migrants earn the highest wages?

A similar approach was taken with Skilled principal migrants as was taken with all migrants. Table 5.6 presents findings from the models of hourly earnings at

Waves 1 and 3 for all Skilled principal migrants, while results for males and females separately are included in Appendix D.

Table 5.6: Regression coefficients based on hourly earnings from wages and salaries for principal migrants' demographic and human capital characteristics, Waves 1 and 3

	Wave 1			Wave 3		
Characteristic	**Est**	**Sig**	**SE**	**Est**	**Sig**	**SE**
Region of origin (compared to UK/Irish Republic)						
South Africa	-7.0		3.5	-7.0		3.4
North America	14.7	**	9.4	2.2		8.0
Rest of Europe	0.7		7.3	-2.3		12.1
North Asia	-23.7	**	6.0	-18.9	**	7.4
South Asia	-26.6	**	4.4	-22.4	**	5.1
South-East Asia	-15.5	**	4.6	-19.7	**	5.6
Pacific	-18.1	**	4.2	-19.2	**	4.5
Other	-13.6	**	4.1	-11.5		4.9
Household composition (compared to couple with children)						
Couple no children	-1.6		2.7	-4.9		3.2
Single parent	25.5	*	33.7	6.0		7.2
Single no children	-8.3	**	3.0	-7.3		3.9
Other family arrangement	-6.2		4.9	-12.1	*	6.5
Highest qualification (compared to bachelor's degree)						
Higher degree	3.3		4.0	4.0		4.3
Vocational qualification	-10.4	**	3.2	-9.7	**	3.8
Post-school qualification undefined	-12.9	**	6.4	-13.6	**	8.3
School qualification	-12.6	**	5.9	-23.2	**	12.8
No qualification	-24.0	**	8.4	-33.8	**	11.6
Region of settlement (compared to Auckland)						
Wellington	5.8		4.2	11.6	**	4.1
Canterbury	-10.8	**	4.1	-14.7	**	6.5
Other North Island	-8.5	**	2.9	-6.6	*	3.6
Other South Island	-18.1	**	5.3	-18.2	**	5.9
English language proficiency (compared to English is a main language spoken)						
Very good English language ability	-0.1		2.9	0.8		5.2
Good English language ability	-8.7	*	4.6	-12.7	*	5.8
Moderate or poor English language ability	-13.3		8.2	-27.3	**	10.5
Work experience in New Zealand before residence (compared to not been to New Zealand)						
Been to New Zealand before but not employed	14.1	**	5.9	-0.3		6.4
Less than 7 months' work experience	13.7	**	5.9	4.2		6.5
7–12 months' work experience	16.7	**	5.8	4.7		6.1
13–24 months' work experience	21.4	**	5.9	4.0		6.4
More than 24 months' work experience	17.3	**	6.5	10.3		8.3
Age	4.9	**	1.6	0.7		1.7
Age squared	-0.1	**	0.0	0.0		0.0
Sex (compared to male)						
Female	-8.7	**	2.5	-8.8	**	2.6
In source country 2 years before residency? (compared to yes)						
No	-8.2	**	4.1	-13.8	**	7.1

Note: * = p-value less than 0.05; ** = p-value less than 0.01.

The key results in Table 5.6 are as follows.

- *Region of origin*—Skilled migrants from the UK/Irish Republic earned significantly more than those from South Asia, the Pacific, and Other countries at both waves, controlling for other factors.
- *English language proficiency*—Migrants who spoke English as a main language earned far more than migrants with moderate or poor English language proficiency , particularly at Wave 3.
- *Work experience*—New Zealand work experience was important in Wave 1, but by Wave 3 it had no significant benefit. Those with New Zealand work experience were not earning more than those who had not worked in New Zealand prior to gaining permanent residence.
- *Living in source country before gaining residence*—Skilled principal migrants who lived in their source country in the 2 years prior to residence earned significantly more than those not living in their source country. By Wave 3, the difference was even greater.

What role does English language proficiency play?

The link between English language proficiency and earnings was similar for Skilled principal migrants and migrants overall. Migrants who still had poor English language proficiency at Wave 3 earned considerably less than those with English as a main language (13 percent for those with good English, and 27 percent less for those with moderate or poor English) controlling for other factors.

How important is New Zealand work experience?

As for migrants more generally, Skilled principal migrants who had been to New Zealand (particularly those with more than 1 year's work experience) earned more at Wave 1 than those who had not been to New Zealand (14–21 percent, depending on length of experience). By Wave 3, the effect had all but disappeared, with no significant differences.

What effect does a Skilled migrant's region of origin have?

Skilled principal migrants from Asia, the Pacific, and Other countries, earned significantly less than those from the UK/Irish Republic, South Africa, North America, and the Rest of Europe. In both waves, Skilled principal migrants from Asia or the Pacific earned around 15–20 percent less on average than those from the UK/Irish Republic, controlling for other factors. The effect of region of origin increased over time for Skilled principal migrants from some regions, unlike for all migrants where the gap closed over time across all regions of origin. Skilled principal migrants from South-East Asia earned around 15 percent less than those from the UK/Irish Republic at Wave 1, but 20 percent less at Wave 3.

Income compared with lifestyle

Some migrants experienced significant decreases in salary after migrating to New Zealand. This was particularly the case for migrants from the UK, South Africa, and North America:

> *I actually gave up dollars and benefits to come here and work, just because I like the area.*
>
> *From what I used to earn in the UK to what I earn here is definitely halved.*
>
> *Gosh, I made more money there [in the UK] than I ever made here.*

However, the sacrifice in salary was made up for by a perceived better standard of living or lifestyle factors in New Zealand:

> *You're not going to make a fortune coming to New Zealand because we earn, or did earn, a heck of a lot more money in the UK than here, we took a massive drop to come here … it's more the lifestyle we were after.*

For others, the lure of Australia and an increase in salary coupled with similar lifestyle factors was increasingly appealing:

> *Yeah so certainly it's quite an incentive to go … I've got no real huge desire at this point to jump across the ditch, but certainly it's always there so that as things get tighter and tighter here … there's always a temptation to say, maybe.*

"The salary average in China is not, not high compared to here, so I think if you can offer me higher then I will go, otherwise I will stay here."

"When I got here I took at least a third salary cut, people couldn't believe it how much the salary cut was coming here. But I could still live just as good a life … it's the lifestyle, having the beaches, the climate and everything."

Does being in New Zealand longer help?

Skilled principal migrants who lived in their source country 2 years before residency earned 8 percent more at Wave 1 than those who did not. By Wave 3, this difference had increased to 14 percent. This result could reflect that migrants who can secure residence a relatively short time after arriving in New Zealand, are more likely to be in well-rewarded, high-skilled work.

What other factors influence the wages of Skilled principal migrants?

As expected, Skilled principal migrants from the Auckland and Wellington regions earned higher wages than those from other regions. Those in Canterbury and the

rest of the South Island earned 15 percent and 18 percent less, respectively, than those in Auckland at Wave 3. Skilled principal migrants in Wellington earned 12 percent more than those in Auckland by Wave 3, controlling for other factors.

The returns from a qualification are positive and continue to be a strong indicator of wages by Wave 3. Skilled principal migrants with a bachelor's degree earned 34 percent more than those with no qualification at Wave 3 (compared to a 24 percent difference at Wave 1).

Age was linked with wages at Wave 1 for Skilled principal migrants, as for all migrants, but its influence diminished by Wave 3.

Importance of networks

Many interviewees from the Five Years On study had had several jobs since arriving in New Zealand. The first jobs of these migrants were sometimes not a good 'fit' or below their skills level, or migrants had changed career direction.

Social and professional networks were important for finding subsequent jobs. Migrants heard about, applied for, and gained employment with the assistance of friends and colleagues:

> *I got this job through another scientist who works there [and] who I'd met around the place.*
>
> *I got the job through a friend of mine, he goes to the same church as I did … I said, 'Hey I am looking for a job', and he said, 'yeah, I'll connect to the boss and see how it goes'.*

6 CONCLUSION

Migrants' early experiences in New Zealand have a significant impact on how well they settle and their ability to make a valuable contribution to the country during their first years of residence and beyond. These initial settlement years, during which migrants move from their initial motivations to migrate to early employment and settlement, are often some of the most challenging.

One of the Government's priorities is to attract and retain migrants who will contribute to the employment needs of New Zealand's changing economy. With increasing international competition for skilled migrants, it is vital that we understand what factors lead to migrants' employment success in order to facilitate their successful economic integration and maximise their contribution to the New Zealand economy. This report highlights the main factors that play a part in early labour market experiences and earnings of new migrants to New Zealand.

Understanding the relevant factors that lead to the successful economic integration of early migrants will inform the fine-tuning of immigration and settlement policies. Current research generally demonstrates positive labour market outcomes, particularly for New Zealand's skilled migration programme, and supports the effectiveness of the country's migration programme overall. This reflects the efficacy of New Zealand's migration policies in recent years and their role in producing early labour market successes, particularly for principal migrants approved under the Skilled Migrant Category.[66]

Immigration policy settings can affect the economic integration of migrants in several ways. The results in this report largely support the findings reported in the international literature. Migration research has identified the four most important determinants of labour market success for migrants as being:

- immigrant selection policy
- 'entry' effects and economic integration over time
- immigrant human capital
- the ethnic, racial, or national origins of immigrants, and the possibility of discrimination based on such backgrounds.[67]

6.1 Immigration selection policy

Immigration selection policy can have a major influence on the qualifications, language proficiency, local work experience, and general employability of incoming migrants. Although the policy's criteria are applied primarily to the principal applicant, they can often affect settlement experiences of accompanying family members indirectly. LisNZ allows us to examine the effectiveness of New Zealand selection policies for the various immigration

[66] Note that while the labour force participation rates reported in the current research were high by world standards, the full impact of the global economic downturn on current labour market outcomes may not be fully reflected in the results of this earlier cohort of migrants.

[67] J Reitz. 2007. 'Immigrant employment success in Canada, Part I: Individual and contextual causes.' *International Migration and Integration* 8: 11–36.

categories and to assess the contribution of these to both immediate and medium-term labour market integration.

Skilled principal migrants, as well as their partners (who are also often skilled), and their labour market integration were of particular interest here. Selection policy settings for the Skilled and Pacific categories have remained relatively consistent since LisNZ was initiated. However, there have been minor changes to some of the family policies and marked changes to the Business category.[68]

The current results show higher levels of early labour force participation for particular migrant approval categories. Skilled and Pacific principal migrants had considerably higher labour force participation and employment rates over the three waves, but Skilled principal migrants had substantially higher income than migrants in other categories. This is primarily because of the policy settings of these approval categories, which mean applicants are selected based on criteria such as having a job offer and meeting a prescribed level of English language proficiency. Principal applicants from the Pacific categories are also required to hold an offer of employment but tend to earn considerably lower wages, In contrast, Business, Family Partner, and Skilled secondary migrants were less likely to participate in the labour market at Wave 1, regardless of sex. However, this tended to improve over time.

6.2 Entry effects and economic integration over time

New migrants require time to adjust to a new country, including adjusting to a new labour market. While working well for those already employed labour market integration may present more of a challenge to secondary and family applicants who are more likely to arrive without a prearranged job offer or may have no previous local work experience. The current research findings demonstrate high levels of early labour force participation for migrants, especially those approved through immigration categories that require an initial offer of employment.

Policy-driven migration has ensured that almost all principal migrants from the Skilled and Pacific categories gain immediate employment, and current results demonstrate that these high employment rates are maintained over time.

Skilled secondary migrants, on the other hand, are less likely to participate in the labour force immediately, but tend to make quick gains over time. Spouses or partners of principal applicants often arrive without an offer of employment and may take time to establish a home, so their economic integration is less immediate. In this research, Skilled secondary migrants demonstrated the largest increases in labour force participation between Waves 1 and 3 among both males and females.

[68] Since 2005, business migration has significantly decreased. A new policy package, introduced in July 2009, was designed for migrants who wanted to invest or set up a business in New Zealand and gain permanent residence. The new Investor Policy sets more realistic requirements for capital, language skills, and time spent in New Zealand annually, as well as providing greater flexibility in terms of investment vehicles. For entrepreneurial migrants, a new Entrepreneur Plus Category complements the existing Entrepreneur Category.

6.3 Human capital characteristics

Research has shown that human capital characteristics are important determinants of labour force participation and earnings of new migrants. New Zealand's selection of skilled migrants is based on a combination of employment and human capital characteristics. As well as allocating points to skilled migrants who hold an offer of employment, points are awarded for criteria such as local work experience and qualifications, and applicants must meet an English language proficiency requirement. These selection criteria are based on the assumption that such criteria increase the employability of skilled migrants.

Many of the current findings point to the positive and immediate value of previous work experience in New Zealand. Migrants who have spent time in New Zealand before gaining permanent residence have advantages such as the opportunity to improve their English language skills, gain local work experience, and develop social networks. Over a period of 3 years, however, this initial New Zealand work experience no longer contributes significantly to labour force integration.

Proficiency in the host-country language has clear labour market value since it is a critical determinant of employment outcomes.[69] Canadian research has found a strong correlation between higher levels of host-country language proficiency and labour market outcomes for migrants.[70] The same trend has been found in Australian studies. Australia's 2005–06 skilled migration review confirmed the critical relationship between objective measures of English language proficiency and the rate of labour market integration. Therefore, it was important to explore the extent to which LisNZ data confirmed these findings.

The role of host language proficiency as a key contributor to positive labour market outcomes was not entirely supported by the research findings. Our results demonstrate that language proficiency did not significantly impact on employment outcomes for men. However, the negative impact of having moderate or poor English language proficiency was significant for women, whose labour market participation decreased significantly from Waves 1 to 3. The lack of this affect for men may, in part, be attributable to the self-reported measures used to assess English language proficiency. Indeed, analysis of data in Australia confirms that migrants may overestimate or underestimate their host-country language proficiency and there is no evidence that self-reporting is a reliable measure.

Analysis of the influence of English language proficiency on migrant wage rates at Waves 1 and 3 indicates that migrants with poor English language proficiency earned less than half those who spoke English as a main language. Moreover, not only did migrants with better language skills earn considerably higher wages than those reporting moderate or poor proficiency, but this gap widened over time.

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[69] L Hawthorne. 2008. 'The impact of economic selection policy on labour market outcomes for degree-qualified migrants in Canada and Australia.' *IRPP Choices* 14(5). www.irpp.org/choices/archive/vol14no5.pdf

[70] B R Chiswick and P W Miller. 2005. 'Do enclaves matter in immigrant adjustment?' *City and Community* 4(1): 5–35.

Qualification level was not significantly related to increased labour force participation for most migrants. The exception was women who held a school qualification, who were less likely to be employed at Wave 1 than those with a bachelor's degree. This finding is not surprising since labour force participation was very high for the large majority of migrants, and particularly Pacific category migrants who tended to hold lower qualifications. This is a positive finding since labour force participation rates tend to be high regardless of qualification level. This differs from the New Zealand-born population where employment rates are around 10–20 percentage points lower than those of the high-qualified New Zealand-born.[71]

Most studies have also demonstrated that previous foreign work experience is of limited value in predicting local labour market experiences.[72] This result has largely been attributed to inconsistencies in the transferability of foreign experience. Employers tend to place greater value on local work experience than on experience gained abroad. This was demonstrated by the labour market experiences of migrants at Wave 1 of LisNZ. LisNZ showed that lack of New Zealand work experience was by far the greatest difficulty newcomers experienced. Over time, difficulties may lessen as migrants gain employment experience and income levels rise. These findings suggest employers have a high demand for New Zealand work experience. Foreign work experience may not be seen as directly transferable, and this lack of transferability may be especially pronounced for migrants from non-European backgrounds.

A large proportion of the LisNZ cohort had held a temporary visitor, work, or student permit before gaining permanent residence.

> *"I came here basically to do my higher studies and then I just stayed on here because things worked out well for me, so I just stayed on here and I've settled here now."*

Not surprisingly, migrants who had spent time in New Zealand before gaining residence, particularly those who had gained local work experience, were much more likely to participate in the labour force at Wave 1 than were migrants who had not been to New Zealand before, particularly female migrants. This entry effect may be more pronounced for women since a larger proportion of female migrants with no local work experience might be carrying out non–labour market activities such as domestic responsibilities. By Wave 3, New Zealand work experience was no longer a significant predictor of labour force participation. These findings suggest that New Zealand work experience is a significant factor in gaining initial entry into the labour market, but does not play a longer-term role in the economic integration of recent migrants.

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[71] S Stillman. 2011. *Labour Market Outcomes for Immigrants and the New Zealand-born 1997-2009*. International Migration, Settlement, and Employment Dynamics (IMSED) Research Report. Wellington: Department of Labour. http://dol.govt.nz/publications/research/labour-market-outcomes

[72] J Reitz and S Sklar. 1997. 'Culture, race, and the economic assimilation of immigrants.' *Sociological Forum* 12(2): 233–277.

6.4 Region of origin effects

Studies from Canada, Australia, the United States, and various OECD countries have shown that migrants from visible minorities have more difficulty integrating into the labour market and earn less on average than their counterparts of European origin or native-borns.[73] Generally, these differences in outcomes tend to remain even after taking into account observable factors that could explain differences in employment rates or wages between the two groups (for example, age, qualifications, language proficiency, and labour force experience). Although these remaining differences may be explained by other unobserved differences such as individual motivation, they may also suggest employer preferences in recruiting migrants from traditional source countries that are more socio-culturally and linguistically congruent to the receiving country. This has been demonstrated in several studies carried out in New Zealand and Australia in which fictitious job applications, equivalent except for the name of the applicant, were sent to employers. These studies showed that in as many as one-third to one-half of decisions on job applications, candidates with non-European backgrounds, as signaled by their name, were selectively ignored or rejected, even though their qualifications and work experience were identical to candidates with European backgrounds.[74]

LisNZ provides a unique opportunity to examine and learn about labour market integration among particular groups of the migrant population. Early success in the labour market is evident for migrants overall, although the ease with which migrants enter the labour market and their income levels tend to vary across migrants from different regions of origin.

As found using the Wave 1 data, Pacific category migrants experienced immediate and positive labour market outcomes.[75] The current research broadened our initial findings by demonstrating how these results extend to the labour market outcomes for these migrants in the medium term. Pacific category migrants had very high labour market participation rates, second only to Skilled principal migrants. However, they earned significantly less than migrants in most other categories.

Conversely, migrants from North Asia were less likely to participate in the labour market and had the highest seeking-work rate at all three waves compared with migrants from other regions. A larger proportion of North Asian migrants who were not in the labour force were studying or caring for dependents.

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[73] J Reitz. 2007. 'Immigrant employment success in Canada. Part 1: Individual and contextual causes.' *International Migration and Integration* 8: 11–36.

[74] A Booth, A Leigh, and E Varganova. 2010. *Does Racial and Ethnic Discrimination Vary across Minority Groups? Evidence from a field experiment.* Discussion Paper 4947. Bonn, Germany: Institute for the Study of Labor (IZA); C Ward and A-M Masgoret. 2007. 'Immigrant entry into the workforce: A research note from New Zealand.' *International Journal of Intercultural Relations* 31: 525–530; M Wilson, P Gahlout, L Liu, and S Mouly. 2005. 'A rose by any other name: The effects of ethnicity and name on access to employment.' *Business Review* 7(2): 65–72.

[75] R Bedford, A-M Masgoret, P Merwood, and M Tausi. 2010. 'Immigrants from the Pacific: "Drain on the economy" or "active participation in the labour force"?' Published in a special issue, Labour Circulation and Acceptance: New Zealand and its Neighbours, *Asia Pacific Migration Journal* 19(3): 371–400.

In terms of income levels, migrants from the UK/Irish Republic, Europe, South Africa, and North America earned more than those from Asia in Wave 1, although this gap lessened by Wave 3.

6.5 Future directions

In today's dynamic migration environment, many countries are competing to attract skilled migrants to fulfil national demands for skilled professionals who are in short supply. The LisNZ research programme provides a unique opportunity to better understand this process over time, from migrants' initial motivations to come to New Zealand to their medium-term settlement outcomes. This data will continue to be used to assess the settlement outcomes and needs of migrants and the results used to inform the Government's priority areas. For example, the research findings will provide useful settlement information that will contribute to attracting and retaining newcomers to New Zealand. These findings will also help us to develop practical resources to assist migrants in developing realistic expectations and support before migrating and throughout the early settlement period.

6.5.1 Impact of social networks and family dynamics on labour market outcomes

Integration into the labour market is one important aspect of positive settlement. However, additional considerations need to be taken into account within the settlement process. Successful integration may be achieved in very different ways among migrants depending on their initial motivation to relocate and factors such as family and social networks.

Future research will examine the role of social networks and family dynamics, focusing on the impact of community linkages and family (spouses/partners and children) settlement on the labour market outcomes and retention of migrants.

Social networks appear to play a key role for new migrants to New Zealand; LisNZ data show that most migrants had friends and family in New Zealand before they migrated, and these contacts were most often used as a main source of information.[76] Future research using LisNZ will examine the impact of social issues on migrants' labour market outcomes by focusing on the interrelationships between economic and social integration, and the role of this dynamic in predicting successful migration.

The relationships between various aspects of the integration and settlement process merit particular attention. For example, previous research has suggested that social ties not only contribute to the social integration of new migrants, but also play a significant role in their economic integration.[77] Research has shown that greater opportunities for economic integration exist in regions with ethnic community networks.[78] The current findings and on-going research in this area

[76] A-M Masgoret, P Merwood, and M Tausi. 2009. *New Faces, New Futures: New Zealand – Findings from the Longitudinal Immigration Survey: New Zealand (LisNZ) – Wave one.* Wellington: Department of Labour. www.dol.govt.nz/publications/research/lisnz

[77] B R Chiswick and P W Miller. 2005. 'Do enclaves matter in immigrant adjustment?' *City and Community* 4(1): 5–35.

[78] B R Chiswick and P W Miller. 2005. 'Do enclaves matter in immigrant adjustment?' *City and Community* 4(1): 5–35.

are in line with recent interest in the impact of migrants' social and cultural capital on their employment success.

6.5.2 Research important for attracting, selecting, and retaining migrants who will contribute to a productive labour market

The LisNZ research will continue to provide essential information on the factors associated with both positive and negative economic outcomes of migrants. Additional research will help us to further understand the key drivers to labour market integration, as well as how best to attract, select, and retain migrants who will contribute effectively to a productive labour market.

Further analysis will focus on identifying characteristics contributing to both the attraction and retention of New Zealand migrants and their families. This information can be used to tailor recruitment strategies to attract migrants who will settle well, and to maximise their benefits to employers, and to New Zealand more broadly, by identifying important areas that require support for particular subgroups of migrants.

The Department will use the findings of this research to inform immigration policy settings in order to maximise economic outcomes of migrants, through a targeted review of skilled migration policies. This research will be used to inform immigration policy settings in order to maximise migrant outcomes and contribute to the Government's priorities arising from the Business Growth Agenda.

Finally, results from the LisNZ research will be further enhanced and expanded through the Integrated Data Infrastructure (IDI), an administrative data source which will create an integrated data environment with longitudinal microdata about individuals, households, and firms. This data will enable research and policy to support informed decision-making by allowing for the systematic tracking of information on migrant cohorts over time.

APPENDIX A: METHODOLOGY FOR THE LONGITUDINAL IMMIGRATION SURVEY: NEW ZEALAND

The Longitudinal Immigration Survey: New Zealand (LisNZ) conducted interviews with the same group of migrants at three 'waves'—6 months (Wave 1), 18 months (Wave 2), and 36 months (Wave 3) after the migrants had taken up permanent residence in New Zealand.

The sample was selected from migrants aged 16 years and over who were approved for permanent residence in New Zealand from 1 November 2004 to 31 October 2005. Wave 1 interviews were conducted from 1 May 2005 to 30 April 2007, Wave 2 interviews from 1 May 2006 to 30 April 2008, and Wave 3 interviews from 1 November 2007 to 31 October 2009. The survey achieved 5,144 completed interviews at Wave 3.

The migrants were interviewed face to face using an electronic questionnaire that the interviewer administered on a laptop computer. Bilingual interviewers conducted the interviews in seven designated survey languages (English, Mandarin, Cantonese, Samoan, Korean, Hindi, and Punjabi).

Target population and survey population

The target population for LisNZ included migrants aged 16 years and over who were approved for permanent residence in New Zealand from 1 November 2004 to 31 October 2005, but excluding refugees, temporary visitors, and people from Australia, Niue, the Cook Islands, and Tokelau. The target population included those who were approved for residence offshore as well as those approved onshore. Migrants were sampled at the time they were granted residence. Migrants who were approved offshore had 12 months from the date of their residence approval to arrive in New Zealand and take up residence.

Migrants in the survey population were those in the target population who had not left New Zealand permanently and were living in the North Island, South Island, or Waiheke Island at Wave 1. These migrants were granted residence through:

- skilled categories
- business categories
- family categories
- Pacific categories
- other categories.[79]

These categories were used in the sampling design of LisNZ.

[79] The 'other' categories consist of applicants granted residence through categories other than those listed. It includes a small number of migrants approved through various International/Humanitarian Stream Categories (but excluding refugees).

Sampling design

A stratified random sampling design was used to select the sample from 40 strata. The construction of these strata was based on immigration approval category, region of origin, and location of approval (offshore/onshore).

A large sample of 12,202 migrants was selected at Wave 1. Allowing for non-contact, non-response, and attrition over the three waves, the aim was to achieve a target of at least 5,000 interviews by Wave 3.

Non-response and attrition

From the 12,202 migrants selected at Wave 1, further enquiry showed that 217 were ineligible to take part in the survey, 145 did not arrive in New Zealand in time, and 984 had no initial contact address in New Zealand. Of the remaining 10,856 migrants, 7,137 were interviewed at Wave 1, corresponding to a 66 percent response rate.

The main reason for failing to interview migrants at Wave 1 was non-contact, where migrants could not be found at the addresses they supplied when they were approved for residence.

Of the 7,137 migrants interviewed at Wave 1, 6,069 were interviewed at Wave 2, giving a Wave 1 to Wave 2 attrition rate of 15 percent. Of the 1,068 Wave 2 non-respondents, 79 percent were Wave 1 respondents who left the country permanently, 18 percent refused to participate, and 3 percent did not respond for other reasons.

Of the 6,069 migrants interviewed at Wave 2, 5,144 were interviewed at Wave 3, giving a Wave 2 to Wave 3 attrition rate of 15 percent. Of the 925 Wave 3 non-respondents, 79 percent were Wave 2 respondents who left the country permanently, 15 percent refused to participate, and 6 percent did not respond for other reasons.

Attrition analysis determined whether individuals with certain characteristics were more likely to attrite and whether that introduced bias in the LisNZ data. It was found that attritors and non-attritors were systematically different in ways that induced selection bias. However, the effects of attrition were not large and unlikely to compromise the quality of output produced using the LisNZ data.

Estimation

Sampling weights were used to obtain various estimates from LisNZ. These sampling weights were derived from the initial design weights, reflecting the probability of being selected in the Wave 1 sample, and with adjustments applied to:

- account for the retention of a maximum of two migrants per residence application
- ensure the sum of the adjusted design weights within a stratum was the same as the total number of migrants in the survey population from that stratum
- account for unit non-response at Wave 1

- benchmark the actual number of migrants approved over Wave 1 by strata, sex, and age groups
- to account for attrition at Waves 2 and 3.

Weighted estimates were randomly rounded to base 10 and the percentages calculated using the rounded values. In addition, weighted estimates of fewer than 20 migrants have been suppressed to protect the confidentiality of the respondents.

Estimates of totals with a particular characteristic, such as annual income, were calculated by adding the weighted income of all migrants with an income. To get a mean annual income, we divided the weighted income by the weighted number of migrants. For a proportion of migrants with an annual income of $40,000 or more, we divided the weighted number of migrants with an annual income of $40,000 or more by the weighted number of all migrants with an income.

For median income, we ordered the respondents' income from the lowest to the highest income. We then counted the weighted number of respondents who had an income value less than or equal to a given income and found the respondent who lay halfway in the survey population. If respondents had the same income on either side, then this income was the median income; otherwise, the median was interpolated from the two income values on either side.

Regression analysis describes the relationship between two or more variables. The interest is simply in a summary statistic that describes the association between the explanatory and response variables. Sampling weights have been used in the regression models discussed in this report.

To estimate sampling errors associated with means, totals, and regression analysis, we used the delete-a-group jackknife variance estimation method.[80] For medians, the sampling errors were estimated using a method introduced in 1952.[81]

Methodology for the qualitative Five Years On study

Five Years On is a small qualitative study with people who took part in LisNZ and agreed to a further in-depth interview. The purpose of the study was to add to the data gathered in LisNZ by providing in-depth information on:

- choice of location for settlement
- motives for migration
- employment and income
- English language competence
- social integration
- citizenship and commitment

[80] P S Kott. 1998. 'Using the delete-a-group jackknife variance estimator in practice'. In *Proceedings of the Section on Survey Research Methods* (pp 763–768). Alexandria, VA: American Statistical Association.

[81] R S Woodruff. 1952. 'Confidence intervals for medians and other position measures.' *Journal of American Statistical Association* 47: 635–646.

- discrimination
- family sponsorship issues.

At Wave 3 of LisNZ, all participants were asked if they would be willing to be contacted again by the Department of Labour; 1,700 individuals were willing.

Five Years On focused on Skilled Migrant Category principal applicants. To protect the privacy of individuals' information, participants were not selected on the basis of their previous interview data. Participants were sampled on the basis of location of residence and region of origin to reflect the distribution and character of the Skilled Migrant Category principal applicant population.

Sixty-four people participated in the study: 19 from Auckland, 22 from Wellington, 8 from Dunedin, 5 from Nelson, and 10 from Napier. Eighteen participants were from the United Kingdom, 2 from the Pacific, 13 from South-East Asia, 13 from North Asia (mainly China), 9 from South Asia (India), 3 from South Africa, 4 from North America, and 2 from other regions.

Participants were sent a letter with an information sheet in advance of a telephone call during which a time to meet was arranged and later confirmed by mail. Interviews were face to face, informed consent was recorded, and the conversation was structured around an interview guide and audiotaped. Participants were given a $25 supermarket voucher as a token of appreciation for their time.

Audiotapes were transcribed verbatim and analysis was conducted with the assistance of NVivo software.

APPENDIX B: IMMIGRATION APPROVAL CATEGORIES USED IN THIS REPORT

Category	Definition
Skilled	This category comprises migrants granted residence through the Skilled Migrant Category, General Skills Category (now closed), or Residence from Work Category.
Skilled principal	A principal applicant granted residence through the Skilled category.
Skilled secondary	A secondary applicant granted residence through the Skilled category.
Business	This category comprises migrants granted residence through the Investor, Entrepreneur, and Employees of Relocating Businesses Policies.
Business principal	A principal applicant granted residence through the Business category.
Family Partner	This category comprises migrants granted residence through the Family Partner Policy. This policy enables the partner (that is, spouse, de facto partner, or same-sex partner) of a New Zealand citizen or resident to apply for residence. Applicants must show that they have been living in a partnership for 12 months or more.
Family Partner principal	A principal applicant granted residence through the Family Partner category.
Pacific	This category comprises migrants granted residence through the Pacific Access Category and Samoan Quota. These two policies are part of the International/Humanitarian Stream of the New Zealand Residence Programme.
Pacific principal	A principal applicant granted residence through the Pacific category.
Other	This category comprises migrants (principal or secondary applicants) granted residence through categories other than the Skilled, Business, Family Partner, and Pacific categories. Migrants in this Other category are mainly secondary applicants (other than Skilled secondary); applicants approved though the Family Parent, Family Sibling, and Family Adult Child Policies; and a small number approved through the International/Humanitarian Stream (but excluding refugees).

APPENDIX C: DEFINITIONS OF TERMS USED IN THIS REPORT

Term	Definition
Adult Child Policy	This policy enables adult children of New Zealand citizens or residents to gain residence in New Zealand. Applicants must: • have no immediate family in their home country • have an acceptable offer of employment in New Zealand • be able to financially support any dependants • have an eligible sponsor.
approval	An approval is an individual (a principal or secondary applicant) who has been approved for residence.
Business category	This immigration approval category comprises migrants granted residence through the Investor, Entrepreneur, and Employees of Relocating Businesses Policies. Some of the analysis in this report distinguishes the subgroup 'Business principal'.
English language proficiency	English language proficiency is derived from responses to questions about migrants' language usage and their ability to read, write, speak, and understand English. English was recorded as a language spoken best, or various questions were used to assess migrants' ability to read, write, speak, and understand English (each on a five-point scale). An overall score was derived from the average of the four scores.
Entrepreneur Policy	Established for people able to demonstrate they have successfully set up and operated a business in New Zealand.
Employees of Relocating Businesses Policy	Established for key people in a business relocating to New Zealand who do not qualify for residence under any other residence category. There is a two-year employment period before the residence permit is endorsed.
Family Partner category	This immigration approval category comprises migrants granted residence through the Family Partner Policy. This policy enables the partner (that is, spouse, de facto partner, or same-sex partner) of a New Zealand citizen or resident to apply for residence. Applicants must show that they have been living in a partnership for 12 months or more. (Migrants approved through other family policies are included in the Other category.) Some of the analysis in this report distinguishes the subgroup 'Family Partner principal'.
Family Sibling Policy	This policy enables siblings of New Zealand citizens or residents to gain residence. Applicants must: • have no immediate family in their home country • have an acceptable offer of employment in New Zealand • be able to financially support any dependants • have an eligible sponsor.

Term	Definition
Family Sponsored Stream	This stream includes the Parent, Sibling, Adult Child and an Uncapped Immediate Family Category and is intended to enhance the well-being of existing New Zealand residents by allowing people with whom they have family links to come to New Zealand
immigration approval categories	Five groupings of immigration approval categories are used in this report: the Skilled, Business, Family Partner, Pacific, and Other categories.
International/ Humanitarian Stream	This stream includes the Refugee Quota,82 the Samoan Quota, and other policies that allow New Zealand to meet its humanitarian or international obligations.
Investor Policy (closed June 2005)	This policy is based on the principal applicant meeting a minimum level of points, earned through a combination of the money they have available for investment (minimum of NZ$1 million), age, and business experience.
Long Term Skills Shortage List	A list of skilled occupations that are in critical or absolute shortage all over New Zealand. An applicant through the Skilled Migrant Category can claim bonus points if their skilled employment, recognised work experience, or recognised qualification is on this list.
Other category	This immigration approval category comprises migrants (principal or secondary applicants) granted residence through categories other than the Skilled, Business, Family Partner, and Pacific categories. Migrants in this Other category are mainly: • secondary applicants (other than Skilled secondary) • applicants though the Family Parent, Family Sibling, and Family Adult Child Policies • a small number of applicants approved through the International/Humanitarian Stream (but excluding refugees). Some of the analysis in this report distinguishes the subgroup 'Family Partner principal'.
New Zealand Residence Programme	This programme enables people wishing to migrate to New Zealand to gain residence. Residence applications are considered on the basis of whether the principal applicant meets the policy criteria. The principal applicant may include his or her partner and dependent children in the application. All applicants must meet health and character requirements.
Pacific Access Category	This category allows up to 250 citizens of Tonga, 75 citizens of Tuvalu, 75 citizens of Kiribati, and 250 citizens of Fiji (including the spouses, de facto partners and dependent children of principal applicants) to be granted residence in New Zealand each year. Applicants must have an acceptable offer of employment, be aged 18–45, and meet minimum income requirements if they have dependents. Places in this category are balloted.

[82] Refugees are not included in the survey population. The Refugee Voices project and Quota Refugees 10 Years On research programme explore the resettlement experiences of refugees to New Zealand. Visit the Immigration New Zealand website for more details on these projects (www.immigration.govt.nz/migrant/general/generalinformation/research).

Term	Definition
Pacific category	This immigration approval category comprises migrants granted residence through the Pacific Access Category and Samoan Quota. These two policies are part of the International/Humanitarian Stream of the New Zealand Residence Programme. Some of the analysis in this report distinguishes the subgroup 'Pacific principal'.
Parent Sibling Adult Child Stream	This stream includes the Parents, Family Sibling, and Adult Child Policies.
Parents Policy	This policy enables the parent(s) of a New Zealand citizens or resident to apply for residence if either they have no dependent children and all of their children live outside of the parent's home country, or the centre of gravity of their family is in New Zealand. The applicant's child must be an eligible sponsor.
principal applicant	This applicant is the main person assessed against the policy criteria. For example, a 'Business principal' is the main person assessed against the policy criteria for the Business category.
region of origin	This region is derived from country of nationality or citizenship. For an applicant with dual citizenship, citizenship refers to the nationality recorded on the passport used for the residence application. The regions of origin based on these criteria were: • UK/Irish Republic: Great Britain, Ireland • South Africa • North America: Canada, United States and its outlying islands • rest of Europe (including Russia): European Union 25, Albania, Andorra, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Gibraltar, Iceland, Kosovo, Liechtenstein, Macedonia, Moldova, Monaco, Norway, Romania, Russia, San Marino, Serbia and Montenegro, Switzerland, Ukraine, Vatican City • North Asia: China, Hong Kong, Japan, Macau, Mongolia, North Korea, South Korea, Taiwan • South Asia: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka • South-East Asia: Brunei Darussalam, Burma, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor Leste, Viet Nam • Pacific: American Samoa, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Norfolk Island, Pacific Island Trust Territory, Palau, Pitcairn Islands, Samoa, Solomon Islands, Tonga, Tuvalu, US Pacific Islands, Vanuatu, Wallis and Futuna • Other: countries not stated above.
Samoan Quota	This quota allows for up to 1,100 Samoan citizens, including partners and dependent children, to be granted residence in New Zealand each year. Applicants must have an acceptable offer of employment, be aged 18–45, and meet minimum requirements if they have dependents. Places in this quota are balloted.

Term	Definition
secondary applicant	This applicant is included in a principal applicant's application, but is also assessed against various criteria. All people in an application are approved through the same residence policy. For example, a 'Skilled secondary' is a person included in a Skilled principal's application. They are assessed against the policy criteria for the Skilled category.
Skilled/Business Stream	This stream includes the Skilled Migrant Category, Residence from Work Category, and business policies. This stream accounts for 60 percent of all people granted permanent residence in New Zealand, with most gaining residence through the Skilled Migrant Category. The Skilled Migrant Category is a points-based policy that allows people to gain permanent residence if they have the requisite skills, qualifications, and experience to contribute to New Zealand economically and socially.
Skilled category	This immigration approval category comprises migrants granted residence through the Skilled Migrant Category, General Skills Category (now closed), or Residence from Work Category. Some of the analysis in this report distinguishes two subgroups: Skilled principal and Skilled secondary.
Skilled Migrant Category	This is a points-based policy that allows people to gain permanent residence in New Zealand if they have the skills, qualifications, and experience to contribute to New Zealand economically and socially.

APPENDIX D: CONFIDENCE INTERVALS

Table D1: Confidence intervals for selected variables

Variable	Weighted estimate	Total	Proportion	95% CI		Relative sampling error (%)
				Lower boundary	Upper boundary	
Approval category						
Skilled principal	11,780	34,540	34.1	32.8	35.4	3.8
Skilled secondary	8,170	34,540	23.7	22.4	25.0	5.5
Business principal	860	34,540	2.5	2.3	2.6	5.6
Family Partner principal	6,520	34,540	18.9	18.5	19.3	2.0
Pacific principal	930	34,540	2.7	2.4	3.0	9.7
Other	6,280	34,540	18.2	17.6	18.7	3.1
Region of origin						
UK/Irish Republic	11,200	34,540	32.4	31.7	33.1	2.1
South Africa	3,290	34,540	9.5	8.7	10.4	8.6
North America	1,320	34,540	3.8	3.3	4.4	14.4
Rest of Europe	2,050	34,540	5.9	5.1	6.8	13.6
North Asia	6,160	34,540	17.8	17.1	18.5	4.0
South Asia	2,960	34,540	8.6	8.0	9.1	6.3
South-East Asia	1,760	34,540	5.1	4.8	5.4	6.5
Pacific	4,280	34,540	12.4	11.8	13.0	4.7
Other	1,510	34,540	4.4	4.0	4.7	7.5
Age group at Wave 1						
16–24 years	4,970	34,540	14.4	13.8	14.9	3.8
25–34 years	12,310	34,540	35.6	34.9	36.4	2.2
35–44 years	10,620	34,540	30.7	29.9	31.6	2.7
45–54 years	4,120	34,540	11.9	11.5	12.4	4.1
55–64 years	1,460	34,540	4.2	4.0	4.5	5.7
65 years and over	1,060	34,540	3.1	2.8	3.3	7.5

Variable	Weighted estimate	Total	Proportion	95% CI		Relative sampling error (%)
				Lower boundary	Upper boundary	
Highest qualification at Wave 1						
Higher degree	4,290	34,500	12.4	11.4	13.5	8.7
Bachelor's degree	5,950	34,500	17.2	16.0	18.5	7.2
Vocational qualification	11,210	34,500	32.5	30.9	34.1	4.9
Post-school undefined	1,680	34,500	4.9	4.1	5.7	16.4
School qualification	8,710	34,500	25.2	23.9	26.6	5.2
No qualification	2,650	34,500	7.7	6.8	8.6	11.3
New Zealand work experience at Wave 1						
Less than 7 months' work experience	4,030	34,540	11.7	10.6	12.7	9.1
7–12 months' work experience	4,470	34,540	12.9	11.7	14.2	9.4
13–24 months' work experience	5,930	34,540	17.2	15.9	18.4	7.2
More than 24 months' work experience	5,160	34,540	14.9	13.7	16.1	8.0
Been to New Zealand but not employed	10,680	34,540	30.9	29.5	32.3	4.5
Not been to New Zealand	4,270	34,540	12.4	11.5	13.2	6.9
English language ability at Wave 3						
English is a main language spoken	20,700	34,520	60.0	58.7	61.2	2.1
Very good English language ability	6,410	34,520	18.6	17.4	19.7	6.4
Good English language ability	3,410	34,520	9.9	9.0	10.8	9.2
Moderate or poor English language ability	4,000	34,520	11.6	10.7	12.5	7.7
Region of New Zealand at Wave 3						
Auckland	16,970	34,400	49.3	47.8	50.8	3.1
Wellington	3,930	34,400	11.4	10.3	12.5	9.7
Other North Island	6,860	34,400	19.9	18.8	21.1	5.7
Canterbury	4,120	34,400	12.0	10.8	13.1	9.7
Other South Island	2,520	34,400	7.3	6.4	8.2	12.4

Variable	Weighted estimate	Total	Proportion	95% CI		Relative sampling error (%)
				Lower boundary	Upper boundary	
Living arrangements in New Zealand at Wave 1						
Couple with no children	11,080	34,540	32.1	30.6	33.6	4.7
Couple with youngest child under 5 years	6,860	34,540	19.9	18.5	21.2	6.8
Couple with youngest child 5–13 years	6,050	34,540	17.5	16.4	18.6	6.5
Couple with youngest child 14 years or over	840	34,540	2.4	1.9	2.9	20.8
Single with no children	3,490	34,540	10.1	9.1	11.1	10.3
Single parent	260	34,540	0.8	0.5	1.0	36.8
Other family arrangement	5,830	34,540	16.9	15.9	17.9	6.0
Unspecified	130	34,540	0.4	0.2	0.5	39.4
Living arrangements in New Zealand at Wave 3						
Couple with no children	11,350	34,540	32.9	31.3	34.4	4.6
Couple with youngest child under 5 years	7,970	34,540	23.1	21.7	24.4	5.8
Couple with youngest child 5–13 years	6,300	34,540	18.2	17.1	19.4	6.4
Couple with youngest child 14 years or over	1,080	34,540	3.1	2.6	3.6	16.2
Single with no children	3,540	34,540	10.2	9.3	11.3	9.8
Single parent	370	34,540	1.1	0.7	1.4	34.7
Other family arrangement	3,920	34,540	11.3	10.3	12.3	8.8

Table D2: Confidence intervals for labour force participation rates for all migrants, Waves 1–3

Variable	Wave 1			Wave 2			Wave 3		
	Percent	95% CI		Percent	95% CI		Percent	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Approval category									
Skilled principal	96.0	94.7	97.3	95.2	93.8	96.6	94.8	93.2	96.2
Skilled secondary	67.3	64.0	70.9	74.3	70.2	78.2	75.0	71.5	78.6
Business principal	77.4	70.9	82.5	71.3	67.9	79.1	74.1	67.3	80.1
Family Partner principal	74.0	71.3	77.0	73.2	70.6	76.0	75.2	72.3	77.9
Pacific principal	91.3	86.4	94.6	92.6	763.6	967.1	92.5	87.7	96.7
Other	44.7	41.8	47.6	46.9	41.0	47.4	49.2	45.5	52.7
Total	75.2	73.4	77.0	76.7	74.8	78.6	77.5	75.5	79.5
Region of origin									
UK/Irish Republic	82.4	80.0	84.6	83.8	80.9	86.7	84.4	81.8	86.8
South Africa	81.2	75.7	86.5	82.4	78.1	87.3	82.6	77.2	87.2
North America	84.0	77.1	90.2	82.2	73.9	87.3	82.1	77.8	90.0
Rest of Europe	76.2	69.0	84.2	77.7	71.0	84.4	79.1	72.4	86.2
North Asia	61.8	57.5	65.5	64.4	61.2	67.4	61.2	57.6	65.0
South Asia	73.3	69.2	77.2	74.5	70.8	79.0	77.4	73.7	81.7
South-East Asia	78.4	73.2	82.8	78.0	73.5	82.7	82.4	77.8	86.2
Pacific	66.4	62.6	70.1	68.5	65.0	72.0	72.4	68.6	76.0
Other	80.8	76.3	85.1	83.2	78.2	86.8	82.1	77.5	87.3
Age group									
16–24 years	57.4	52.6	62.4	57.6	51.8	62.8	56.8	50.6	62.8
25–34 years	83.8	81.7	85.7	84.1	80.8	84.8	82.6	80.2	85.0
35–44 years	81.9	79.4	84.6	84.0	79.7	85.3	86.0	84.0	88.2
45–54 years	81.8	78.0	85.6	83.2	77.4	84.5	83.3	80.2	86.4
55–64 years	39.0	31.8	47.4	49.4	40.0	53.2	55.7	49.9	61.7
Sex									
Male	83.9	81.7	85.9	85.0	83.5	86.5	86.3	84.9	87.9
Female	67.1	64.9	69.3	69.0	65.1	69.7	69.2	67.0	71.5

Variable	Wave 1			Wave 2			Wave 3		
	Percent	95% CI		Percent	95% CI		Percent	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Applicant type									
Principal	82.8	80.9	84.7	82.1	80.4	83.8	82.7	81.4	84.0
Secondary	60.5	57.6	63.4	66.4	63.1	69.5	67.4	64.1	70.7

Table D3: Confidence intervals for labour force participation rates for all male migrants, Waves 1 and 3

Variable	Wave 1			Wave 3		
	Percent	95% CI		Percent	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Approval category						
Skilled principal	97.2	96.1	98.3	97.3	95.8	98.6
Skilled secondary	76.1	70.2	82.0	84.0	78.7	89.7
Business principal	77.2	69.5	84.7	77.2	71.9	84.1
Family Partner principal	90.0	86.7	93.5	90.1	86.3	94.0
Pacific principal	95.2	93.0	100.0	100.0	96.4	100.2
Other	47.6	42.9	52.3	55.2	49.9	60.1
Total	83.8	81.7	85.9	86.3	84.9	87.9
Region of origin						
UK/Irish Republic	91.7	88.7	94.1	92.3	89.7	94.9
South Africa	85.6	78.6	92.8	88.6	82.2	94.4
North America	94.8	85.6	97.2	93.2	87.7	97.9
Rest of Europe	90.3	79.3	99.1	89.0	78.5	98.1
North Asia	67.3	61.2	74.0	70.7	65.1	76.3
South Asia	83.9	77.3	89.7	85.2	79.7	90.9
South-East Asia	83.8	76.4	90.9	90.4	83.8	95.6
Pacific	76.5	71.2	81.4	83.7	79.3	87.9
Other	86.7	81.6	91.8	91.0	85.4	93.8
Age group						
16–24 years	54.6	47.5	61.5	58.5	50.3	66.3
25–34 years	95.3	93.3	97.4	94.6	92.6	96.4
35–44 years	93.2	90.9	95.7	96.0	94.3	97.5
45–54 years	92.9	89.6	96.1	92.7	90.4	95.2
55–64 years	48.6	36.3	59.7	66.3	56.9	75.5

Table D4: Confidence intervals for labour force participation rates for all female migrants, Waves 1 and 3

Variables	Wave 1			Wave 3		
	Percent	95% CI		Percent	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Approval category						
Skilled principal	93.3	91.3	95.9	89.8	86.4	93.2
Skilled secondary	63.6	59.2	68.0	71.1	66.4	75.8
Business principal	77.8	63.7	87.7	64.3	49.7	79.7
Family Partner principal	65.4	61.3	69.4	66.7	63.1	70.7
Pacific principal	83.3	67.3	90.3	80.6	67.8	92.3
Other	42.4	37.7	46.9	44.2	38.9	49.3
Total	67.1	64.9	69.3	69.2	67.0	71.5
Region of origin						
UK/Irish Republic	72.8	69.2	76.6	75.7	71.9	80.5
South Africa	75.5	67.7	85.1	76.3	68.1	83.9
North America	76.4	66.8	87.4	73.6	66.4	86.4
Rest of Europe	69.7	59.4	79.8	74.4	65.2	83.6
North Asia	57.5	52.7	62.1	50.5	49.7	60.1
South Asia	60.7	54.8	67.0	68.4	63.2	74.0
South-East Asia	74.5	68.4	79.4	74.5	70.5	82.3
Pacific	56.4	50.6	62.0	57.9	55.7	66.3
Other	72.1	63.8	79.8	71.2	62.4	81.0
Age group						
16–24 years	60.6	53.5	67.1	55.1	45.6	64.4
25–34 years	74.3	70.7	77.5	73.5	69.9	77.1
35–44 years	71.6	67.3	75.6	77.0	73.5	80.7
45–54 years	68.8	61.5	75.9	71.9	66.1	78.1
55–64 years	31.5	20.7	40.9	44.3	36.3	52.9

Table D5: Confidence intervals for non-labour market activities for migrants who have not been in the labour force rates in all three waves

Variable	Studying			Caring for dependants at home			Other activities		
	Percent	95% CI		Percent	95% CI		Percent	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Approval category									
Skilled principal	S	S	S	28.6	5.3	69.6	S	S	S
Skilled secondary	29.5	20.3	37.5	63.2	54.4	72.2	7.4	2.4	10.6
Business principal	S	S	S	33.3	0.2	70.1	41.7	13.2	66.0
Family Partner principal	15.9	7.1	25.0	63.4	54.1	75.0	18.3	12.1	25.6
Pacific principal	S	S	S	100.0	100.0	100.0	S	S	S
Other	36.6	30.1	42.5	34.1	26.5	41.2	27.4	20.3	33.6
Total	28.5	24.4	32.6	49.3	44.1	54.2	19.7	16.0	23.5
Region of origin									
UK/Irish Republic	8.7	0.0	19.5	56.5	42.4	69.6	30.4	18.1	42.3
South Africa	S	S	S	62.5	39.8	85.4	12.5	-3.6	34.1
North America	S	S	S	45.5	25.2	84.7	36.4	9.3	67.5
Rest of Europe	38.9	11.6	74.6	44.4	11.3	71.3	11.1	-1.6	32.8
North Asia	38.1	29.6	47.4	46.8	37.5	56.6	11.1	6.2	16.3
South Asia	13.3	5.1	23.2	56.7	41.5	68.3	30.0	17.2	44.6
South-East Asia	50.0	29.5	73.4	27.8	16.0	48.4	11.1	2.5	30.2
Pacific	29.4	21.9	39.3	45.6	37.8	54.8	20.6	15.5	28.4
Other	50.0	28.8	71.2	37.5	23.7	66.0	S	S	S
Age group									
16–24 years	85.4	78.4	91.2	12.2	6.5	18.6	S	S	S
25–34 years	21.0	11.0	29.5	76.5	66.3	85.4	2.5	0.4	4.7
35–44 years	10.8	2.2	19.4	75.9	66.4	87.3	9.6	4.4	15.4
45–54 years	10.9	3.1	18.7	41.3	27.2	54.7	45.7	33.2	61.0
55–64 years	2.9	0.0	9.4	34.8	22.2	45.4	56.5	42.0	68.3
Sex									
Male	55.8	46.5	65.7	14.7	6.6	23.6	25.3	17.3	32.9
Female	18.8	14.2	23.3	61.3	55.3	67.1	18.0	13.6	22.0

Note: S = suppressed for confidentiality reasons.

Table D6: Confidence intervals for hourly earnings for all migrants, Waves 1 and 3

Characteristic	Wave 1			Wave 3			Change		
	Median	95% CI		Median	95% CI		Median	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Sex									
Male	$22.59	$21.64	$23.54	$25.25	$24.54	$25.96	$2.84	$2.49	$3.19
Female	$18.97	$18.24	$19.69	$21.19	$20.32	$22.07	$2.80	$2.66	$2.95
Age									
15-24 years	$14.60	$13.98	$15.23	$16.33	$15.77	$16.88	$2.95	$2.23	$3.67
25-34 years	$20.90	$20.09	$21.70	$24.30	$23.40	$25.21	$3.35	$2.92	$3.78
35-44 years	$22.81	$21.80	$23.81	$24.94	$23.53	$26.36	$2.63	$2.23	$3.03
45-54 years	$23.08	$22.05	$24.10	$25.13	$23.62	$26.65	$2.17	$1.59	$2.74
55-64 years	$21.01	$17.27	$24.76	$18.09	$13.36	$22.82	$2.62	$1.27	$3.98
Region of origin									
UK/Irish Republic	$25.02	$24.06	$25.98	$28.33	$27.33	$29.32	$3.44	$2.82	$4.07
South Africa	$24.76	$22.33	$27.19	$27.07	$25.11	$29.03	$2.49	$2.19	$2.78
North America	$25.30	$22.28	$28.32	$28.95	$24.63	$33.27	$2.80	$2.67	$2.92
Rest of Europe	$20.85	$17.90	$23.80	$27.21	$24.28	$30.14	$4.69	$3.12	$6.27
North Asia	$16.10	$15.20	$16.99	$18.62	$17.11	$20.14	$3.04	$1.76	$4.32
South Asia	$16.95	$16.21	$17.69	$20.72	$19.41	$22.02	$3.04	$2.65	$3.44
South-East Asia	$17.45	$16.73	$18.18	$18.94	$17.71	$20.17	$2.84	$2.13	$3.55
Pacific	$14.55	$14.01	$15.10	$15.96	$15.50	$16.42	$1.80	$1.40	$2.19
Other	$21.20	$19.88	$22.52	$23.58	$22.59	$24.57	$1.80	$1.43	$2.17
Immigration approval category									
Skilled principal	$25.41	$24.76	$26.06	$28.95	$28.31	$29.58	$3.44	$2.94	$3.95
Skilled secondary	$17.45	$16.68	$18.22	$19.65	$18.94	$20.36	$2.73	$2.24	$3.22
Business principal	S	S	S	$17.68	$16.39	$18.97	$4.31	$4.71	$3.92
Family Partner principal	$17.56	$16.79	$18.32	$20.41	$19.50	$21.31	$2.78	$2.35	$3.21
Pacific principal	$13.86	$13.08	$14.64	$15.58	$14.93	$16.23	$1.62	$1.40	$1.83
Other	$13.96	$13.58	$14.34	$15.96	$15.24	$16.68	$1.89	$1.30	$2.48

Characteristic	Wave 1			Wave 3			Change		
	Median	95% CI		Median	95% CI		Median	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Region of settlement									
Auckland	$19.90	$19.11	$20.69	$22.25	$21.41	$23.10	$2.78	$2.43	$3.13
Wellington	$20.33	$18.96	$21.70	$23.51	$21.50	$25.53	$2.81	$2.08	$3.55
Canterbury	$21.07	$20.01	$22.13	$23.76	$22.72	$24.80	$2.67	$2.18	$3.15
Other North	$18.84	$17.28	$20.40	$21.92	$19.73	$24.10	$2.83	$1.89	$3.78
Other South	$23.88	$22.70	$25.06	$28.19	$26.24	$30.14	$3.53	$2.43	$4.62
Highest qualification									
Higher degree	$25.52	$24.13	$26.90	$30.50	$29.00	$31.99	$5.02	$4.09	$5.95
Bachelor's degree	$22.59	$21.46	$23.72	$27.44	$25.97	$28.92	$3.91	$3.22	$4.60
Vocational qualification	$21.49	$20.51	$22.46	$24.41	$23.34	$25.48	$2.54	$2.25	$2.84
Post-school qualification undefined	$21.77	$20.01	$23.54	$25.51	$22.88	$28.14	$2.17	$1.89	$2.45
School qualification	$15.22	$14.52	$15.91	$16.94	$16.25	$17.62	$2.26	$1.83	$2.69
No qualification	$14.51	$13.63	$15.39	$15.79	$15.00	$16.58	$1.32	$0.65	$1.99
English language proficiency									
English a main language spoken	$23.35	$22.68	$24.02	$25.73	$25.04	$26.42	$2.91	$2.75	$3.07
Very Good English language ability	$19.52	$18.65	$20.40	$22.11	$20.93	$23.28	$3.31	$2.75	$3.87
Good English language ability	$14.72	$14.07	$15.37	$17.01	$16.18	$17.85	$2.41	$1.74	$3.07
Moderate-Poor English language ability	$12.48	$11.86	$13.11	$14.15	$13.41	$14.89	$1.24	$0.90	$1.58
Work experience in New Zealand before residence									
Not been to New Zealand	$16.04	$14.67	$17.41	$18.11	$16.61	$19.61	$2.73	$2.05	$3.42
Been to New Zealand before but not employed in New Zealand	$20.62	$19.58	$21.66	$21.98	$20.54	$23.42	$2.88	$2.37	$3.38
Less than 7 months' work experience	$20.33	$18.92	$21.74	$22.96	$20.94	$24.98	$3.00	$2.08	$3.93
7–12 months' work experience	$21.42	$20.02	$22.82	$25.89	$24.61	$27.18	$3.31	$2.72	$3.90
13–24 months' work experience	$22.87	$21.60	$24.14	$25.51	$24.15	$26.87	$2.13	$1.48	$2.78
More than 24 months' work experience	$20.02	$18.94	$21.10	$22.91	$21.93	$23.90	$2.72	$2.17	$3.28

Note: S = suppressed for confidentiality reasons.

Table D7: Confidence intervals for hourly earnings for Skilled principal migrants, Waves 1 and 3

Characteristic	Wave 1			Wave 3			Change		
	Median	95% CI		Median	95% CI		Median	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Sex									
Male	$25.91	$24.99	$26.84	$30.12	$28.88	$31.36	$3.36	$2.69	$4.02
Female	$24.82	$23.58	$26.06	$28.36	$27.24	$29.47	$3.60	$2.77	$4.42
Age									
15-24 years	$18.97	$17.93	$20.00	$24.37	$22.36	$26.38	$4.43	$3.96	$4.91
25-34 years	$24.70	$23.82	$25.58	$28.36	$27.35	$29.36	$3.68	$3.00	$4.37
35-44 years	$27.89	$27.41	$28.37	$31.07	$29.73	$32.42	$3.17	$2.49	$3.86
45-54 years	$26.05	$24.10	$28.00	$32.11	$29.17	$35.05	$2.25	$1.02	$3.49
55-64 years	$28.96	$21.40	$36.52	$28.42	$22.17	$34.67	$4.18	$2.06	$6.31
Region of origin									
UK/Irish Republic	$27.61	$26.04	$29.19	$31.78	$30.31	$33.25	$3.95	$3.14	$4.76
South Africa	$27.89	$26.99	$28.79	$31.07	$29.63	$32.51	$2.69	$1.40	$3.99
North America	$29.72	$25.31	$34.13	$33.84	$29.10	$38.58	$2.97	$0.49	$5.44
Rest of Europe	$28.27	$24.98	$31.55	$35.05	$27.88	$42.22	$3.13	-$1.33	$7.60
North Asia	$18.58	$17.50	$19.67	$22.11	$21.33	$22.88	$4.08	$1.66	$6.50
South Asia	$20.08	$18.41	$21.75	$25.89	$23.56	$28.23	$3.65	$2.40	$4.89
South-East Asia	$25.10	$24.37	$25.83	$27.90	$26.67	$29.12	$3.21	$2.50	$3.93
Pacific	$23.15	$22.14	$24.17	$24.37	$22.06	$26.68	$2.21	$1.11	$3.31
Other	$24.43	$23.33	$25.54	$26.93	$25.21	$28.65	$2.91	$1.86	$3.96
Region of settlement									
Auckland	$25.88	$24.68	$27.07	$28.59	$27.65	$29.52	$3.31	$2.58	$4.03
Wellington	$29.12	$27.12	$31.12	$35.11	$32.43	$37.80	$4.62	$3.08	$6.16
Canterbury	$24.13	$22.17	$26.10	$27.96	$25.46	$30.46	$2.57	$1.35	$3.80
Other North	$24.95	$23.96	$25.93	$29.00	$27.91	$30.09	$4.14	$3.52	$4.77
Other South	$21.71	$19.37	$24.04	$24.31	$22.05	$26.58	$2.31	-$0.07	$4.68

Characteristic	Wave 1			Wave 3			Change		
	Median	95% CI		Median	95% CI		Median	95% CI	
		Lower boundary	Upper boundary		Lower boundary	Upper boundary		Lower boundary	Upper boundary
Highest qualification									
Higher degree	$27.47	$26.07	$28.88	$32.01	$30.19	$33.82	$5.24	$4.12	$6.35
Bachelor's degree	$26.06	$24.46	$27.66	$28.95	$27.64	$30.26	$4.13	$3.21	$5.05
Vocational qualification	$25.41	$24.55	$26.28	$28.62	$27.79	$29.46	$2.82	$2.26	$3.37
Post-school qualification undefined	$23.43	$21.97	$24.89	$27.21	$24.07	$30.35	$1.72	$1.69	$1.74
School qualification	$22.31	$19.70	$24.93	$27.62	$24.33	$30.91	$1.75	$3.65	-$0.16
No qualification	$22.31	$19.18	$25.45	$20.25	$17.56	$22.95	-$0.29	-$2.14	$1.55
English language proficiency									
English a main language spoken	$26.78	$26.01	$27.54	$30.23	$29.15	$31.32	$3.36	$2.81	$3.91
Very Good English language ability	$23.15	$21.66	$24.65	$28.06	$26.58	$29.54	$4.43	$3.12	$5.74
Good English language ability	$17.96	$16.42	$19.50	$20.72	$18.50	$22.93	$2.51	$0.70	$4.33
Moderate-Poor English language ability	$18.67	$15.05	$22.30	$15.54	$12.77	$18.30	$0.29	-$1.94	$2.53
Work experience in New Zealand before residence									
Not been to New Zealand	$26.17	$24.72	$27.61	$32.01	$28.76	$35.25	$5.90	$6.34	$5.46
Been to New Zealand before but not employed in New Zealand)	$28.05	$24.88	$31.22	$32.37	$29.87	$34.86	$4.18	$2.91	$5.46
Less than 7 months' work experience	$24.73	$24.83	$24.62	$29.92	$27.67	$32.18	$4.92	$3.39	$6.45
7–12 months' work experience	$25.91	$25.55	$26.27	$28.48	$27.10	$29.87	$3.60	$2.69	$4.52
13 to 24 months' work experience	$26.38	$25.11	$27.65	$29.09	$27.68	$30.50	$2.78	$1.75	$3.81
More than 24 months' work experience	$22.45	$20.83	$24.07	$24.47	$22.90	$26.05	$2.51	$1.58	$3.45

Table D8: Confidence intervals for median annual earnings, Waves 1–3

Variable	Wave 1			Wave 2			Wave 3		
	Median income	95% CI		Median income	95% CI		Median income	95% CI	
		Lower Boundary	Upper Boundary		Lower Boundary	Upper Boundary		Lower Boundary	Upper Boundary
All migrants									
Approval category									
Skilled principal	$54,870	$52,785	$56,955	$56,846	$55,313	$58,379	$60,324	$58,996	$61,652
Skilled secondary	$13,349	$10,020	$16,677	$23,748	$20,407	$27,089	$28,861	$26,060	$31,662
Business principal	$16,344	$5,026	$27,662	$16,226	$8,446	$24,005	$21,224	$14,680	$27,768
Family Partner principal	$24,778	$22,229	$27,327	$27,159	$24,113	$30,204	$32,181	$29,807	$34,555
Pacific principal	$30,764	$27,733	$33,795	$34,050	$31,339	$36,760	$37,702	$34,184	$41,221
Other	$0	-$1,405	$1,405	$10,412	$8,000	$12,824	$14,582	$12,738	$16,425
Total	$31,848	$30,384	$33,311	$34,456	$33,131	$35,781	$37,736	$36,437	$39,035
Region of origin									
UK/Irish Republic	$45,044	$42,602	$47,486	$46,739	$43,990	$49,488	$51,117	$48,072	$54,162
South Africa	$46,413	$41,454	$51,373	$50,548	$45,721	$55,375	$52,784	$48,813	$56,754
North America	$45,399	$39,554	$51,245	$44,574	$35,448	$53,701	$49,266	$40,370	$58,162
Rest of Europe	$34,298	$29,219	$39,376	$37,761	$27,902	$47,621	$42,012	$33,989	$50,034
North Asia	$10,464	$4,436	$16,491	$15,577	$12,418	$18,735	$17,576	$15,243	$19,909
South Asia	$29,349	$26,444	$32,254	$30,380	$28,350	$32,411	$35,191	$32,818	$37,564
South-East Asia	$27,527	$24,098	$30,957	$32,527	$29,619	$35,435	$33,959	$31,833	$36,085
Pacific	$24,895	$23,144	$26,647	$26,551	$25,399	$27,703	$30,974	$29,713	$32,235
Other	$39,938	$35,581	$44,295	$40,606	$34,336	$46,876	$42,686	$36,518	$48,854
English language ability									
English is a main language spoken	$40,860	$39,025	$42,696	$43,001	$41,144	$44,859	$47,179	$45,386	$48,973
Very good English language ability	$32,890	$29,865	$35,915	$35,010	$32,537	$37,483	$37,673	$35,135	$40,211
Good English language ability	$22,301	$17,897	$26,704	$23,601	$20,033	$27,169	$26,754	$21,689	$31,820
Moderate or poor English language ability	$0	-$2,481	$2,481	$10,561	$8,076	$13,047	$16,158	$14,059	$18,257

Variable	Wave 1			Wave 2			Wave 3		
	Median income	95% CI		Median income	95% CI		Median income	95% CI	
		Lower Boundary	Upper Boundary		Lower Boundary	Upper Boundary		Lower Boundary	Upper Boundary
Settlement region in New Zealand									
Auckland	$30,613	$28,867	$32,358	$32,735	$30,552	$34,917	$36,367	$34,699	$38,035
Wellington	$40,743	$37,108	$44,378	$44,821	$40,029	$49,613	$47,397	$41,824	$52,971
Other North Island	$31,218	$27,473	$34,962	$37,643	$33,949	$41,337	$38,316	$34,543	$42,090
Canterbury	$31,532	$27,104	$35,961	$35,049	$29,837	$40,261	$36,697	$31,058	$42,335
Other South Island	$32,212	$27,360	$37,064	$29,589	$23,863	$35,315	$33,700	$28,440	$38,959
Skilled principal migrants									
Region of origin									
UK/Irish Republic	$62,861	$60,220	$65,501	$64,004	$59,942	$68,066	$67,518	$64,750	$70,285
South Africa	$59,409	$56,311	$62,508	$64,822	$60,753	$68,892	$68,978	$65,335	$72,621
North America	$65,780	$57,094	$74,466	$67,231	$62,910	$71,552	$66,129	$54,791	$77,466
Rest of Europe	$56,970	$46,278	$67,663	$59,975	$46,322	$73,628	$64,633	$49,872	$79,393
North Asia	$35,023	$32,563	$37,483	$38,645	$35,308	$41,983	$43,790	$40,306	$47,275
South Asia	$44,106	$41,177	$47,034	$47,669	$44,232	$51,106	$53,861	$51,070	$56,651
South-East Asia	$52,644	$49,860	$55,427	$55,145	$51,481	$58,808	$56,270	$53,635	$58,906
Pacific	$49,305	$46,594	$52,016	$51,176	$47,358	$54,993	$53,861	$49,924	$57,798
Other	$51,309	$47,095	$55,524	$56,015	$52,178	$59,851	$57,322	$54,029	$60,615
Total	$54,870	$52,783	$56,956	$56,846	$55,218	$58,474	$60,324	$58,960	$61,688
Age group									
16–24 years	$38,763	$35,422	$42,104	$39,606	$26,855	$52,357	$47,519	$12,209	$82,830
25–34 years	$51,757	$48,884	$54,631	$52,054	$49,755	$54,353	$54,738	$52,085	$57,391
35–44 years	$58,732	$55,636	$61,828	$65,824	$62,847	$68,801	$64,094	$61,128	$67,060
45–54 years	$60,337	$56,109	$64,564	$59,136	$55,580	$62,692	$66,556	$61,521	$71,591
55–64 years	$59,120	$29,931	$88,308	$61,718	$50,395	$73,041	$60,771	$48,958	$72,584
Sex									
Male	$58,372	$56,769	$59,975	$60,697	$58,143	$63,250	$65,795	$63,647	$67,943
Female	$48,734	$46,091	$51,376	$50,653	$47,271	$54,035	$53,308	$49,813	$56,804

Variable	Wave 1			Wave 2			Wave 3		
	Median income	95% CI		Median income	95% CI		Median income	95% CI	
		Lower Boundary	Upper Boundary		Lower Boundary	Upper Boundary		Lower Boundary	Upper Boundary
Settlement region in New Zealand									
Auckland	$55,208	$52,701	$57,715	$56,581	$53,658	$59,503	$60,771	$58,118	$63,424
Wellington	$62,899	$57,383	$68,415	$69,472	$66,299	$72,645	$74,946	$69,456	$80,435
Other North Island	$54,152	$50,514	$57,790	$58,588	$55,144	$62,031	$59,886	$56,553	$63,220
Canterbury	$49,801	$45,936	$53,665	$53,438	$49,822	$57,053	$53,861	$46,997	$60,725
Other South Island	$48,574	$43,146	$54,002	$49,709	$42,516	$56,903	$53,308	$47,461	$59,156
English language ability									
English is a main language spoken	$58,435	$57,353	$59,518	$60,656	$58,950	$62,362	$64,633	$62,438	$66,828
Very good English language ability	$46,986	$43,816	$50,155	$51,176	$47,766	$54,585	$54,797	$50,817	$58,777
Good English language ability	$37,358	$31,342	$43,373	$38,645	$33,228	$44,063	$44,885	$40,628	$49,141
Moderate or poor English language ability	$34,087	$24,868	$43,307	$40,941	$23,547	$58,334	$36,081	$31,747	$40,415
Skilled principal migrants with English as a main language									
Region of origin									
UK/Irish Republic	$62,861	$60,118	$65,604	$64,122	$60,051	$68,193	$68,031	$65,236	$70,826
South Africa	S	S	S	$67,231	$64,063	$70,399	$70,588	$65,591	$75,585
North America	$65,780	$66,277	$65,282	$67,231	$62,518	$71,943	$66,129	$60,991	$71,266
Rest of Europe	$62,256	$52,801	$71,711	$52,054	$48,529	$55,579	$79,590	$78,596	$80,585
North Asia	S	S	S	$33,354	$14,541	$52,166	S	S	S
South Asia	S	S	S	$48,804	$44,321	$53,288	$54,978	$51,131	$58,826
South-East Asia	S	S	S	$54,317	$46,981	$61,653	$53,861	$48,357	$59,365
Pacific	$51,446	$48,425	$54,467	$52,180	$47,716	$56,644	$54,668	$50,454	$58,881
Other	$51,131	$47,096	$55,166	$56,052	$50,218	$61,885	$59,247	$54,260	$64,233
Total	$58,435	$57,375	$59,496	$60,656	$58,950	$62,362	$64,633	$62,442	$66,823

Note: S = suppressed for confidentiality reasons.

APPENDIX E: REGRESSION MODELS

Table E1: Marginal effects from the logistic regression model of employment participation by sex, Waves 1 and 3

Characteristic	Male		Female	
	Wave 1	**Wave 3**	**Wave 1**	**Wave 3**
Immigration approval category (compared to Skilled principal)				
Skilled secondary	-0.01	-0.01	-0.03	-0.04
Business principal	0.02	-0.01	0.03 *	0.01 *
Family Partner principal	-0.01	-0.01	-0.02	-0.01
Pacific principal	0.03 *	0.01	-0.01	0.00
Other	0.00	-0.01	0.00	-0.02
Region of origin (compared to UK/Irish Republic)				
Rest of Europe	0.02	0.00	0.02	0.01
South Africa	-0.02	-0.01	-0.03	0.00
North America	0.00	-0.01	0.04 **	-0.10
North Asia	0.00	-0.04	-0.04	-0.05
South Asia	0.01	-0.03	-0.02	-0.01
South-East Asia	0.00	-0.02	0.01	-0.02
Pacific	0.01	-0.03	-0.01	-0.03 *
Other	0.02	-0.01	-0.02	-0.02
Family composition (compared to couple with no children)				
Couple with youngest child aged under 5	-0.02	0.01	-0.02	0.01
Couple with youngest child aged 5–13	0.00	0.00	-0.01	0.01
Couple with youngest child aged 14 or over	-0.03	-0.04	-0.02	0.02
Single no child (aged under 14)	0.02	0.01	0.02	-0.01
Single parent with child under 14	0.03 **	0.02 **	0.02	0.02 **
Other family arrangement	0.00	-0.01	-0.02	-0.03
Unspecified	0.03 **		0.04 **	0.02
Highest qualification (compared to bachelor's degree)				
Higher degree	0.00	0.01	-0.02	-0.01
Vocational qualification	-0.02	0.01	0.01	-0.02
Undefined post-school qualification	0.01	-0.08 *	0.01	-0.06
School qualification	0.02	0.00	0.00	-0.02
No qualification	-0.01	-0.01	0.01	-0.01
Region of settlement (compared to Auckland)				
Wellington	0.01	0.00	-0.02	0.02 *
Other North Island	-0.01	0.00	0.00	-0.02
Canterbury	0.01	-0.02	0.01	0.02 *
Other South Island	-0.02	0.00	0.00	0.02
New Zealand undefined	0.03 **		0.05 **	0.03
English language proficiency (compared to English as main language spoken)				
Very good English language proficiency	-0.02	-0.02	-0.01	-0.01
Good English language proficiency	-0.06	0.00	-0.05	-0.01
Moderate or poor English language proficiency	-0.07	-0.01	-0.04	-0.02
Unspecified proficiency			0.04	

Characteristic	Male		Female	
	Wave 1	Wave 3	Wave 1	Wave 3
Work experience in New Zealand before residence (compared to not been to New Zealand)				
More than 24 months' work experience	0.09 *	0.01	0.09 **	0.02
13–24 months' work experience	0.08 *	0.02	0.05	0.00
7–12 months' work experience	0.09 *	0.02	0.07 *	0.00
Less than 7 months' work experience	0.07	0.00	0.08 **	0.02
Been to New Zealand before but not employed in New Zealand	0.02	0.00	0.03	0.01
In source country 2 years before residency? (compared to yes)				
No	0.00	0.01	-0.01	-0.01

Table E2: Coefficients from the regression model of male hourly earnings, Waves 1 and 3

Characteristic	Wave 1			Wave 3		
	Estimate		SE	Estimate		SE
Immigration approval category (compared to Skilled principal)						
Skilled secondary	-21.6	**	3.6	-19.7	**	3.8
Business principal	-9.1		8.8	-9.7		14.7
Family Partner principal	-18.1	**	5.1	-13.3	**	4.9
Pacific principal	-17.8	**	8.7	-20.7	**	5.2
Other	-18.2	**	5.6	-21.3	**	6.4
Region of origin (compared to UK/Irish Republic)						
South Africa	-7.5	*	4.0	-9.6	*	4.2
North America	6.5		9.2	-0.4		7.4
Rest of Europe	-10.5	*	8.2	-12.0		12.3
North Asia	-36.4	**	6.6	-35.5	**	9.0
South Asia	-36.7	**	4.6	-33.7	**	5.2
South-East Asia	-28.1	**	5.4	-25.4	**	6.4
Pacific	-30.7	**	9.7	-24.5	**	4.3
Other	-23.5	**	4.8	-19.0	**	4.5
Household composition (compared to couple with children)						
Couple no children	-1.0		3.0	-4.4		3.1
Single parent	20.6		9.1	-0.1		16.8
Single no children	-4.7		4.8	-6.1		4.4
Other family arrangement	-0.4		6.1	-2.2		5.0
Highest qualification (compared to bachelor's degree)						
Higher degree	7.8	*	4.4	7.4		5.8
Vocational qualification	-14.7	**	3.1	-15.2	**	4.1
Post-school qualification undefined	-12.8	**	6.3	-16.3	**	7.4
School qualification	-22.1	**	4.6	-26.5	**	6.8
No qualification	-22.6	**	5.5	-29.2	**	6.3
Region of settlement (compared to Auckland)						
Wellington	-2.0		3.9	2.9		4.1
Canterbury	-14.1	**	4.0	-17.1	**	5.6
Other North Island	-12.3	**	3.0	-12.8	**	3.5
Other South Island	-26.8	**	10.3	-18.8	**	5.0
English language proficiency (compared to English is a main language spoken)						
Very good English language ability	1.0		3.6	-0.4		4.8
Good English language ability	-4.7		5.1	-6.9		5.1
Moderate or poor English language ability	-6.3		5.7	-22.3	**	9.2
Work experience in New Zealand before residence (compared to not been to New Zealand)						
Been to New Zealand before but not employed in New Zealand)	5.4		4.2	-1.5		4.7
Less than 7 months'	6.5		4.7	-2.1		5.3
7–12 months' work experience	7.5		4.6	2.9		5.4
13–24 months'	8.3		5.6	-3.3		6.0
More than 24 months'	10.1		5.9	9.3		7.3
Age	5.0	**	1.6	1.7		1.3
Age squared	-0.1	**	0.0	0.0		0.0
In source country 2 years before residency? (compared to yes)						
No	1.2		4.6	-4.9		6.3

Table E3: Coefficients from the regression model of Female hourly earnings, Waves 1 and 3

Characteristic	Wave 1			Wave 1		
	Est		SE	Est		SE
Immigration approval category (compared to Skilled principal)						
Skilled secondary	-23.0	**	3.0	-20.2	**	3.6
Business principal	-74.6	**	147.5	-19.3		10.8
Family Partner principal	-19.5	**	3.3	-14.5	**	4.1
Pacific principal	-14.4	*	6.3	-8.7		6.8
Other	-22.4	**	5.6	-11.9	**	5.3
Region of origin (compared to UK/Irish Republic)						
South Africa	2.0		4.6	4.4		4.9
North America	-0.7		8.5	-1.9		5.7
Rest of Europe	-7.8		5.3	11.8	*	6.3
North Asia	-28.1	**	5.4	-10.6	*	5.8
South Asia	-22.5	**	4.7	-13.0	**	4.3
South-East Asia	-22.1	**	4.5	-13.5	**	4.6
Pacific	-24.5	**	4.7	-17.9	**	4.5
Other	-13.0	**	5.5	-3.9		5.4
Household composition (compared to couple with children)						
Couple no children	0.2		3.2	0.4		4.0
Single parent	10.6		27.3	-15.1		7.2
Single no children	-1.2		3.7	-9.7	*	4.4
Other family arrangement	-3.1		3.8	-5.3		4.6
Highest qualification (compared to bachelor's degree**)**						
Higher degree	8.4	*	4.9	13.2	**	4.4
Vocational qualification	-5.7	*	3.2	-8.2	**	3.4
Post-school qualification undefined	-14.6	**	5.9	-11.7	*	5.3
School qualification	-15.9	**	4.1	-18.3	**	5.5
No qualification	-28.1	**	5.5	-28.0	**	4.4
Region of settlement (compared to Auckland)						
Wellington	0.2		4.0	7.5	*	4.1
Canterbury	-11.6	**	3.6	-1.5		5.5
Other North Island	-10.1	**	3.4	-3.2		3.7
Other South Island	-11.3	**	5.4	-2.2		6.7
English language proficiency (compared to English is a main language spoken)						
Very good English language ability	-0.2		3.1	-4.9		2.9
Good English language ability	-12.2	**	4.5	-19.1	**	3.7
Moderate or poor English language ability	-15.6	**	5.7	-18.1	**	4.9
Work experience in New Zealand before residence (compared to not been to New Zealand)						
Been to New Zealand before but not employed in New Zealand)	11.0	**	4.1	10.9	**	4.9
Less than 7 months' work experience	12.6	**	4.2	12.7	**	4.8
7–12 months' work experience	12.5	**	4.4	16.3	**	4.5
13–24 months' work experience	18.7	**	4.3	15.3	**	4.3
More than 24 months' work experience	14.2	**	6.0	14.1	*	5.6
Immigration approval category (compared to Skilled principal)						
Age	3.1	**	1.2	2.5	*	1.2
Age squared	-0.03	**	0.0	-0.03	*	0.0
In source country 2 years before residency? (compared to yes)						
No	-1.4		2.9	-2.8		3.1

Table E4: Marginal effects from logistic regression models of those seeking work by sex, Waves 1 and 3

Characteristic	Male						Female					
	Wave 1			Wave 3			Wave 1			Wave 3		
	Marginal effect	Standard error	Sig	Marginal effect	Standard error	Sig	Marginal effect	Standard error	Sig	Marginal effect	Standard error	Sig
Immigration approval category (compared to Skilled principal)												
Skilled secondary	1.5	2.6		1.1	1.1		3.1	2.5		3.5	2.4	
Business principal	-1.7	1.7		1.0	2.0		-3.3	1.5	*	-1.2	0.5	*
Family Partner principal	1.0	2.1		0.7	1.1		2.1	2.2		0.5	0.8	
Pacific principal	-2.9	1.2	*	-1.3	0.7		0.6	4.2		0.3	1.4	
Other	0.4	2.0		0.9	1.2		0.4	1.8		2.2	1.4	
Region of origin (compared to UK/Irish Republic)												
South Africa	1.7	2.4		0.9	1.5		3.5	3.1		0.1	0.8	
North America	-0.3	2.4		1.2	1.9		-3.7	1.1	**	10.5	7.2	
Rest of Europe	-2.1	2.0		-0.5	0.3		-2.3	1.7		-0.6	0.4	
North Asia	0.1	2.7		4.1	2.8		3.6	3.2		5.0	3.0	
South Asia	-1.4	1.9		2.7	1.6		2.0	2.7		0.9	1.0	
South-East Asia	0.3	2.5		1.8	1.3		-0.6	1.8		2.5	1.3	
Pacific	-0.9	2.0		3.3	1.7		1.4	1.8		3.4	1.6	*
Other	-2.3	1.7		1.1	0.9		1.5	2.9		2.3	1.9	
Household composition (compared to couple with children)												
Couple no children	3.0	3.3		3.6	3.9		2.1	4.0		-1.6	0.9	
Couple youngest child under 5 years	1.8	1.7		-0.6	0.9		1.6	2.2		-0.6	1.0	
Couple youngest child 5–13 years	0.4	1.6		-0.1	0.8		1.2	1.9		-1.2	0.9	
Single parent	-2.8	0.7	**	-1.8	0.5	**	-2.1	2.4		-2.3	0.7	**
Single no children	-1.9	1.1		-1.2	0.7		-1.8	2.4		1.2	2.8	
Other family arrangement	0.5	1.7		0.8	1.5		1.9	2.8		3.1	2.5	
Unspecified	-2.8	0.7	**	0.0	0.0		-4.1	1.2	**	-2.3	1.9	

Characteristic	Male						Female					
	Wave 1			Wave 3			Wave 1			Wave 3		
	Marginal effect	Standard error	Sig	Marginal effect	Standard error	Sig	Marginal effect	Standard error	Sig	Marginal effect	Standard error	Sig
Highest qualification (compared to bachelor's degree)												
Higher degree	0.0	1.9		-0.5	1.2		2.1	3.5		0.6	1.2	
Vocational qualification	1.9	1.7		-0.8	0.9		-0.9	1.8		1.7	1.2	
Post-school qualification undefined	-1.3	1.6		8.3	3.7	*	-0.8	3.0		6.1	6.1	
School qualification	-1.6	1.2		-0.5	0.9		0.0	2.0		1.5	0.9	
No qualification	0.9	2.5		0.6	2.0		-0.9	2.2		1.2	1.5	
Region of settlement (compared to Auckland)												
Wellington	-0.9	1.6		-0.1	1.3		2.0	2.5		-1.9	0.9	*
Canterbury	-1.0	1.9		2.1	2.2		-0.6	2.4		-1.9	0.9	*
Other North Island	1.2	1.8		0.4	0.9		-0.5	1.8		1.9	1.4	
Other South Island	2.2	3.1		-0.1	1.7		0.2	3.0		-1.7	1.2	
Unspecified	-3.2	1.0	**	0.0	0.0		-4.7	0.8	**	-2.6	2.2	
English language proficiency (compared to English is a main language spoken)												
Very good English language ability	2.4	2.0		1.7	1.1		1.4	1.8		1.2	1.1	
Good English language ability	5.8	3.2		-0.1	0.9		4.6	3.8		0.7	1.7	
Moderate or poor English language ability	7.4	4.3		1.4	1.8		4.2	3.2		1.6	2.1	
Unspecified	-2.8	0.7		0.0	0.0		-4.1	1.2		-2.3	1.9	
Work experience in New Zealand before residence (compared to not been to New Zealand)												
Been to New Zealand before but not employed in New Zealand)	-2.5	4.1		-0.5	1.3		-3.1	2.7		-0.8	1.6	
Less than 7 months' work experience	-6.7	4.2		-0.2	1.3		-7.8	2.9	**	-2.3	1.5	
7–12 months' work experience	-8.7	3.9	*	-2.0	1.5		-6.5	2.9		0.2	2.5	
13–24 months' work experience	-7.6	3.8	*	-1.8	1.5		-5.0	3.3	*	-0.3	2.0	
More than 24 months' work experience	-8.7	3.9	*	-1.5	1.7		-9.0	2.9	**	-2.4	1.7	
In source country 2 years before residency? (compared to yes)												
No	0.3	1.6		-0.8	1.2		1.2	1.9		0.9	1.1	

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