Pay gaps among Ethnic Communities in Aotearoa New Zealand

NEW ZEALAND POLICY RESEARCH INSTITUTE
TE KĀHUI RANGAHAU MANA TAURITE

Authors

Leon Iusitini and Lisa Meehan

Acknowledgements

This project was commissioned by Te Tari Mātāwaka | Ministry for Ethnic Communities. We would like to thank Deborah Potter and other members of the Ministry for their input and feedback throughout the research process and Alexandra Ferguson from Stats NZ for thoughtful peer review.

New Zealand Policy Research Institute, Auckland, New Zealand

ISBN (PDF): 978-1-99-101153-4

2025

Suggested citation: Iusitini, L. & Meehan, L. (2025). *Pay gaps among Ethnic Communities in Aotearoa New Zealand.* New Zealand Policy Research Institute, Auckland.

Disclaimer

Access to the data used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers.

These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) which is carefully managed by Stats NZ. For more information about the IDI visit https://www.stats.govt.nz/integrated-data/.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes and is not related to the data's ability to support Inland Revenue's core operational requirements.

Unweighted observation counts have been randomly rounded to base 3 and weighted counts have been rounded to base 100 in accordance with Stats NZ confidentiality rules. Cells marked with 'S' have been suppressed for confidentiality reasons.

Executive Summary

The aim of this report is to estimate, and explore the drivers of, pay gaps between Aotearoa's Ethnic Communities – defined as New Zealanders of Asian, Continental European, Middle Eastern, Latin American, and African ethnicity and their constituent ethnic subgroups – and Sole New Zealand Europeans (people who identify as being only of New Zealand European ethnicity, who are the reference group in the analysis). Ethnic Communities currently make up about 21% of New Zealand's population and about 25% of the employed workforce.

The report uses data from Stats NZ's Household Labour Force Survey pooled across the years 2016 to 2024, linked with other data in the Integrated Data Infrastructure, to (a) estimate pay gaps – defined as differences in inflation-adjusted hourly earnings – between Sole New Zealand Europeans and Ethnic Communities across the nine-year period as a whole, and (b) understand the factors contributing to these pay gaps using a statistical decomposition method that quantifies how much of the pay gap can be attributed to differences between Ethnic Communities and Sole New Zealand Europeans in a host of personal and job-related characteristics – such as differences in age, educational attainment, and occupation – and how much is left unexplained once these differences are accounted for.

The results show that Ethnic Communities as a whole face a 7.2% pay gap with Sole New Zealand Europeans, but that pay gaps vary considerably across the various ethnic subgroups encapsulated within the overall Ethnic Communities population. Workers of Latin American and Asian ethnicity (including all the Asian subgroups of Southeast Asian, Filipino, Chinese, Indian, Sri Lankan, Japanese, Korean, and Other Asian) have lower hourly earnings than Sole New Zealand Europeans, earning between 3.6% and 14.3% less per hour than Sole New Zealand Europeans over the 2016 to 2024 period. In contrast, workers of Continental European, Middle Eastern, and 'African+' ethnicity (the latter an expanded definition of African ethnicity, defined in this report) have *higher* hourly earnings than Sole New Zealand Europeans, earning wage premiums of between 0.6% and 5.8% more per hour over the nine-year period.

In general, Ethnic Communities tend to have demographic, regional, and educational characteristics that are more favourable to earnings than those of Sole New Zealand Europeans. Compared to Sole New Zealand Europeans, Ethnic Communities tend to be younger on average but with larger shares in the prime working ages, larger shares living in Auckland where average wages are higher, and higher levels of educational attainment, notably, larger shares with bachelor's and postgraduate degrees (although there is variation in all these characteristics across ethnic subgroups). While workers from Ethnic Communities are distributed differently across industries compared to Sole New Zealand Europeans (for example, Ethnic Communities have

higher shares employed in the Hospitality and Healthcare industries, but also higher shares in the Professional Services and Media, Finance, Insurance, and Real Estate industries), in general these sectoral differences do not lead to pay gaps between them. Differences in occupational distribution and other job-related characteristics tend to generate pay gaps favouring Sole New Zealand Europeans, primarily reflecting their larger shares employed in managerial occupations and longer job tenure compared to most Ethnic Communities. However, these overall patterns for Ethnic Communities as a whole mask important variations by ethnic subgroup.

The wage premiums that Continental European and Middle Eastern workers receive are largely 'explained' (statistically accounted for) by observed differences in the personal and job-related characteristics that we include in our analysis, namely, the more favourable demographic, geographic, and educational characteristics discussed above, alongside occupational and industry compositions that do not generate pay disparities with Sole New Zealand Europeans.

In contrast, the pay penalties faced by Asians and Latin Americans are largely 'unexplained' (not readily accounted for by observed personal and job-related differences), despite the fact that in many instances these ethnic groups have more favourable demographic, geographic, and educational attributes on average than Sole New Zealand Europeans. While occupational differences do play a role in generating pay penalties for Asians and Latin Americans, there are unexplained differences favouring Sole New Zealand Europeans that require further investigation. These could be due to important earnings-related personal or job-related characteristics that are not captured in the analysis, or to ethnic differences in preferences for non-wage aspects of jobs, or to discriminatory differences in the wages that Ethnic Communities and Sole New Zealand Europeans receive for a given level of skills.

The findings from this report highlight the need for ongoing monitoring of ethnic pay gaps and targeted action. Pay transparency, equitable progression pathways, recognition of overseas qualifications, and proactive diversity policies remain essential tools for addressing ethnic pay gaps. Further research is needed on trends in pay gaps over time among Ethnic Communities and sector-specific analyses focused on those industries in which Ethnic Communities are most concentrated.

Contents

List of Figures

List of Tables

1 Introduction

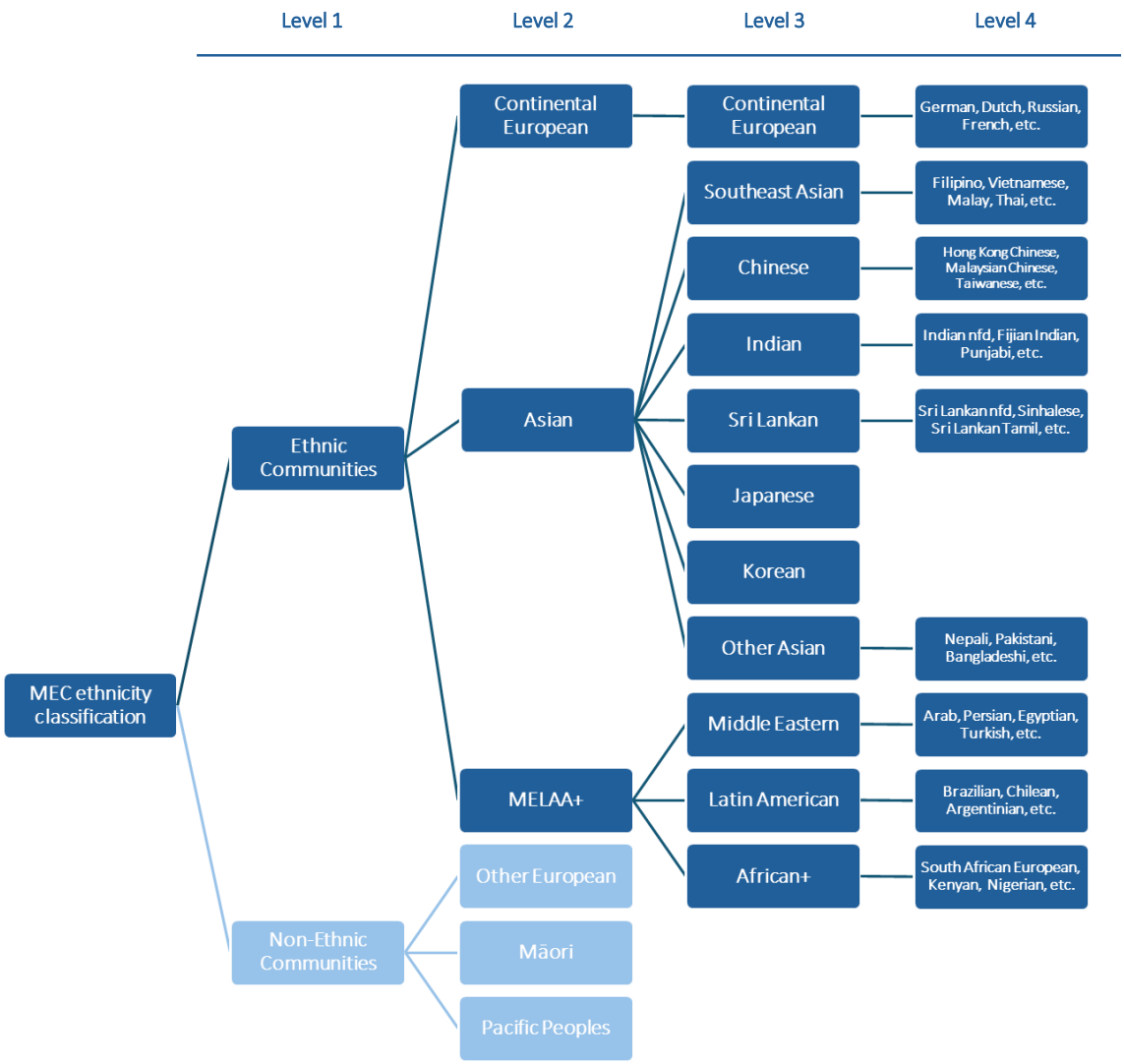
This report, prepared for the Ministry of Ethnic Communities (MEC), estimates pay gaps among Ethnic Communities in New Zealand. It also investigates the extent to which ethnic group differences in individual and job-related characteristics – such as age, education, and occupation – contribute to these ethnic pay gaps. MEC is a New Zealand Government agency that is the chief government advisor on policy and matters related to Ethnic Communities, which includes people who identify as Asian, Continental European, Middle Eastern, Latin American, and African. Ethnic Communities includes former refugees, asylum seekers, new and temporary migrants, long-term settlers, and multi-generational New Zealanders. These communities collectively represent about 21% of New Zealand's total population.

The way the New Zealand Government defines 'Ethnic Communities' does not always align with the classifications used in Stats NZ's *Ethnicity Standard Classification 2005*. To address this, Stats NZ has published a concordance to the standard classification to better reflect MEC's mandated groups. This ensures that ethnic groups represented by MEC — as well as those outside the 'Ethnic Communities' umbrella — have consistent statistical definitions for use in research and policy (see Ministry for Ethnic Communities, 2024; Stats NZ, 2025). The resulting modified ethnicity classification has four levels, illustrated in Figure 1:

- Level 1 classifies the population into Ethnic Communities and Non-Ethnic Communities.
- Level 2 splits Ethnic Communities into three broad groups: Continental European, Asian, and 'MELAA+' (Middle Eastern, Latin American, and 'African+'). 'African+' includes people classified as 'African' under the standard ethnicity classification but adds in: (a) people of African origin with European heritage such as South African European, Zimbabwean European, and Afrikaner who are classified as 'European' under the standard ethnicity classification, and; (b) people of African origin who are classified under 'Other ethnicity' under the standard ethnicity classification such as Mauritian, Seychellois, and Other South African.
- Level 3 further subdivides the Level 2 groups, except for Continental European, which remains undivided at this level.
- Level 4 contains the most granular ethnic categories within each Level 3 group. At Level 4, Continental European includes groups such as German, Dutch, Russian, French, and Swedish.

In this report, we examine pay gaps across all Ethnic Communities defined at Levels 1 to 3, as well as for one specific Level 4 group: Filipino. This group is analysed separately due to its relatively large population size in Aotearoa New Zealand and its relevance to understanding variation within the broader Asian category.

Figure 1: Ministry for Ethnic Communities' view of Stats NZ's standard ethnicity classification

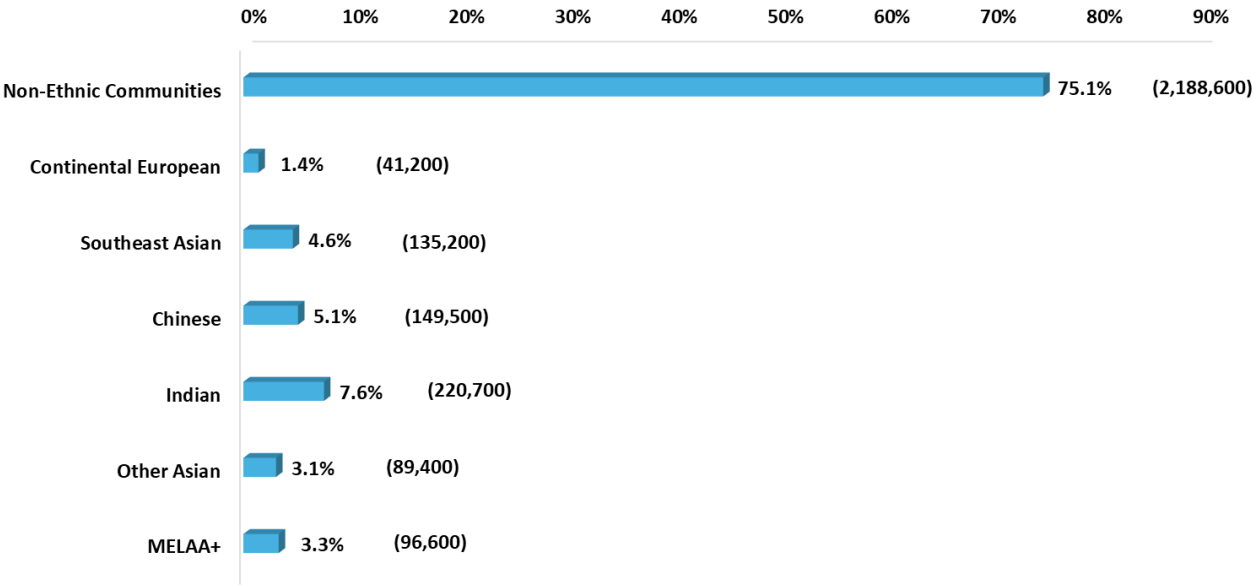


Source: Stats NZ (2025).

Figure 2 displays the share (and the corresponding population size) of the employed workforce in the March 2025 quarter by selected Level 2 and 3 Ethnic Communities (alongside Level 1 Non-Ethnic Communities), based on official statistics reported by the Ministry of Business, Innovation and Employment. This shows that Ethnic Communities made up 25% of the employed labour force in 2025, of which the largest Level 3 group was Indian at 7.6% (representing about 220,700 people), followed by Chinese at 5.1% (149,500 people), followed by Southeast Asian at 4.6% (135,200 people). The other Ethnic Communities groups each make up less than 4% of the employed workforce, each representing between

about 41,000 to 97,000 people. The remaining 75% of the employed labour force (2.19 million people) is Non-Ethnic Communities.

Figure 2: Share (number) of employed workforce in March 2025 quarter by ethnicity



Source: Ministry of Business, Innovation and Employment. (2025). *Ethnic Communities labour market statistics snapshot – March 2025*. https://www.mbie.govt.nz/business-and-employment/employment-and-skills/labour-market-reports-data-and-analysis/labour-market-statistics-snapshot

There is little existing research on pay gaps among the Ethnic Communities mentioned above. Stillman and Maré (2009) provide an early contribution to New Zealand's pay gaps literature by examining differences in hourly earnings based on migration status, rather than ethnicity, using data from the 2003 to 2007 New Zealand Income Survey. While it is important not to conflate ethnicity with migration — since not all migrants belong to Ethnic Communities, and not all members of Ethnic Communities are migrants — the study remains relevant because many migrants are part of these communities as defined by MEC. The authors controlled for a range of factors, including age and education, and found that migrants from Asia and the Pacific Islands earned significantly less than New Zealand-born individuals, while those born in the United Kingdom earned more. These findings highlight the potential importance of migration status as a factor in understanding pay disparities affecting Ethnic Communities.

New Zealand Treasury (2018) used data from the June 2016 and June 2017 Household Labour Force Surveys (HLFS) to estimate, and examine the factors contributing to, pay gaps in hourly earnings between Māori and Europeans and between Pacific peoples and Europeans. The report did not examine pay gaps for other ethnic groups, such as Asian, MELAA, or Continental European communities, leaving a significant evidence gap regarding pay disparities within these Ethnic Communities. They defined ethnic groups based on a 'total response' classification, such that respondents are counted as 'Māori', 'Pacific peoples', and

'European' if they identified with those ethnicities, regardless of any other ethnic affiliations. They estimated the pay gap between Māori and Europeans to be 19.1% for males and 13.7% for females (that is, on average, Māori males earn about 19% less per hour than European males while Māori females earn about 14% less than European females). They estimated the pay gap between Pacific peoples and Europeans to be 24.8% for males and 19.7% for females. About three-quarters of the Māori pay gaps, and about one-half of the Pacific pay gaps, could be statistically attributed to ethnic differences in personal and job characteristics, especially differences in occupation and educational qualifications.

Cochrane and Pacheco (2022) used data from the June 2020 HLFS to estimate, and examine the factors contributing to, pay gaps in hourly earnings of Māori, Pacific, and Asian peoples compared to Europeans. They defined ethnicity based on an administrative prioritisation classification which creates mutually exclusive ethnic categories by assigning respondents to a single (Level 1) ethnic group in the following order: Māori>Pacific>Asian>MELAA>Other>European. They noted that, "[d]ue to their small sample size, we do not delve into the outcomes for MELAA or the 'Other ethnicity' category" (Cochrane & Pacheco, 2022, p. 3). The authors also did not disaggregate the Asian and Pacific groups into subgroups. They found that the pay gap between Asian males and European males was 13.9% and between Asian females and European females was 8.2%, the Māori pay gap was 19.0% for males and 11.7% for females, and the Pacific pay gap was 24.3% for males and 14.8% for females. They also found that the Asian pay gap, to an overwhelming extent, could not be accounted for by Asian-European differences in a host of personal and job characteristics. This is because Asians have higher average levels of educational attainment and a more favourable geographical distribution (heavy concentration in Auckland where wages are higher) compared to Europeans, yet they still have lower hourly earnings compared to Europeans. While demographic and occupational differences favouring Europeans made some contribution to the Asian pay gap, these were outweighed by the educational and geographic differences favouring Asians alongside unexplained differences contributing to the pay gap.

Iusitini, Meehan, and Pacheco (2024) used HLFS data from 2016 to 2022 to estimate gender and ethnic pay gaps over time at the industry level in New Zealand and to quantify the extent to which gender and ethnic group differences in personal and job characteristics contribute to these pay gaps. Ethnicity was defined by administrative prioritisation. To mitigate small ethnic and gender counts in some industries, data was pooled over two consecutive years, and the industry variable was collapsed to 14 industry categories, but sample sizes for MELAA and Other ethnicities were still too small to analyse, so ethnic pay gaps were estimated for Māori, Pacific, and Asian groups only. Moreover, these groups were not further disaggregated into subgroups. They found that in 2021-2022, the Māori gap was 14.6%, the Pacific pay gap was 18.8%, and the Asian pay gap was 10.2% (the latter had decreased marginally from 11% in 2016-2017). When these were broken down by industry, there was wide variation in pay gaps. For example, the Asian

pay gap ranged from 0.4% in Hospitality to 16% in the Wholesale industry. They also found that when gender and ethnic pay gaps were combined, the pay gaps compounded (e.g., the pay gap between Asian women and European men was 18%). When contributing factors to pay gaps were analysed, Iusitini et al. found that while occupational and industry differences between Asians and Europeans made small contributions to the Asian pay gap, the gap was mostly unexplained by the variables considered in their analysis.

MEC (2024) used HLFS data from 2018 to 2023 to estimate pay gaps using median hourly earnings for Asian and MELAA compared to Europeans (all defined according to the *standard* ethnicity classification). They estimated that in 2023, the Asian pay gap was 9.1% and the MELAA pay gap was 6.1%. They find a declining trend since 2018 for the Asian pay gap and a volatile trend for the MELAA pay gap.

While most studies focus on estimating the size of pay gaps as percentage differences in hourly earnings, Maré (2022) took a different approach by quantifying the aggregate dollar value of gender and ethnic pay gaps in New Zealand. He estimated the total wage increase that would be required to raise the average pay of all gender and ethnic groups (based on Level 1 ethnic classifications) to match the average pay of European men. He found that eliminating both gender and ethnic pay gaps in this way would require an additional $17.6 billion per year in wage and salary payments — equivalent to approximately 11% of total employee earnings. Of this amount, $4.46 billion was attributed to the aggregate Asian pay gap, and $0.24 billion to the MELAA pay gap (these figures reflect the combined effects of gender and ethnic pay disparities). Underpinning these estimates, Maré calculated 2022 mean hourly earnings gaps of 10.8% for Asian men, 17.4% for Asian women, -2.3% for MELAA men, and 19.0% for MELAA women.

This report contributes to this existing literature by examining pay gaps among New Zealand's smaller and little-researched ethnic groups. In doing so, it takes a step toward recognising the diversity that exists within Ethnic Communities — groups that are often treated as homogenous in national statistics and research. While this analysis provides new insights, it does not capture the full complexity or variation within these communities, which include a wide range of migration histories, cultural backgrounds, and labour market experiences. Section 2 discusses the data sources used, how the variables are defined, and how the samples are selected. Section 3 describes the method used to estimate and decompose pay gaps — that is, to break down the observed pay gaps into portions that can be statistically explained by group differences in characteristics (such as education or occupation) and portions that remain unexplained. Section 4 presents descriptive statistics of the analysis samples, estimates of pay gaps, and the results of the decomposition. Section 5 summarises and concludes the report.

2 Data

This section describes the data sources, variables, and sample selection criteria used to estimate and decompose pay gaps across and within Ethnic Communities.

2.1 Data sources

To estimate pay gaps, we use data from the Household Labour Force Survey (HLFS). The HLFS is run by Stats NZ every quarter with a nationally representative sample of about 15,000 households (equating to about 30,000 individuals). It has a rotating panel design in which the same respondents are interviewed over a set number of consecutive quarters and then replaced (on a rotating basis) by a new set of respondents, such that the entire panel is turned over in an eight-quarter period. It collects information on labour market outcomes as well as demographic and socioeconomic characteristics of respondents and their households. The HLFS target population is the non-institutionalised population aged 15 years and over who usually live in New Zealand. The target population excludes the following: (a) people who have been living in New Zealand for less than 12 months and who do not intend to stay in New Zealand for more than a year; (b) long-term residents of homes for older people, hospitals, and psychiatric institutions, and; (c) people in prison. The first exclusion means that very recent migrants and those residing in New Zealand for only a short period are not captured in the HLFS.

We use the June quarter HLFS because the surveys in this quarter collect additional information on income received from various sources and hours worked over the reference week of the HLFS, including hourly earnings. We pool data over 2016 to 2024 (nine years of June HLFS surveys) in order to increase sample sizes for the relatively small ethnic groups that are the focus on this report. We start with the 2016 survey because this was when the New Zealand Income Survey – an annual supplement to the HLFS and the main data source used for research on pay gaps up to that point – was discontinued and the redesigned Household Labour Force Survey was launched.

HLFS data are included in Stats NZ's Integrated Data Infrastructure (IDI), which is a large research database that holds anonymised administrative and survey microdata about people, households, and businesses linked across a range of life domains for the whole population of New Zealand. In our analysis of pay gaps — where we decompose the gaps into portions explained by group differences in characteristics (e.g. age or education) and portions that remain unexplained — we use linked data from the IDI, drawing additional information about HLFS respondents from the 2013,2018, and 2023 Censuses and from Inland Revenue, as discussed in the next section.

2.2 Variables

Ethnicity

We classify HLFS respondents as belonging to Ethnic Communities based on a 'total response' classification in which respondents are counted in *each* of the ethnic groups they report. Thus, respondents who belong to more than one Ethnic Community defined at the same level will be counted in both pay comparisons (e.g., a person who is Continental European and Asian is counted in both groups and hence will appear in the both the Continental European and Asian pay gap samples).

'New Zealand European' is a Level 4 ethnic group classified under 'European' in the standard classification and under 'Other European' in the Ministry for Ethnic Communities' classification. HLFS respondents who identify *solely* as New Zealand European ('Sole New Zealand European') are used as the reference group against which all Ethnic Communities are compared. By definition, Sole New Zealand European respondents do not belong to any other ethnic group and hence cannot be classified as also belonging to any of the Ethnic Communities groups.

In this report, we estimate pay gaps for all Ethnic Communities at Levels 1 to 3. We also estimate pay gaps for one Level 4 Ethnic Community – Filipino – owing to the large increase in the Filipino population in New Zealand in recent years.

Hourly earnings

Earnings (or 'pay' or 'wages' – the terms are used interchangeably in this report) are defined as the total before-tax hourly earnings from the respondent's main job or business in real terms (deflated to 2024 Q2 dollars using the Consumer Price Index). 'Total' earnings encompass regular earnings plus extra income such as allowances, bonuses, and commissions. 'Main job' is the job or business in which the respondent usually worked the most hours.

Place of birth and place of schooling

We also categorise Ethnic Communities (at all levels of classification) by place of birth (dichotomised to whether they are New Zealand-born or overseas-born) and by place of schooling (dichotomised based on whether the respondent's highest secondary school qualification is an overseas secondary qualification or

a New Zealand one).[1] and then estimate pay gaps among these subgroups of Ethnic Communities. Note that while dichotomised place of birth is used in the decomposition, place of schooling is not, owing to substantial missing data in this HLFS variable. Thus, 'place of schooling' is used only when estimating pay gaps (section 4.2) but not in the decomposition (section 4.3). It is also important to note that we do not use information on whether the respondent's *highest qualification overall* was obtained overseas. This is because the HLFS variable on highest qualification lacks sufficient detail about the country in which that qualification was gained. Therefore, we rely on the location of secondary school qualifications as the best available proxy for place of schooling.

Other explanatory variables

We draw the demographic, household, regional, educational, and job-related characteristics used as explanatory variables in the decomposition from the HLFS, except for two noted below. We group these variables into five categories, as shown in Table 1.

Demographic characteristics include respondents' sex, dichotomised place of birth (New Zealand-born versus overseas-born), age, and age-squared (the latter is included to capture diminishing wage returns as people age – growth in earnings tends to slow as people get older and wages tend to level off and then decline once people reach their fifties and sixties). Demographic characteristics also include whether the respondent can speak English, based on the Census question, "*In which language(s) could you have a conversation about a lot of everyday things?*". HLFS respondents are assigned their response to this English language question based on the Census that occurred immediately prior to the HLFS survey in which they participated (e.g., respondents to the 2016 and 2017 HLFS surveys are matched to their 2013 Census data, respondents to the 2024 HLFS survey are matched to their 2023 Census data).

Household characteristics are whether the respondent is a sole parent, whether they are partnered, the number of dependent children in their family, and their household income. Regional characteristics are the geographic region in which the respondent was living. Educational characteristics are the respondent's highest educational qualification attained coded to five categories: no qualification, secondary school qualification, post-school (level 4 to 6) qualification, bachelor's degree or other level 7 qualification, and postgraduate (level 8 to 10) qualification.

[1] Specifically, we count HLFS respondents as 'New Zealand-schooled' if they report a New Zealand school qualification (NCEA qualification or its earlier equivalents) as their highest school qualification and as 'overseas-schooled' if they report that their highest school qualification is "Overseas secondary school qualification".

Table 1. Definitions of variables

Variable	Definition
Pay	
Total hourly earnings	Total hourly earnings from main job (includes allowances, bonuses, commissions, etc.), deflated to 2024 Q2 NZ dollars
Log total hourly earnings	Natural logarithm of total hourly earnings
Demographic characteristics	
Sex	1 = Female; 0 = Male
Age	Age in years
Age-squared	Age in years squared
Sole New Zealand European	Dummy variable: 1 = Sole New Zealand European ethnicity; 0 otherwise
Continental European	Dummy variable: 1 = Continental European total response ethnicity; 0 otherwise
Asian	Dummy variable: 1 = Asian total response ethnicity; 0 otherwise
MELAA+	Dummy variable: 1 = Middle Eastern, Latin American, African+ total response ethnicity; 0 otherwise
Southeast Asian	Dummy variable: 1 = Southeast Asian total response ethnicity; 0 otherwise
Chinese	Dummy variable: 1 = Chinese total response ethnicity; 0 otherwise
Indian	Dummy variable: 1 = Indian total response ethnicity; 0 otherwise
Sri Lankan	Dummy variable: 1 = Sri Lankan total response ethnicity; 0 otherwise
Japanese	Dummy variable: 1 = Japanese total response ethnicity; 0 otherwise
Korean	Dummy variable: 1 = Korean total response ethnicity; 0 otherwise
Other Asian	Dummy variable: 1 = Other Asian total response ethnicity; 0 otherwise
Middle Eastern	Dummy variable: 1 = Middle Eastern total response ethnicity; 0 otherwise
Latin American	Dummy variable: 1 = Latin American total response ethnicity; 0 otherwise
African+	Dummy variable: 1 = African+ total response ethnicity; 0 otherwise
Filipino	Dummy variable: 1 = Filipino total response ethnicity; 0 otherwise
Place of birth	Dummy variable: 1 = born in New Zealand; 0 otherwise
English language ability	Dummy variable: 1 = can speak English; 0 otherwise
Household characteristics	
Sole parent	Dummy variable: 1 = Sole parent with dependent child(ren); 0 otherwise
Partnered	Dummy variable: 1 = Partnered; 0 = Not partnered
Number of dependent children	Number of dependent children in family
Household income	Household weekly income decile
Region characteristics	
Northland	Dummy variable: 1 = Northland region; 0 otherwise
Auckland	Dummy variable: 1 = Auckland region; 0 otherwise
Waikato	Dummy variable: 1 = Waikato region; 0 otherwise
Bay of Plenty	Dummy variable: 1 = Bay of Plenty region; 0 otherwise
Gisborne/Hawke's Bay	Dummy variable: 1 = Gisborne/Hawke's Bay; 0 otherwise
Taranaki	Dummy variable: 1 = Taranaki region; 0 otherwise
Manawatu-Wanganui	Dummy variable: 1 = Manawatu-Wanganui region; 0 otherwise
Wellington	Dummy variable: 1 = Wellington region; 0 otherwise
Nelson/Tasman/Marlborough/West Coast	Dummy variable: 1 = Nelson/Tasman/Marlborough/West Coast region; 0 otherwise
Canterbury	Dummy variable: 1 = Canterbury region; 0 otherwise
Otago	Dummy variable: 1 = Otago region; 0 otherwise
Southland	Dummy variable: 1 = Southland region; 0 otherwise

Variable	Definition
Education characteristics	
Higher degree qualification	Dummy variable: 1 = Highest qualification is a Master's or PhD degree
Bachelor's degree qualification	Dummy variable: 1 = Highest qualification is a Bachelor's degree, level 7 or level 8 postgraduate/graduate certificate or diploma; 0 otherwise
Post-school qualification	Dummy variable: 1 = Highest qualification is a post-school qualification (e.g. Level 1-4 certificates, Level 5-6 Diplomas); 0 otherwise
School qualification	Dummy variable: 1 = Highest qualification is a secondary school qualification; 0 otherwise
No qualification	Dummy variable: 1 = No qualification; 0 otherwise
Job-related characteristics	
Manager	Dummy variable: 1 = Occupation in main job is Manager; 0 otherwise
Professional	Dummy variable: 1 = Occupation in main job is Professional; 0 otherwise
Technical or Trades worker	Dummy variable: 1 = Occupation in main job is Technical or Trades worker; 0 otherwise
Community or Personal Service worker	Dummy variable: 1 = Occupation in main job is Community or Personal Service worker; 0 otherwise
Clerical or Administrative worker	Dummy variable: 1 = Occupation in main job is Clerical or Administrative worker; 0 otherwise
Sales worker	Dummy variable: 1 = Occupation in main job is Sales worker; 0 otherwise
Machinery Operator or Driver	Dummy variable: 1 = Occupation in main job is Machinery Operator or Driver; 0 otherwise
Labourer	Dummy variable: 1 = Occupation in main job is Labourer; 0 otherwise
Part-time employment	Dummy variable: 1 = In part-time employment (<30 hours per week); 0 = In full-time employment ($\geq$30 hours per week)
Permanent job	Dummy variable: 1 = Main job is permanent; 0 otherwise
Job tenure	Number of weeks employed in main job
Employment continuity	Number of months in employment over past 12 months
Union member	Dummy variable: 1 = Member of a union; 0 otherwise
Industry characteristics (abbreviated name)	
Agriculture	Dummy variable: 1 = Industry of main job is Agriculture, Forestry, Fishing and Mining; 0 otherwise
Manufacturing	Dummy variable: 1 = Industry of main job is Manufacturing; 0 otherwise
Construction	Dummy variable: 1 = Industry of main job is Electricity, Gas, Water, Waste Services and Construction; 0 otherwise
Wholesale	Dummy variable: 1 = Industry of main job is Wholesale Trade; 0 otherwise
Retail	Dummy variable: 1 = Industry of main job is Retail Trade; 0 otherwise
Hospitality	Dummy variable: 1 = Industry of main job is Accommodation and Food Services; 0 otherwise
Logistics	Dummy variable: 1 = Industry of main job is Transport, Postal and Warehousing; 0 otherwise
Media & Finance	Dummy variable: 1 = Industry of main job is Information Media and Telecommunications, Financial and Insurance Services, Rental, Hiring and Real Estate Services; 0 otherwise
Professional Services	Dummy variable: 1 = Industry of main job is Professional, Scientific and Technical Services; 0 otherwise
Administrative Services	Dummy variable: 1 = Industry of main job is Administrative and Support Services; 0 otherwise
Public Administration	Dummy variable: 1 = Industry of main job is Public Administration and Safety; 0 otherwise
Education	Dummy variable: 1 = Industry of main job is Education and Training; 0 otherwise
Healthcare	Dummy variable: 1 = Industry of main job is Health Care and Social Assistance; 0 otherwise
Arts & Recreation	Dummy variable: 1 = Industry of main job is Arts, Recreation and Other Services; 0 otherwise

Job-related characteristics are the respondent's occupation (coded to level 1 of the *Australian and New Zealand Standard Classification of Occupation 2006*), whether they work part-time, whether they have a permanent job, how many years they have been employed in their current job, how long they have been employed over the previous 12 months (taken from Inland Revenue's Employer Monthly Schedule and included as a measure of employment continuity or stability), and whether they are a member of a union. Industry characteristics are the industry of the respondent's main job coded to level 1 of the *Australian and New Zealand Standard Industrial Classification 2006* but collapsed down to 14 industry groupings due to small numbers of some ethnic groups in some industries. See Table 1 for definitions of all variables.

2.3 Sample selection

The following sample selection criteria are applied: HLFS respondents are restricted to those aged between 16 and 64 years who are paid employees (not an employer, self-employed, or an unpaid worker in a family business) and have positive hourly earnings data.[2] We trim our sample by dropping individuals who fall into the bottom or top 1% of the distribution of hourly earnings over the full nine-year period. Due to the HLFS's rotating panel design, generally between one half and two-thirds of respondents will be present in two consecutive June HLFS surveys and therefore be represented more than once in our sample pooled over nine years. Since each quarterly HLFS survey is designed to be a representative sample of the usually-resident population aged 15 and over, dropping these 'repeat' respondents would distort the representativeness of the samples. Thus, we retain these respondents to ensure that the representativeness of the sample to the underlying population of usual residents is maintained.

[2] We retain all respondents with non-missing earnings data, which means responses to the survey questions on earnings were provided either directly by the respondent or through another member of their household (that is, through a proxy respondent) or that responses were not provided but earnings were later imputed by Stats NZ.

3 Method

This section outlines the methods used to estimate and decompose pay gaps between Sole New Zealand Europeans and Ethnic Communities. We begin by describing how pay gaps are calculated as average differences in hourly earnings. We then explain how these gaps are decomposed into explained and unexplained components using a Blinder-Oaxaca approach, with adjustments made for sample selection bias.

3.1 Method for estimating pay gaps

In this report, we estimate pay gaps using data pooled over the years 2016 to 2024. The data therefore relate to the total population of Ethnic Communities and Sole New Zealand Europeans summed over this nine-year period. The resulting pay gap estimates therefore relate to the full period considered as a whole. Pay gaps are estimated as follows:

$$\frac{\text{Sole New Zealand European mean hourly earnings} - \text{Ethnic Communities mean hourly earnings}}{\text{Sole New Zealand European mean hourly earnings}} \times 100$$

Mean hourly earnings (rather than median) are used to estimate pay gaps because the Blinder-Oaxaca decomposition (explained in Section 3.2) is designed to work with mean differences between groups. While mean earnings are more sensitive to extreme values, we mitigate this issue by dropping individuals who fall into the top or bottom 1% of the hourly earnings distribution across the full sample (Sole New Zealand European plus all Ethnic Communities combined, as described in Section 2). However, we also estimate (but do not decompose) the main set of pay gaps using median hourly earnings. All estimates are weighted using the HLFS sampling weights so that they are representative of the relevant population.

3.2 Method for decomposing pay gaps

To investigate the extent to which ethnic group differences in characteristics may be contributing to pay gaps, we use a Blinder-Oaxaca decomposition which is a statistical technique for studying differences in average outcomes between groups (typically wage gaps), developed by Oaxaca (1973) and Blinder (1973). As used in this report, the decomposition quantifies how much of the gap in hourly earnings between ethnic groups can be statistically accounted for by group differences in measured characteristics (personal and job-related attributes that influence earnings) and how much cannot be accounted for by such differences or is left unmeasured in the decomposition. It takes the mean difference in hourly earnings

between two ethnic groups and apportions it into 'explained' and 'unexplained' components. The explained component is the portion of the pay gap that is statistically attributable to differences in the mean values of the explanatory variables within the groups. The unexplained component is the remaining part of the pay gap that is not accounted for by differences in the explanatory variables but instead may be attributable to either (or some combination of) group differences in *the effects of* (or *returns* to) the characteristics included in the decomposition or alternatively to factors that are not observed in the data (i.e., group differences in one or more determinants of earnings that are not captured in the model).

Consider two ethnic groups, Sole New Zealand Europeans ('NZE') and a particular Ethnic Community ('EC'). First, wage equations are estimated for each group being compared, by regressing a set of covariates X_i on the natural logarithm of hourly earnings,[3] as in equation (1) for Sole New Zealand Europeans and equation (2) for the Ethnic Community:

$$\ln\left(w_i^{NZE}\right) = \beta^{NZE} X_i^{NZE} + \varepsilon_i^{NZE} \quad (1)$$

$$\ln\left(w_i^{EC}\right) = \beta^{EC} X_i^{EC} + \varepsilon_i^{EC} \quad (2)$$

where the i subscript denotes the i^{th} wage earner, $\ln(w)$ denotes the natural logarithm of hourly earnings, and X represents a vector of explanatory variables including demographic, household, regional, educational, and job-related characteristics.

The gap in log wages between the two groups can be written as:

$$\overline{\ln(w^{NZE})} - \overline{\ln(w^{EC})} = \widehat{\beta^{NZE}}\,\overline{X^{NZE}} - \widehat{\beta^{EC}}\,\overline{X^{EC}} \quad (3)$$

where $\overline{X^{NZE}}$ and $\overline{X^{EC}}$ are vectors containing the means of the explanatory variables for each ethnic group, and $\widehat{\beta^{NZE}}$ and $\widehat{\beta^{EC}}$ are the vectors of estimated coefficients from equations (1) and (2). Based on this result, the log wage gap can be decomposed in various ways. In this report, we decompose the pay gap using Neumark's (1988) method shown in equation (4):

$$\overline{\ln(w^{NZE})} - \overline{\ln(w^{EC})} = \beta^{*}\left(\overline{X^{NZE}} - \overline{X^{EC}}\right) + \left\{\left(\widehat{\beta^{NZE}} - \beta^{*}\right)\overline{X^{NZE}} + \left(\beta^{*} - \widehat{\beta^{EC}}\right)\overline{X^{EC}}\right\} \quad (4)$$

[3] It is standard in the literature to use the log of wages because this makes the distribution of the wage variable less skewed to the right, so that the mean is closer to the centre of the earnings distribution and thus closer to the wage earned by the typical worker.

where β^* is the coefficient vector from a pooled regression over both groups which is used to weight the differences in group characteristics,[4] $\hat{\beta}$ represents the vector of coefficients estimated in the wage equations, and $\bar{X}$ is a vector of mean values of explanatory variables. The first term on the right-hand side of equation (4) is the part of the pay gap that is explained by group differences in average characteristics (based on the explanatory variables outlined in Table 1). This 'explained' component can be further broken down to show the contribution of different groupings of characteristics to the overall gap (these groupings are also shown in Table 1).

The second component on the right-hand side of equation (4) is the part of the pay gap left unexplained. This reflects differences in the estimated coefficients, representing returns to characteristics in the labour market, and is more problematic to interpret. There are several possible reasons for these differences in returns. They may be due to ethnic group differences in characteristics that are not measured (i.e. are unobserved) in the data and hence are not included in the decomposition model (for example, we do not have data that directly measures employees' literacy or numeracy skills). They may be due to unmeasured differences in the level or quality of characteristics that *are* included in the decomposition (for example, HLFS collects the highest educational qualification but not the subject/field of study of the qualification). They may partly reflect ethnic group differences in preferences for non-wage job characteristics (non-pecuniary aspects such as flexible hours, paid holidays, commuting time, etc.). They may also be due to discriminatory differences in the wage rates that people of different ethnicities receive for a given level of skills.

If discrimination against ethnic groups exists in the labour market or in the wider society, it is important to note that this can affect both the 'explained' and 'unexplained' components of pay gaps. For example, ethnic pay gaps may be partly *explained* by group differences in educational attainment, yet these educational differences may themselves arise from unfair disparities or discrimination in the education system. Thus, ethnic differences that fall within the 'explained' component are not necessarily free from the effects of discrimination.

A known issue with the Blinder-Oaxaca decomposition is that the results it produces can be affected by sample selection bias (Heckman, 1979), given that hourly earnings are only observed for employed individuals in our sample (the earnings of people who are not currently participating in the labour market

[4] Use of the coefficients from a pooled regression assumes that in the absence of discrimination, the 'wage structure' (or returns to characteristics or prices for different attributes) that would prevail in the labour market would be some amalgam of Sole New Zealand European's coefficients and the Ethnic Community's coefficients.

are not observed). To correct our estimates for sample selection bias, we apply the Heckman correction procedure, which deducts the selection effects from the overall pay gap and then applies the decomposition equations to the adjusted pay gap. We do this correction for both groups being compared. The procedure requires one additional step before equations (1) to (4) above. This is to separately estimate probit models of labour force participation for Sole New Zealand Europeans in equation (5) and each Ethnic Community in equation (6):

$$LFP^{NZE} = \varphi^{NZE} Z^{NZE} \tag{5}$$

$$LFP^{EC} = \varphi^{EC} Z^{EC} \tag{6}$$

where the full HLFS sample is utilised, i.e., we do not restrict the analysis to waged employees but rather include individuals of all labour force statuses. In equations (5) and (6), LFP stands for labour force participation (equal to 1 for wage earners, the self-employed, the unemployed, and others in the labour force; and equal to 0 for those not in the labour force) and Z represents the vector of explanatory variables shown in Table 1 except for job-related characteristics. Then for each Sole New Zealand European in equation (7) and each Ethnic Community member in equation (8), the probability of participating in the labour force is predicted as:

$$\widehat{LFP_j^{NZE}} = \widehat{\gamma_1^{NZE}} Z_{1j}^{NZE} + \widehat{\gamma_2^{NZE}} Z_{2j}^{NZE} + \cdots + \widehat{\gamma_k^{NZE}} Z_{kj}^{NZE} \tag{7}$$

$$\widehat{LFP_j^{EC}} = \widehat{\gamma_1^{EC}} Z_{1j}^{EC} + \widehat{\gamma_2^{EC}} Z_{2j}^{EC} + \cdots + \widehat{\gamma_k^{EC}} Z_{kj}^{EC} \tag{8}$$

where k and j subscripts denote the k^{th} explanatory variable and the j^{th} Sole New Zealand European or Ethnic Community member in the sample.

A selection-correction parameter for each Sole New Zealand European in equation (9) and Ethnic Community member in equation (10) is generated as:

$$Mills_j^{NZE} = \frac{(normalden(-\widehat{LFP^{NZE}}))_j}{1-(normal(-\widehat{LFP^{NZE}}))_j} \tag{9}$$

$$Mills_j^{EC} = \frac{(normalden(-\widehat{LFP^{EC}}))_j}{1-(normal(-\widehat{LFP^{EC}}))_j} \tag{10}$$

where $normalden$ and $normal$ denote the standard normal density function and the cumulative normal distribution function, respectively. The selection-correction indices – inverse Mills ratios $Mills_j^{NZE}$ for Sole New Zealand Europeans and $Mills_j^{EC}$ for the Ethnic Community – are added as additional variables into

the decomposition procedure shown in equations (1) to (4), while household characteristics are now left out of the decomposition procedure, instead being used as the 'exclusion restriction' – variables included in the selection equations (5) and (6) but excluded from the outcome equations (1) and (2) – which helps identification of the model (that is, helps separate true wage differences from labour force selection differences).The additional steps implementing the Heckman correction yield the decomposition results corrected for selection bias.

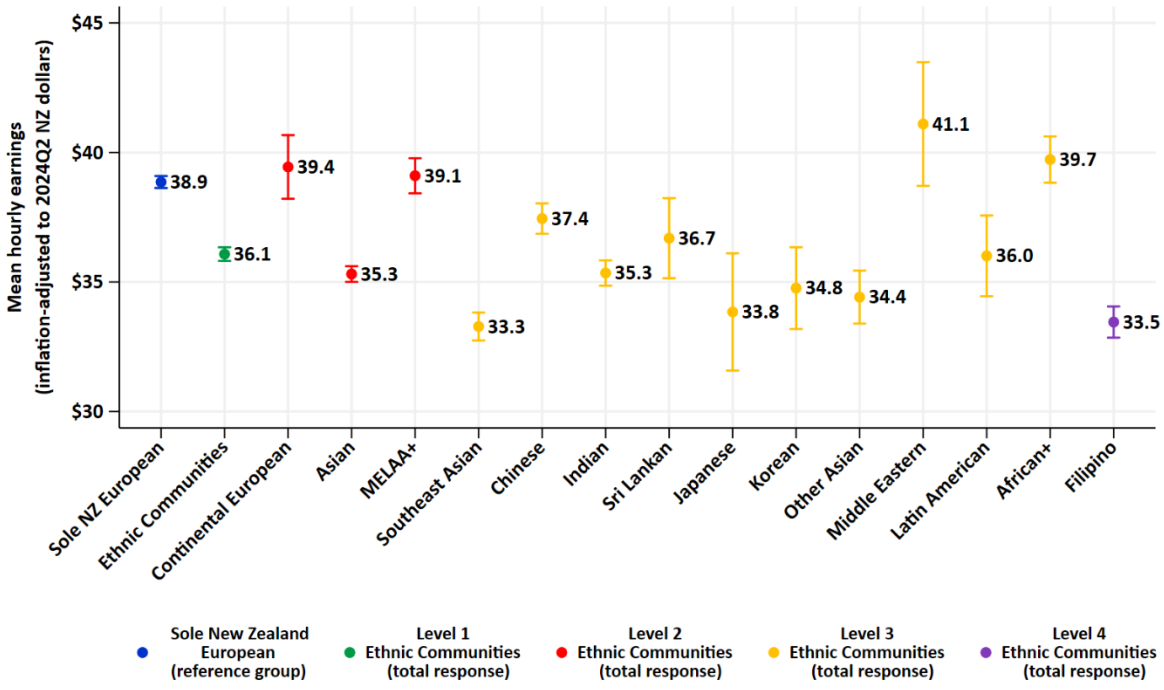
4 Results

This section presents the results of our analysis of ethnic pay gaps in Aotearoa New Zealand. We begin by describing the demographic, regional, educational, and job-related characteristics of the analysis samples (Section 4.1). We then present estimates of pay gaps across and within Ethnic Communities using both mean and median hourly earnings, including results disaggregated by sex, place of birth, and place of schooling (Section 4.2). Finally, we show the results of the Blinder-Oaxaca decompositions, which explore the factors driving ethnic pay gaps (Section 4.3).

4.1 Sample characteristics

Figure 3 displays the mean hourly earnings (adjusted for inflation to 2024 New Zealand dollars) for Sole New Zealand Europeans (in blue) alongside Ethnic Communities classified at Level 1 (green), Level 2 (red), Level 3 (yellow), and one Level 4 Ethnic Community, Filipino (purple). This shows that, over the years 2016 to 2024, Sole New Zealand Europeans earned an average of $38.90 per hour (in 2024 dollars). This compares with $36.10 for Ethnic Communities as a whole, $39.40 for Continental Europeans, $35.30 for Asians, and $39.10 for MELAA+. Because Asians make up about 80% of the total Ethnic Communities population, they have an outsized effect on the mean hourly earnings for Ethnic Communities overall.

Figure 3. Mean real hourly earnings over 2016 to 2024 by Ethnic Communities Levels 1 to 4



Source: Authors' calculations using HLFS data from the Integrated Data Infrastructure.

When the latter two groups are broken down into their constituent Level 3 groups, there is notable variation. Among Asians, Southeast Asians earn significantly less ($33.30) than the overall Asian average, while Chinese earn significantly more ($37.40). Among MELAA+, Middle Eastern ($41.10) and African+ ($39.70) earn significantly more than Latin American ($36.00) and more than Sole New Zealand Europeans (though not significantly so). The same general patterns apply when *median* pay is compared across ethnic groups (see Appendix Figure 1).

Table 2 contains descriptive statistics summarising the demographic and socioeconomic characteristics of the analysis samples of Level 1 and Level 2 Ethnic Communities and Sole New Zealand Europeans. Equivalent statistics for the Level 3 and 4 Ethnic Communities is contained in Appendix Table 1 (Southeast Asian, Chinese, Indian), Appendix Table 2 (Sri Lankan, Japanese, Korean, Other Asian), and Appendix Table 3 (Middle Eastern, Latin American, African+, Filipino). These descriptive tables include the percentages for each category of each variable, alongside the *p*-values from chi-squared (χ^2) tests, which assess whether the distributions for each Ethnic Community differ significantly from those of the Sole New Zealand European reference group. For continuous variables, such as age, *p*-values from t-tests are provided.

Demographic and socioeconomic characteristics such as education, occupation, work hours, and employment status are closely linked to pay outcomes and partly shape the observed ethnic pay gaps. For instance, higher levels of educational attainment are generally associated with access to better-paying jobs, while full-time and permanent employment tends to provide more stability and higher earnings than part-time and temporary work. Similarly, differences in occupational or industry composition can influence average pay, as can variations in union membership or job tenure. These factors provide important context for understanding pay disparities across Ethnic Communities and will be explored in more detail in Section 4.3, which examines how much of the pay gaps can be explained by these characteristics.

Sex

Table 2 shows that men account for a slightly larger share of the sample in all Ethnic Communities combined (52.6%) compared to Sole New Zealand Europeans (49.9%), while women represent a smaller share (47.4% versus 50.1%). This difference in sex distribution is statistically significant. At Level 2, the sex distribution differs significantly for Asian and MELAA+ groups, but not for Continental Europeans, indicating that the sex composition of the Continental European population is similar to that of Sole New Zealand Europeans, whereas the other groups show meaningful deviations.

Among Level 3 Asian ethnic groups, the share of men among the Indian (56.5%) and Sri Lankan (59.9%) groups is particularly high. Conversely, the Japanese group has a high share of women (64.8% female). The Chinese group (47.6% male) has a slightly higher share of women than Sole New Zealand Europeans, while

the Korean group is sex-balanced relative to Sole New Zealand Europeans. The Southeast Asian group is slightly more male (52.2%), while the Filipino group is also male-skewed (54.6%),

Among Level 3 MELAA+ groups, the Middle Eastern population has a significantly higher share of men (56.7%, p=0.0129), while differences for Latin American and African+ groups are not statistically significant.

These differences in sex composition may contribute to observed pay gaps. In groups where men make up a larger share, average pay may be higher simply because men tend to earn more than women on average. Conversely, groups with a higher proportion of women may show lower average pay, reflecting broader gender pay disparities in the labour market.

Age

Sole New Zealand Europeans in the sample have a mean age of 40.5 years, while the average age among all Ethnic Communities is 36.9 years — a difference of 3.6 years. This reflects the younger age profile of many Ethnic Communities, which is especially evident among Asians, whose mean age is 36.6 years, and MELAA+, at 37.9 years. Even Continental Europeans, who have a mean age of 39.0 years, are somewhat younger on average than Sole New Zealand Europeans.

For Level 3 and 4 Asian groups, all have a significantly younger average age than Sole New Zealand Europeans. The Indian group has the youngest average age at 35.4 years, followed by Other Asian (36.1 years), Chinese (37.4 years), Korean (37.4 years), Southeast Asian (37.5 years), Filipino (38.2 years) and Japanese (38.8 years).

Among the Level 3 MELAA+ communities, the Latin American group is the youngest, with a mean age of 36.4 years, followed closely by Middle Eastern at 37.0 years, and African+ at 38.6 years.

These age differences are likely to affect pay gaps, as older workers tend to earn more due to greater experience, seniority, or time in the workforce. Therefore, groups with a younger average age may have lower average earnings simply because they are earlier in their careers.

Place of birth

Table 2 shows that among Sole New Zealand Europeans, the vast majority (88.9%) were born in New Zealand, whereas only 9.9% of people in all Ethnic Communities combined are New Zealand-born. Among Level 2 Ethnic Communities, Continental Europeans have the largest New Zealand-born share (21.1%), while MELAA+ have the smallest at 5.3%, with Asians having a 9.9% share of New Zealand-born.

Among Level 3 and 4 Asian groups, New Zealand-born shares range from 4.2% of Sri Lankan to 17.1% of Chinese. Among the Level 3 MELAA+ groups, Middle Eastern have a comparatively high share (16.5%) of

New Zealand-born individuals, but proportions are very low among African+ (3.0%) and Latin Americans (5.3%).

These differences in birthplace may contribute to pay gaps. Migrants who have arrived in New Zealand more recently may face barriers such as non-recognition of overseas qualifications, language difficulties, or lack of local work experience, all of which can result in lower earnings compared to those born in New Zealand or long-settled residents.

English language

Table 2 also presents English language proficiency, measured by whether respondents report being able to have a conversation in English about everyday things. The differences across groups are substantial and statistically significant.

Nearly all Sole New Zealand Europeans (92.2%) report being able to speak English, and virtually none (0.1%) report being unable to (the balance of 7.6% being missing responses). In contrast, among Ethnic Communities as a whole, 4.0% report not being able to converse in English about everyday things, and only 76.4% report being able to, with a notably high rate of missing data (19.6%, due to lower linkage with the Census among HLFS respondents belonging to Ethnic Communities compared to respondents of Sole New Zealand European ethnicity).

These patterns differ across Level 2 Ethnic Communities. The Asian group has the highest share unable to converse in English (4.6%), while Continental Europeans and MELAA+ have lower rates at 0.5% and 2.1%, respectively. Even so, all Ethnic Communities report lower levels of English language ability than Sole New Zealand Europeans, and the missingness in this variable is also much higher among Ethnic Communities.

For Level 3 and 4 groups, Korean individuals have the highest rate of being unable to converse about everyday things in English (13.3%), followed by Other Asian (6.7%), Chinese (6.5%), Japanese (4.0%), Sri Lankan (4.0%), Middle Eastern (3.8%), Latin American (3.4%), Indian (3.2%), Southeast Asian (3.0%), Filipino (1.8%), and African+ (1.4%).

Limited English language proficiency may contribute to pay gaps, as it can restrict access to higher-paying roles, reduce opportunities for advancement, and make it harder to navigate the labour market or negotiate employment conditions. Furthermore, the Ministry of Business, Innovation and Employment's Migrant Surveys in 2021 and 2022 found that migrants with low levels of English proficiency were more likely to have employment entitlements withheld (such as holiday pack or sick leave) and more likely to be working without a written employment agreement compared to migrants with high proficiency (Ministry of Business, Innovation and Employment, 2024).

Household type and number of children

Household type distributions differ significantly across all Ethnic Communities compared with Sole New Zaland Europeans. Sole New Zealand Europeans are more likely to live in couple-only households (24.2%) or one-person households (8.5%) compared with Ethnic Communities overall (18.2% and 4.3%, respectively). In contrast, Ethnic Communities are more likely to live in couple-with-children households (38.4% versus 33.2%) and in 'other household types' (36.0% versus 29.7%). At Level 2, this pattern is more distinct, with Asians having particularly high rates of living in other household types (38.8%), possibly reflecting multigenerational or extended family living arrangements. MELAA+ also have the highest share of couple-with-children households (41.8%).

Despite these differences in household type, the average number of dependent children is similar across groups, with no significant difference between Sole New Zealand Europeans and Ethnic Communities overall (an average of 0.7 dependent children for both). At Level 2, the averages are also similar.

Across Level 3 and 4 Ethnic Communities, there is notable variation in household composition and the number of dependent children. Households comprised of couples with dependent children are common across most groups, with particularly high rates among Sri Lankan (50.7%), Middle Eastern (44.7%), Japanese (44.3%), African+ (43.1%), and Other Asian (42.1%) respondents. In contrast, one-person households are relatively rare across all Ethnic Communities, with the lowest proportions among Indians (3.0%), Sri Lankans (3.0%), Koreans (3.4%), Southeast Asians (3.7%), and Filipinos (3.8%), compared to 8.5% among Sole New Zealand Europeans.

In terms of the number of dependent children in the family, most Level 3 and 4 groups have a similar average to Sole New Zealand Europeans (0.7 children). However, Sri Lankan, Other Asian, Middle Eastern, and African+ groups all have significantly higher average numbers of dependent children (all 0.8 children), while Indians (0.6) and Koreans (0.5) have significantly lower numbers.

These differences in household composition may affect pay gaps, as individuals in households with dependent children or extended family responsibilities may face greater constraints on their availability for paid work, flexibility, or career progression — factors that can influence earnings.

Partnership status

At Level 1, people from all Ethnic Communities combined are slightly more likely to be partnered (66.9%) than Sole New Zealand Europeans (65.1%). However, when broken down into Level 2 groups, distinct differences emerge. Asians show similar partnership rates (65.6%) to Sole New Zealand Europeans, while MELAA+ (73.2%) and Continental Europeans (70.2%) have significantly higher rates.

At Levels 3 and 4, the African+ (74.2%), Latin American (73.5%), Sri Lankan (73.0%), and Indian (69.0%) populations have significantly higher partnership rates than Sole New Zealand Europeans, while the Southeast Asian (59.4%), Korean (59.5%), and Filipino (60.5%) populations have significantly lower rates. Partnership rates among Chinese, Japanese, Other Asian, and Middle Eastern populations are not significantly different from Sole New Zealand Europeans.

Differences in partnership status may influence pay gaps by affecting household responsibilities and employment choices. For example, partnered individuals may have more support for caregiving or, conversely, may reduce their paid work hours to balance family duties — either of which can affect earnings and labour market participation.

Region

At Level 1, Ethnic Communities are far more concentrated in Auckland (57.6%) compared to Sole New Zealand Europeans (25.8%). At Level 2, this pattern holds, especially among Asian (60.3%) and MELAA+ (49.2%) groups. Continental Europeans are more regionally dispersed than other Ethnic Communities, with only 39.3% living in Auckland and a share living in Wellington (15.8%) that is higher than Sole New Zealand Europeans (12.8%) and higher than all other Ethnic Communities except Sri Lankan (who have the largest share residing in Wellington of any group, at 17.4%). The high shares in Auckland are as expected, with Auckland serving as the primary hub for many immigrant populations who make up the majority of Ethnic Communities, likely due to its larger labour market and pre-existing community networks and infrastructure.

Among Level 3 and 4 groups, all groups have a higher share living in Auckland than Sole New Zealand Europeans. Koreans have the highest share (76.8%), followed by Chinese (69.2%), Indian (63.2%), Middle Eastern (62.9%), Sri Lankan (53%), Southeast Asian (48.6%), African+ (48.6%), Filipino (45.1%), Other Asian (45.0%), Japanese (43.4%), and Latin American (42.2%).

These regional patterns may influence pay gaps, as wages tend to be higher in urban areas — particularly Auckland — due to a concentration of high-paying industries, better job opportunities, higher productivity, and a higher cost of living (Maré, 2016). Ethnic groups more heavily concentrated in Auckland may therefore show higher average pay due in part to their location rather than their individual or group-level characteristics.

Highest educational qualification

A notably higher proportion of Ethnic Communities hold bachelor's degrees or higher, particularly among the Asian population, 55.1% of whom hold a bachelor's or postgraduate qualification, compared to just

over 33% of Sole New Zealand Europeans. In contrast, Continental Europeans have a qualification profile closer to the Sole New Zealand European reference group, although still significantly different.

For the more disaggregated Asian groups, all groups have higher levels of educational attainment than Sole New Zealand Europeans. Chinese have the highest rates of bachelor's and postgraduate qualifications (63.3%), followed by Korean (61.4%), Sri Lankan (57.1%), and Indian (56.3%). A high share of Filipino workers have a bachelor's degree (39.0%), but the share with postgraduate degrees (7.2%) is lower than for Sole New Zealand Europeans (10.8%).

For MELAA+ disaggregated groups, nearly 60% of Middle Eastern workers have a bachelor's degree or higher, 53.8% for Latin American, and 38.2% for African+ (the latter the lowest proportion among all Ethnic Communities, although still higher than for Sole New Zealand Europeans).

Overall, Ethnic Communities have high levels of educational attainment. This is perhaps unsurprising given the high share of migrants in these populations (see above) and given New Zealand's skilled migration policy settings. These differences in educational attainment are important for understanding pay gaps, as higher qualifications are generally associated with higher earnings.

Occupation

Table 2 shows that at Level 1, Ethnic Communities overall are less likely to be in managerial occupations (13.0%) compared to Sole New Zealand Europeans (17.4%), and slightly more likely to be professionals (29.4% compared to 27.3%). Labouring jobs are also more common among Ethnic Communities (8.7%) than among Sole New Zealand Europeans (7.7%).

At Level 2, Continental Europeans have a larger share employed in professional occupations (33.8%) and technical and trades occupations (14.2%) compared to Sole New Zealand Europeans. Asian workers have slightly larger shares in professional (28.9%) and technical and trades (13.0%) occupations, but also a larger share in labouring occupations (9.3% compared to 7.7% of Sole New Zealand Europeans). MELAA+ communities show elevated shares of professionals (30.7%) and technicians and trades workers (14.5%).

At Level 3 and 4, all Ethnic Communities have smaller shares employed in managerial occupations than Sole New Zealand Europeans, except for African+ who have a similar proportion (17.2%) working as managers.

Middle Eastern (41.0%), Chinese (36.1%), Sri Lankan (32.6%), and Korean (32.6%) groups are heavily concentrated in professional occupations. Compared to Sole New Zaland Europeans, larger shares in technical and trades occupations are found among Southeast Asians (17.3%) as well as their Filipino subgroup (18.3%), Latin Americans (16.5%), Koreans (15.3%), African+ (14.3%), and Sri Lankans (14.0%).

Compared to Sole New Zealand Europeans, larger shares of community and personal service workers are found among Southeast Asians (11.8%) and their Filipino subgroup (11.2%), Japanese (14.9%), Other Asians (12.7%), and Latin Americans (10.9%). Larger shares of sales workers are found among Indians (12.3%), Japanese (11.7%), and Chinese (10.8%), but a smaller share than Sole New Zealand Europeans is found among Latin Americans (5.4%).

With respect to machinery operators and drivers, Indians have a larger share (6.9%) than Sole New Zealand Europeans (5.2%), while Japanese (1.4%), Sri Lankan (3.3%), and all the MELAA+ subgroups (between 2.9% to 3.8%) have smaller shares. For labouring occupations, Southeast Asians (15.5%), their Filipino subgroup (15.2%), Latin Americans (12.6%), Other Asians (11.3%), and Japanese (10.4%) are all over-represented relative to Sole New Zealand Europeans (7.7%), while the Middle Eastern (5.5%) and African+ (5.5%) populations are under-represented.

These occupational differences are likely to contribute to pay gaps, as managerial and professional roles tend to have higher earnings than labouring or technical jobs. Underrepresentation in higher-paid occupations may limit income opportunities for some ethnic groups, even when qualifications or experience are comparable.

Industry

Among Sole New Zealand Europeans, the most common industries of employment are Healthcare (10.8%), Education (10.1%), Construction (9.8%), and Retail (9.8%). For Ethnic Communities as a whole, the most common industries are Healthcare (12.9%), Retail (10.9%), Professional Services (9.9%), and Manufacturing (9.7%), all of which are higher shares than among Sole New Zealand Europeans. Ethnic Communities also have higher shares employed in the Hospitality industry and lower shares in the Education, Agriculture, and Public Administration sectors, compared to Sole New Zealand Europeans.

Differences emerge at Level 2. Relative to Sole New Zealand Europeans, Continental Europeans are over-represented in Hospitality and Professional Services and under-represented in Retail; Asians are over-represented in Retail, Hospitality, and Healthcare and under-represented in Public Administration, Education, and Construction; and MELAA+ are over-represented in Professional Services and under-represented in Retail, Public Administration, and Agriculture.

At Levels 3 and 4, nearly all Ethnic Communities have smaller shares employed in Agriculture than Sole New Zealand Europeans (4.2%), the exceptions being Southeast Asians (5.1%) and their Filipino subgroup (6.4%), Other Asians (5.3%), and Latin Americans (4.3%). The Manufacturing industry employs larger shares of Southeast Asians (13.7%), Filipinos (13.6%), and Latin Americans (11.7%) than Sole New Zealand Europeans (9.4%). In the Construction sector, nearly all Level 3 Ethnic Communities are under-represented

relative to Sole New Zealand Europeans (9.8%), the exceptions being Southeast Asians (10.5%), Filipinos (12.0%), Latin Americans (10.8%), and African+ (10.6%).

In Retail Trade, there are larger shares of Chinese (11.2%), Indian (14.1%), Sri Lankan (13.4%), Japanese (13.7%), and Korean (11.5%) workers compared to Sole New Zealand Europeans (9.8%), and lower shares of Latin American (6.3%) and African+ (6.9%). All but one of the Level 3 Ethnic Communities are over-represented in Hospitality (especially Japanese at 21.8%, Korean at 15.1%, Other Asian at 13.0%, and Latin American at 11.3%) compared to Sole New Zealand Europeans (4.3%), the exception being African+ (3.7%).

In the Media and Finance industry, only Chinese (10.3%), Indians (8.4%), Sri Lankans (9.9%), and African+ (7.3%) have higher shares than Sole New Zealand Europeans (6.9%); the rest have lower shares.

In the Professional Services industry, Chinese (14.3%), Middle Eastern (15.8%), and Latin American (11.3%) stand out as groups with markedly higher shares than Sole New Zealand Europeans (9.0%), while Southeast Asians (6.9%) and their Filipino subgroup (6.3%) have markedly lower shares.

In Public Administration, all Ethnic Communities have smaller shares than Sole New Zealand Europeans (ranging from 3.6% of Filipinos up to 7.6% of Middle Eastern workers, compared to 8.3% of Sole New Zealand Europeans). A similar pattern applies in the Education industry, where all Ethnic Communities have smaller shares than Sole New Zealand Europeans except for Middle Eastern (12.1% compared to 10.1% of Sole New Zealand Europeans).

The Healthcare industry employs markedly higher shares of Southeast Asians (17.3%) and especially their Filipino subgroup (21.0%), as well as Indians (14.1%) and Other Asians (15.2%), compared to Sole New Zealand Europeans (10.8%).

These industry patterns may influence pay gaps, as different industries vary considerably in average wages and opportunities for advancement. Overrepresentation in lower-paying sectors like Hospitality or Retail trade, and underrepresentation in high-paying sectors like Public Administration or Finance, can contribute to lower average earnings among Ethnic Communities overall and particular subgroups where these sectoral disparities apply.

Full-time and part-time work and hours of work

Sole New Zealand Europeans are mostly employed full-time (82.6%) with 17.4% employed part-time. Ethnic Communities overall have a slightly higher full-time rate (85.2%). Among Level 2 groups, Continental Europeans have a full-time rate (83.3%) that does not differ significantly from Sole New Zealand Europeans, while Asians (85.3%) and MELAA+ (85.3%) have higher full-time rates.

For Level 3 and 4 Asian groups, the rate of full-time work is higher than Sole New Zealand Europeans among Filipinos (89.3%), Indians (88.0%), and Southeast Asians (85.9%). It is similar among Chinese (82.6%), Sri Lankans (84.4%), Koreans (80.7%), and Other Asians (82.0%), and significantly lower among Japanese (71.4%).

For Level 3 MELAA+ groups, the percentage working full-time is higher than Sole New Zealand European workers among African+ (86.7%) and Latin Americans (86.2%) but significantly lower among the Middle Eastern group (77.3%).

There are notable differences in weekly hours worked across Ethnic Communities. Sole New Zealand Europeans average 37.4 hours per week, but some groups — like Filipino and African+ workers — report higher averages (38.1 hours), while Chinese and Japanese workers report lower averages (35.8 and 33.6 hours, respectively). Gaps between usual and actual hours were smaller for many Ethnic Communities than for Sole New Zealand Europeans.

Employment status and union membership

Across all ethnic groups, most workers are permanent employees. Sole New Zealand Europeans have a high rate of permanent employment at 93.7%. For Ethnic Communities as a whole, the share of permanent employees is slightly lower but still high (92.0%).

At Level 2, the Asian group has a slightly lower rate of permanent employment (91.2%) with higher proportions in casual and fixed-term employment, which might be related to the relatively high shares of recent migrants in this group. The MELAA+ population also has a slightly lower rate of permanent employment (92.1%) and higher shares in casual and fixed-term employment. The mix of employment relationships among Continental Europeans does not differ significantly from that of Sole New Zealand Europeans.

Among Level 3 and 4 Asian groups, Southeast Asian, Chinese, Indian, and Sri Lankan workers have permanent employment rates of around 90% to 92%, with casual and fixed-term employment slightly more common than for Sole New Zealand European workers. Rates of permanent employment among Japanese, Korean, and Other Asian groups are slightly lower again, at between 88% and 89%.

Among MELAA+ Level 3 groups, Middle Eastern and Latin American workers have lower rates of permanent employment than Sole New Zealand European workers (89.2% and 89.9% respectively). African+ workers' permanent employment rates (93.5%) are similar to those of Sole New Zealand Europeans.

The union membership rate is generally lower among Ethnic Communities overall (15.6%) compared to Sole New Zealand Europeans (19.3%) and the same generally applies to groups at Levels 2 and 3. However, Filipino workers have a slightly higher rate of union membership (20.0%).

These differences may contribute to pay gaps, as permanent employees and union members tend to have better employment conditions, greater job security, and higher pay than those in casual or fixed-term roles or outside union coverage. Lower unionisation and greater casualisation can limit bargaining power and reduce average hourly earnings.

Job tenure and months employed

Job tenure also varies notably across Ethnic Communities. Sole New Zealand Europeans have the longest average tenure in their main job at 338 weeks (around 6.5 years). In contrast, most Ethnic Communities — especially those with higher shares of recent migrants — have significantly shorter tenures. For example, Latin Americans average just 143 weeks (about 2.7 years). Among other groups, tenure ranges from 161 weeks for Koreans up to 224 weeks for Chinese. These shorter tenures likely reflect more recent arrival in New Zealand and, in some cases, less secure or more transitional employment.

Most Ethnic Communities have high levels of employment continuity over the previous year, with only minor differences in the number of months employed. Sole New Zealand Europeans average 11.4 months out of 12, suggesting consistent year-round employment. Ethnic Communities average slightly less — between 10.7 and 11.2 months — indicating relatively stable patterns overall but with small, statistically significant differences for all groups except Japanese.

Shorter tenure can be associated with lower pay due to reduced opportunities for progression, fewer rewards for loyalty or experience, and limited access to higher-paying roles. Employment instability may also limit bargaining power or access to training and advancement.

Household income

The average household income for Sole New Zealand Europeans is approximately $2,769 per week, higher than the average for Ethnic Communities as a whole ($2,704). But at Level 2, the average household incomes of Continental Europeans ($2,669) and MELAA+ ($2,824) do not differ significantly from Sole New Zealand Europeans, whereas the average household income for Asians ($2,687) is significantly lower.

Among the Level 3 and 4 Asian groups, Southeast Asians have significantly higher household incomes ($2,978), while Chinese, Japanese, Koreans, and Other Asians have significantly lower household incomes (those of Indians and Sri Lankans do not differ significantly from Sole New Zealand Europeans).

Within the MELAA+ groups, African+ have significantly higher household incomes ($2,944) than Sole New Zealand Europeans, Latin Americans have significantly lower incomes ($2,580), and the Middle Eastern group has an average household income ($2,634) that is not significantly different from Sole New Zealand Europeans.

These differences in household income reflect not only individual wages or salaries, but also the number of earners in the household, their combined incomes, and other income sources such as government transfers, business income, or investment returns. As such, household income patterns may not always align directly with ethnic pay gaps.

Table 2. Demographic and socioeconomic characteristics of analysis samples

Categorical variable	Reference group	Level 1 Ethnic Communities		Level 2 Ethnic Communities					
	Sole NZ European	All Ethnic Communities		Continental European		Asian		MELAA+[1]	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Sex			<0.001		0.524		<0.001		0.017
Male	49.9	52.6		48.8		52.9		52.2	
Female	50.1	47.4		51.2		47.1		47.8	
Place of birth			<0.001		<0.001		<0.001		<0.001
Born in New Zealand	88.9	9.9		21.1		9.9		5.3	
Born overseas	11.0	88.9		78.0		88.7		94.1	
Missing	0.2	1.2		1.0		1.4		S	
English language ability			<0.001		<0.001		<0.001		<0.001
Cannot speak English	0.1	4.0		0.5		4.6		2.1	
Can speak English	92.2	76.4		82.4		75.8		77.2	
Missing	7.6	19.6		17.1		19.6		20.6	
Household type			<0.001		<0.001		<0.001		<0.001
Couple only	24.2	18.2		27.7		16.5		24.3	
Couple with dependent child(ren)[2]	33.2	38.4		37.9		37.9		41.8	
One parent with dependent child(ren)[2]	4.3	2.9		4.6		2.6		3.6	
One-person household	8.5	4.3		6.4		4.1		4.4	
All other household types	29.7	36.0		23.3		38.8		25.8	
Missing	0.1	0.1		S		0.1		S	
Partnership status			0.002		0.004		0.543		<0.001
Not partnered	34.9	33.1		29.8		34.4		26.8	
Partnered	65.1	66.9		70.2		65.6		73.2	
Region			<0.001		<0.001		<0.001		<0.001
Northland	2.8	1.3		3.7		0.9		S	
Auckland	25.8	57.6		39.3		60.3		49.2	
Waikato	9.6	7.8		8.2		7.5		9.6	
Bay of Plenty	6.0	3.7		3.8		3.5		5.3	
Gisborne/Hawke's Bay	4.0	1.8		3.2		1.5		S	
Taranaki	2.6	0.8		0.9		0.7		1.4	
Manawatu-Wanganui	5.4	2.2		2.3		2.1		2.8	

Categorical variable	Reference group	Level 1 Ethnic Communities		Level 2 Ethnic Communities					
	Sole NZ European	All Ethnic Communities		Continental European		Asian		MELAA+[1]	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Wellington	12.8	10.1		15.8		9.5		10.6	
Nelson/Tasman/Marlborough/West Coast	5.0	1.5		2.9		1.3		2.1	
Canterbury	16.8	9.3		13.2		9.0		9.5	
Otago	6.5	2.8		5.6		2.5		3.6	
Southland	2.7	1.0		1.0		1.0		S	
Highest educational qualification			<0.001		<0.001		<0.001		<0.001
Postgraduate (level 8 to 10) qualification	10.8	18.0		22.3		17.8		17.3	
Bachelor's degree or other level 7 qual.	22.4	35.3		26.0		37.3		27.2	
Post-school (level 4 to 6) qualification	25.4	18.2		21.8		16.8		24.7	
School qualification	30.0	22.5		23.7		22.1		25.0	
No qualification	9.5	5.1		4.8		5.1		4.8	
Missing	1.9	0.9		1.3		0.8		S	
Occupation in main job[3]			<0.001		<0.001		<0.001		<0.001
Manager	17.4	13.0		16.5		12.2		16.3	
Professional	27.3	29.4		33.8		28.9		30.7	
Technician and Trades Worker	11.8	13.3		14.2		13.0		14.5	
Community and Personal Service Worker	8.7	9.4		10.5		9.5		8.2	
Clerical and Administrative Worker	12.5	10.8		10.4		10.6		11.9	
Sales Worker	8.9	9.8		5.9		10.6		7.3	
Machinery Operator and Driver	5.2	4.8		2.9		5.2		3.4	
Labourer	7.7	8.7		5.3		9.3		7.0	
Missing	0.5	0.7		0.6		0.8		0.6	
Industry of main job[4]			<0.001		<0.001		<0.001		<0.001
Agriculture	4.2	2.7		3.1		2.8		2.3	
Manufacturing	9.4	9.7		9.4		9.6		10.2	
Construction	9.8	7.8		9.3		7.2		10.1	
Wholesale Trade	4.6	4.2		3.2		4.1		5.1	
Retail Trade	9.8	10.9		7.3		11.9		7.2	
Hospitality	4.3	9.3		7.9		9.9		5.8	
Logistics	3.8	3.9		3.2		4.1		3.3	
Media & Finance	6.9	7.5		6.4		7.7		6.8	

Categorical variable	Reference group	Level 1 Ethnic Communities		Level 2 Ethnic Communities					
	Sole NZ European	All Ethnic Communities		Continental European		Asian		MELAA+[1]	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Professional Services	9.0	9.9		11.4		9.5		11.2	
Administrative Services	2.5	3.2		2.7		3.3		3.4	
Public Administration	8.3	5.5		7.2		5.2		6.5	
Education	10.1	6.6		12.4		5.8		8.8	
Healthcare	10.8	12.9		11.3		13.3		11.4	
Arts & Recreation	5.8	4.6		4.6		4.3		6.8	
Missing	0.7	1.2		0.7		1.3		1.0	
Full-time/part-time status			<0.001		0.577		<0.001		0.003
Full-time	82.6	85.2		83.3		85.3		85.3	
Part-time	17.4	14.8		16.7		14.7		14.7	
Employment relationship in main job			<0.001		0.284		<0.001		0.006
Permanent employee	93.7	91.4		92.6		91.2		92.1	
Casual employee	2.9	4.5		2.9		4.7		3.7	
Fixed term employee	2.1	2.2		2.8		2.2		2.6	
Seasonal employee	0.7	0.5		0.7		0.5		S	
Temporary employee	0.4	0.7		0.6		0.7		S	
Missing	0.2	0.6		0.5		0.7		S	
Union member in main job			<0.001		0.189		<0.001		<0.001
Not union member	78.6	81.7		80.9		81.4		83.2	
Union member	19.3	15.6		17.3		15.7		14.3	
Missing	2.1	2.7		1.8		2.8		2.5	

Continuous variable	Reference group	Level 1 Ethnic Communities		Level 2 Ethnic Communities					
	Sole NZ European	All Ethnic Communities		Continental European		Asian		MELAA+	
	Mean (standard error)	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test
Age (in years)	40.5 (0.07)	36.9 (0.09)	<0.001	39.0 (0.47)	0.002	36.6 (0.10)	<0.001	37.9 (0.25)	<0.001
Number of dependent children in family	0.7 (0.01)	0.7 (0.01)	0.6683	0.7 (0.04)	0.248	0.7 (0.01)	0.213	0.8 (0.03)	<0.001
Weekly hours worked in main job[5]	37.4 (0.07)	36.9 (0.09)	<0.001	37.0 (0.39)	0.384	36.8 (0.09)	<0.001	37.5 (0.24)	0.653
Usual hours worked last week in main job	37.6 (0.07)	37.0 (0.08)	<0.001	37.2 (0.40)	0.369	36.9 (0.09)	<0.001	37.7 (0.23)	0.690
Actual hours worked last week in main job	34.7 (0.08)	35.0 (0.09)	0.0194	35.0 (0.41)	0.413	34.9 (0.11)	0.163	35.6 (0.26)	0.002
Job tenure in main job (in weeks)	338.2 (2.23)	203.4 (2.51)	<0.001	237.6 (9.93)	<0.001	204.0 (2.68)	<0.001	184.1 (5.64)	<0.001

Continuous variable	Reference group	Level 1 Ethnic Communities		Level 2 Ethnic Communities					
	Sole NZ European	All Ethnic Communities		Continental European		Asian		MELAA+	
	Mean (standard error)	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test
No. months employed over past 12 months	11.4 (0.01)	11.1 (0.02)	<0.001	11.1 (0.08)	<0.001	11.1 (0.02)	<0.001	11.0 (0.04)	<0.001
Total weekly household income ($)	$2,768.60 ($14.09)	$2,703.70 (19.45)	0.0063	$2,669.30 ($59.20)	0.108	$2,687.20 ($22.48)	0.002	$2,824.20 ($48.61)	0.262
Number of observations (weighted)	9,311,500	3,785,100		241,500		3,050,800		510,200	

Symbols:

S = Suppressed.

Notes:

[1] MELAA+ = Middle Eastern, Latin American, and African+. See Stats NZ (2025) for the classification of all ethnic groups.

[2] This category includes both those with and those without adult children or others in the household.

[3] Coded to level 1 (major group) of the *Australian and New Zealand Standard Classification of Occupations*.

[4] Coded to level 1 (division) of the *Australian and New Zealand Standard Industrial Classification 2006* and then collapsed to 14 categories as follows: 'Agriculture' = Agriculture, Forestry, Fishing and Mining; 'Manufacturing' = Manufacturing; 'Construction' = Electricity, Gas, Water, Waste Services and Construction; 'Wholesale Trade' = Wholesale Trade; 'Retail Trade' = Retail Trade; 'Hospitality' = Accommodation and Food Services; 'Logistics' = Transport, Postal and Warehousing; 'Media & Finance' = Information Media, Telecommunications, Financial and Insurance Services, Rental, Hiring and Real Estate Services; 'Professional Services' = Professional, Scientific and Technical Services; 'Administrative Services' = Administrative and Support Services; 'Public Administration' = Public Administration and Safety; 'Education' = Education and Training; 'Healthcare' = Health Care and Social Assistance; 'Arts & Recreation' = Arts, Recreation, and Other Services.

[5] Includes hours on paid leave.

4.2 Pay gap estimates

This section presents the estimates of pay gaps between Ethnic Communities and Sole New Zealand Europeans in graphical form. Each point estimate has a vertical error bar representing a 95% confidence interval which quantifies the level of uncertainty surrounding the estimate due to the fact that these are estimated from samples of employees from each Ethnic Community. Estimates above zero (the dashed line) indicate that the Ethnic Community earns less, on average, than Sole New Zealand Europeans (a positive pay gap indicating a wage penalty for Ethnic Communities). Estimates *below* zero indicate that the Ethnic Community earns *more*, on average, than Sole New Zealand Europeans (a negative pay gap indicating a wage premium for Ethnic Communities). We provide some general commentary around the potential contribution of personal and job-related characteristics (presented in Table 2) to these pay gaps. However, these will be analysed more formally via pay gap decompositions in Section 4.3.

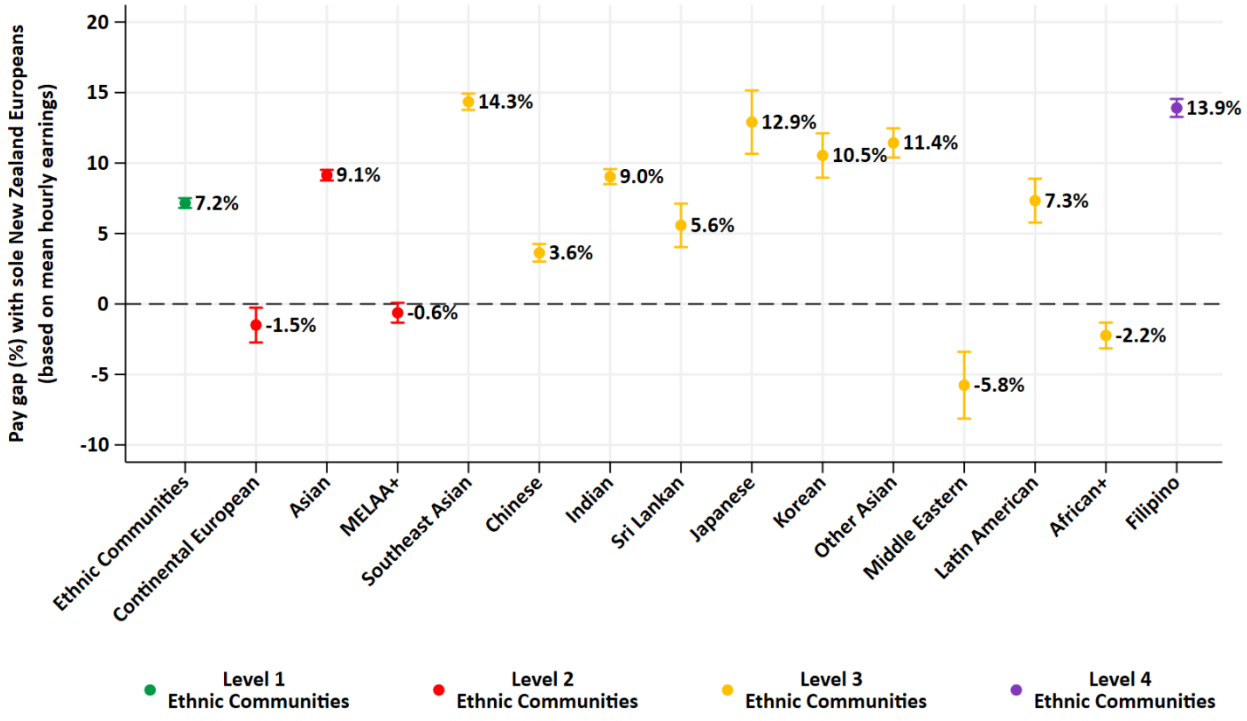
Pay gaps overall

Figure 4 presents estimates of pay gaps using mean hourly earnings for all Ethnic Communities (across Levels 1 to 4) considered in this report and Figure 5 presents the same but using median hourly earnings. Recall that a positive estimate means that the group earns less than the Sole New Zealand European reference group, while negative values indicate a pay premium. Appendix Table 4 contains the full results of the pay gap estimates.

Figure 4 shows that the pay gap between Ethnic Communities overall and Sole New Zealand Europeans is 7.2%, that is, all Ethnic Communities combined earned 7.2% less per hour than Sole New Zealand Europeans, on average over 2016 to 2024. However, this masks considerable heterogeneity among its constituent Level 2 groups. The pay gap for Continental Europeans is -1.5% and for MELAA+ is -0.6%, meaning a pay gap that favours these Ethnic Communities (a wage premium). In contrast, Asians have a wage penalty of 9.1%, and because they are a much larger population than the other Level 2 groups, this leads to a wage penalty for Ethnic Communities overall.

There is further variation within the Level 2 Asian and MELAA+ categories. Among Asians, pay gaps at Level 3 are largest for Southeast Asians (14.3%), followed by Japanese (12.9%), Other Asian (11.4%), and Korean (10.5%), and are smallest among Chinese (3.6%) and Sri Lankan (5.6%). The Level 4 Filipino group have a similar pay gap (13.9%) to the overall Southeast Asian pay gap. Among MELAA+, there are wage premiums for Middle Eastern (-5.8%) and African+ (-2.2%) but a wage penalty for Latin Americans (7.3%).

Figure 4. Pay gaps in mean real hourly earnings over 2016 to 2024 between Ethnic Communities (classified at different levels) and Sole New Zealand Europeans

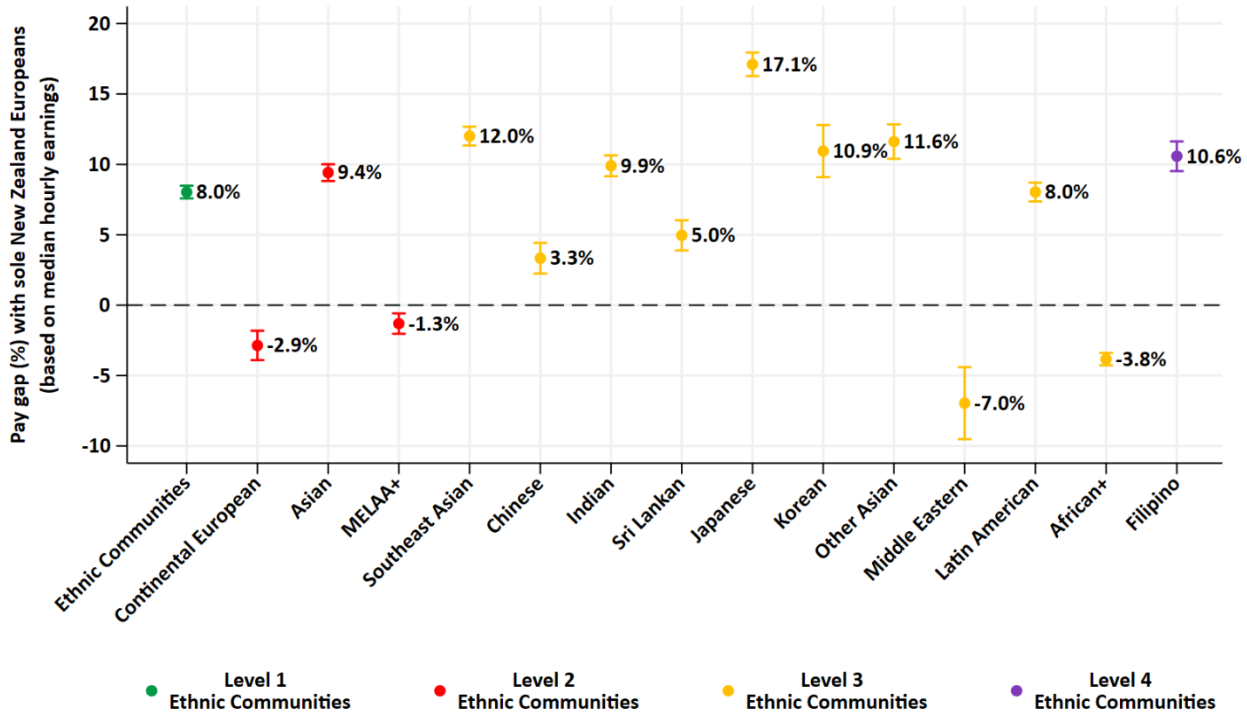


Source: Authors' calculations using HLFS data from the Integrated Data Infrastructure.

In general, pay gaps relative to Sole New Zealand Europeans are favourable for Continental European, Middle Eastern, and African+ groups (at least at Level 3, noting that Level 4 may reveal further variation), while they are unfavourable for all Asian ethnic groups (at least to Level 3) and for Latin Americans.

Figure 5 displays pay gaps using *median* hourly earnings and shows a similar pattern to Figure 4. The pay gaps based on median earnings *increase* for Ethnic Communities with wage premiums based on mean pay (Continental European, Middle Eastern, and African+). Among the Level 3 Asian groups and Latin Americans, pay gaps tend to be about the same as Figure 4 or a little higher.

Figure 5. Pay gaps in median real hourly earnings over 2016 to 2024 between Ethnic Communities (classified at different levels) and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.

Pay gaps by sex

We now report estimates of pay gaps by sex, presented in three ways: men versus men, women versus women, and women versus men. Figure 6 displays pay gaps in mean hourly earnings between men from Ethnic Communities and Sole New Zealand European men, Figure 7 reports the same for women from Ethnic Communities versus Sole New Zealand European women, and Figure 8 reports pay gaps between women from Ethnic Communities and Sole New Zealand European men. Pay gaps tend to be larger for men and smaller for women, in both directions: for those ethnic groups with wage premiums, men tend to be driving this with women from these groups either having no significant pay gap or even a wage penalty, while for those ethnic groups with wage penalties, men tend to have larger penalties than women.

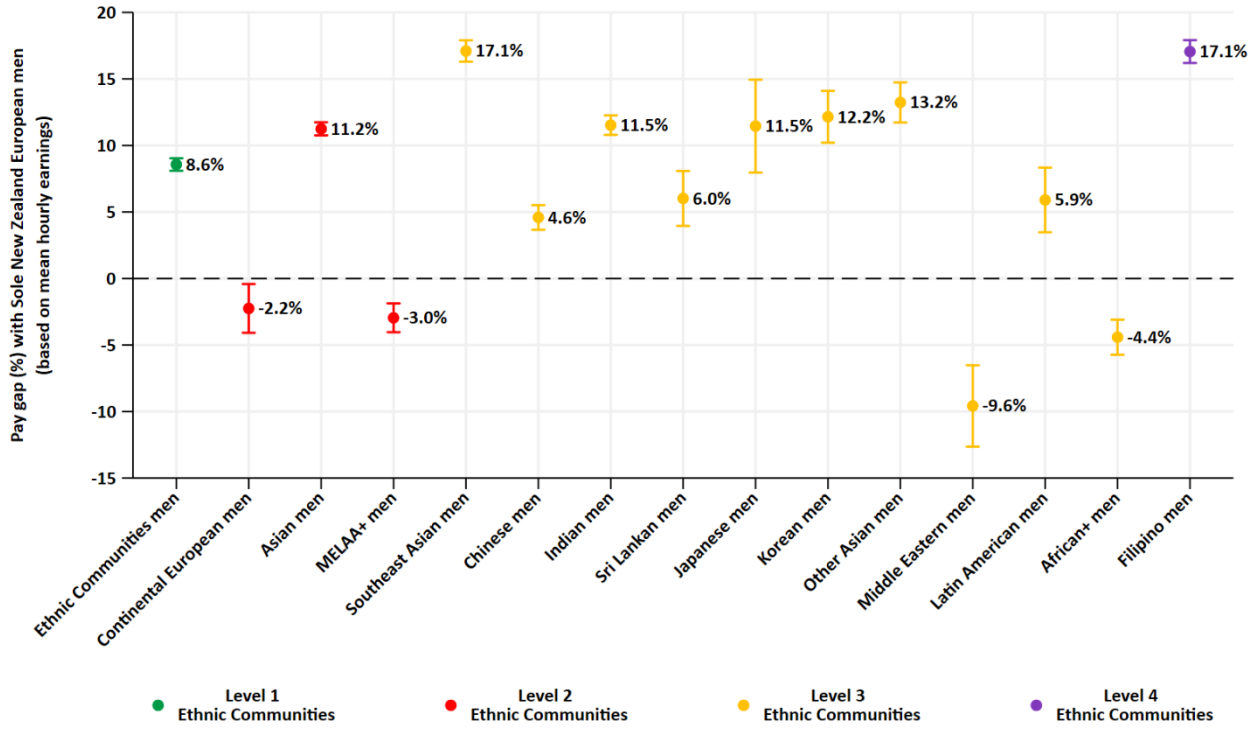
Figure 6 shows that at Level 1, men from all Ethnic Communities combined earned 8.6% less per hour than Sole New Zealand European men over 2016 to 2024. However, this average masks substantial variation at the more disaggregated levels.

Asian men

Men from some groups face particularly large pay gaps. Among Asian subgroups, Southeast Asian men and Filipino men have the largest gaps, both at 17.1%, followed by Other Asian (13.2%), Korean (12.2%), and Indian and Japanese men (both 11.5%). Asian men overall face a pay gap of 11.2%. These gaps are especially striking given that many of these groups – particularly Indian, Korean, and Filipino men – have high educational attainment, high rates of full-time employment, and are heavily represented in professional and healthcare occupations (which are relatively highly paid) (see Table 2).

Chinese men face a smaller, but still significant, pay gap of 4.6% and Sri Lankan men have a gap of 6.0%. Across all Asian subgroups, the size of the gap does not appear to be well explained by observed characteristics such as education, work hours, or occupation – however, this will be more formally examined in Section 4.3.

Figure 6. Pay gaps in mean real hourly earnings over 2016 to 2024 between men from Ethnic Communities (classified at different levels) and Sole New Zealand European men



Source: Authors' calculations using data from the Integrated Data Infrastructure.

MELAA+ and Continental European men

Among MELAA+ men, there is again variation. As a group, MELAA+ men have a wage premium of 3.0%. This is driven by high wages for Middle Eastern men, who earn 9.6% more than Sole New Zealand European men, and African+ men, who earn 4.4% more. Both groups have solid representation in professional

occupations, higher education levels, and, in the case of African+ men, high full-time work rates (see Table 2).

Continental European men also earn more than Sole New Zealand European men, with a wage premium of 2.2%, consistent with earlier findings (Table 2) showing similar demographic and occupational profiles, but stronger presence in certain high-paying sectors, such as Construction and Trades. In contrast, Latin American men face a moderate pay gap of 5.9%, despite a strong presence in full-time work.

Taken together, these results show that pay gaps among men vary substantially both across and within ethnic groups. Men of Southeast Asian (including Filipino) and Other Asian ethnicity face some of the largest penalties despite high labour market participation and skill levels.

Figure 7 presents mean hourly pay gaps between women from various Ethnic Communities and Sole New Zealand European women. At Level 1, women from all Ethnic Communities combined earned 6.1% less per hour than Sole New Zealand European women over 2016 to 2024. This is a smaller gap than that observed for men (8.6%), suggesting that pay disparities are somewhat less pronounced for women. However, substantial variation remains across and within subgroups.

Asian women

Asian women face a pay gap of 7.2%, somewhat smaller than the gap for Asian men (11.2%). The largest pay gaps among Asian subgroups are for Southeast Asian (11.5%), Japanese (11.3%), Filipino (10.8%), Other Asian (10.2%), and Korean (9.1%) women. These are also the same subgroups where men face substantial gaps. That Filipino women have a pay gap of 10.8% is notable given their high rates of full-time employment and significant concentration in the Healthcare sector.

Indian (7.1%) and Sri Lankan (7.8%) women also experience significant pay gaps. Among men, the gap for Indian men was slightly larger (11.5%), while for Sri Lankan men it was slightly smaller (6.0%). Chinese women, with a pay gap of 2.1%, fare slightly better, and the gap is smaller than for Chinese men (4.6%). This group also reports high educational attainment (Table 2).

MELAA+ and Continental European women

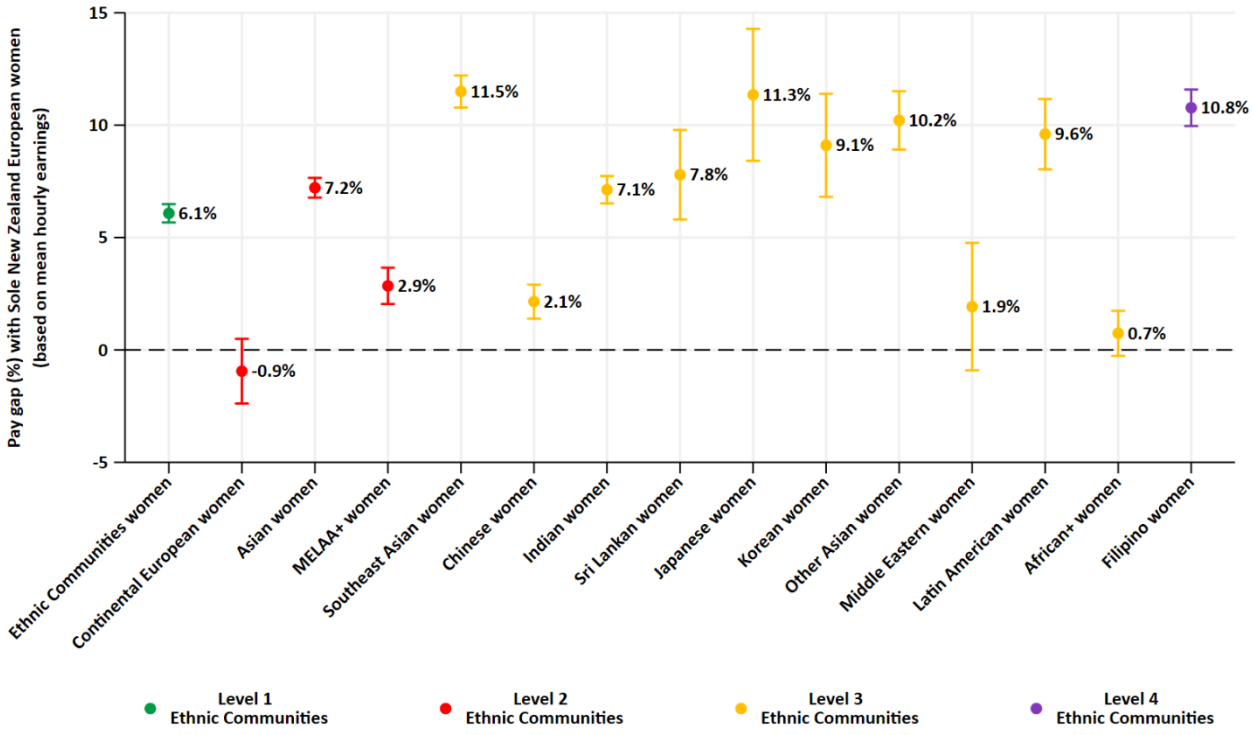
As a group, MELAA+ women face a smaller pay gap (2.9%) than Asian women, and this group-level pattern mirrors the pattern among men, where MELAA+ men as a whole had a wage premium of 3.0%. However, subgroup variation again matters.

For example, Middle Eastern women have a small pay gap (1.9%), whereas Middle Eastern men earned significantly more than Sole New Zealand European men (-9.6%). Similarly, African+ women have a very small pay gap (0.7%), while African+ men earned 4.4% more than Sole New Zealand European men.

Latin American women face a substantial pay gap (9.6%), which is actually larger than Latin American men (5.9%). As with Latin American men, Latin American women tend to be concentrated in lower-paid sectors, such as Hospitality and Administrative Services.

Continental European women are the only female group with a wage premium (-0.9%, albeit not statistically significant), consistent with results for Continental European men (-2.2%). This group has a demographic and occupational profile close to Sole New Zealand Europeans but with a stronger presence in certain skilled trades and professional roles, along with long average job tenure and high levels of permanent employment (Table 2).

Figure 7. Pay gaps in mean real hourly earnings over 2016 to 2024 between women from Ethnic Communities (classified at different levels) and Sole New Zealand European women



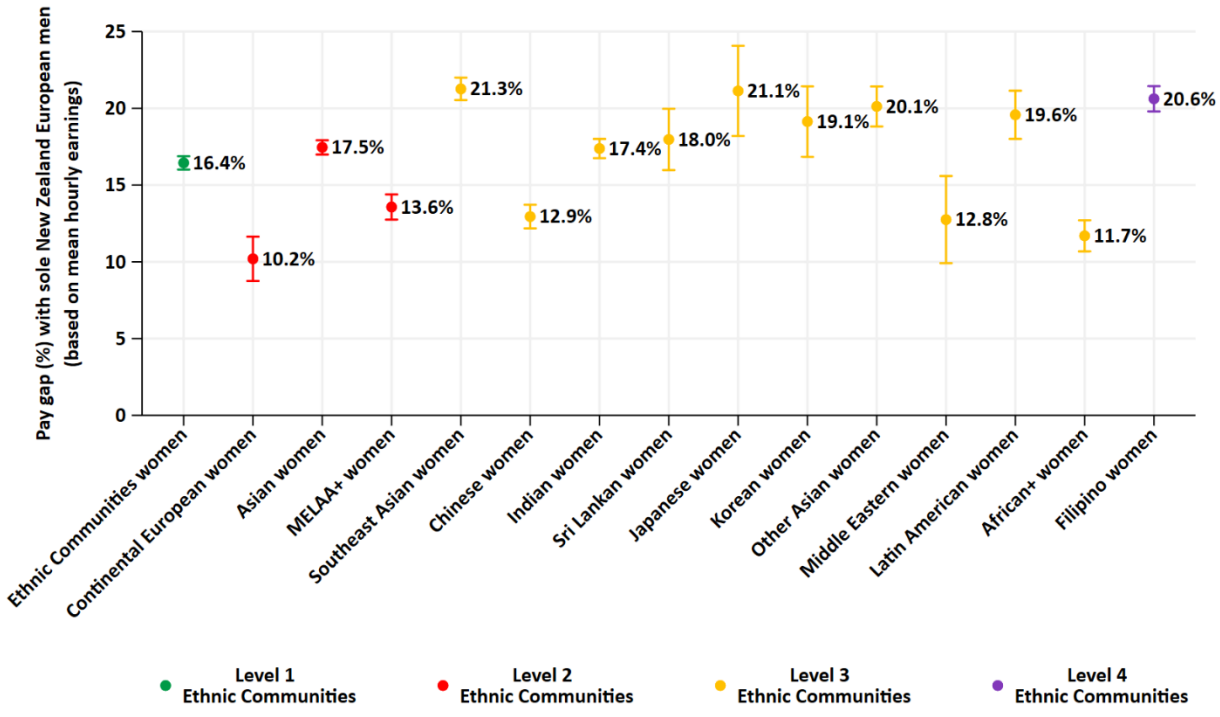
Source: Authors' calculations using data from the Integrated Data Infrastructure.

Figure 8 presents mean hourly pay gaps between women from Ethnic Communities and Sole New Zealand European men. All pay gaps are wage penalties and significantly different from zero. At Level 1, women from all Ethnic Communities combined earned 16.4% less per hour than Sole New Zealand European men over 2016 to 2024. This is a considerably larger pay gap than the 'women versus women' comparison, indicating that ethnic pay gaps compound when combined with the gender pay gap.

At Level 2, Asian women have the largest pay gap with Sole New Zealand European men at 17.5%, followed by MELAA+ women at 13.6% and Continental European women at 10.2%. At Levels 3 and 4, the smallest

pay gaps are observed for African+ (11.7%), Middle Eastern (12.8%), and Chinese (12.9%) women, while the largest gaps are among Southeast Asian women (21.3%) and their Filipino subgroup (20.6%), Japanese women (21.1%), and Other Asian women (20.1%).

Figure 8. Pay gaps in mean real hourly earnings over 2016 to 2024 between women from Ethnic Communities (classified at different levels) and Sole New Zealand European men



Source: Authors' calculations using data from the Integrated Data Infrastructure.

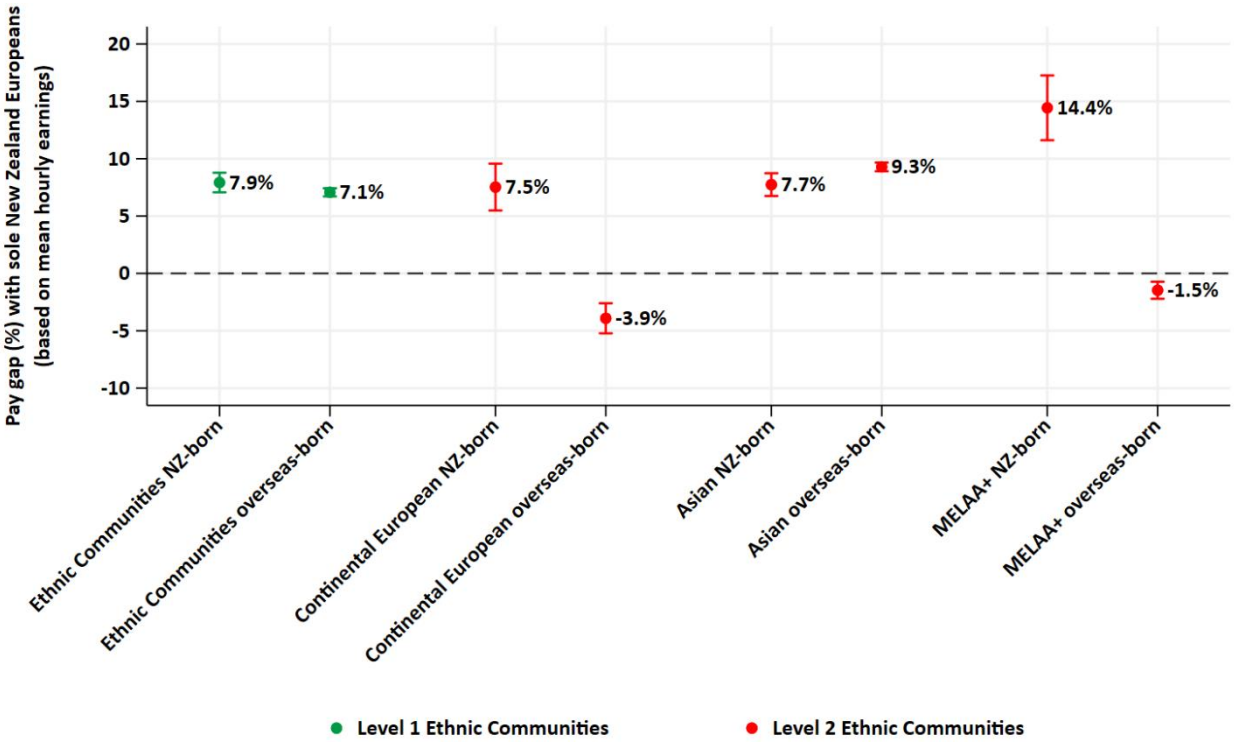
Pay gaps by place of birth

We now report estimates of pay gaps broken down by place of birth. Figure 9 displays pay gaps in mean hourly earnings for Level 1 and Level 2 Ethnic Communities by whether they were born in New Zealand or overseas, compared to Sole New Zealand Europeans. Figure 9 displays the same but for Level 3 and 4 Ethnic Communities.

Disaggregating pay gaps by place of birth is important because migration experience can shape labour market outcomes in multiple ways. Migrants may face barriers such as limited recognition of overseas qualifications, unfamiliarity with local labour market systems, language barriers, or a lack of professional networks - factors that can affect earnings regardless of skill or education level. Meanwhile, New Zealand-born members of Ethnic Communities are more likely to have had their education and work experience within New Zealand and may face fewer such barriers. Comparing pay gaps by place of birth therefore

helps to unpack the extent to which earnings differences may be driven by migration-related factors, versus those that persist even among people who have grown up and been educated in the same system.

Figure 9. Pay gaps in mean real hourly earnings over 2016 to 2024 between Level 1 and Level 2 Ethnic Communities and Sole New Zealand Europeans, by place of birth

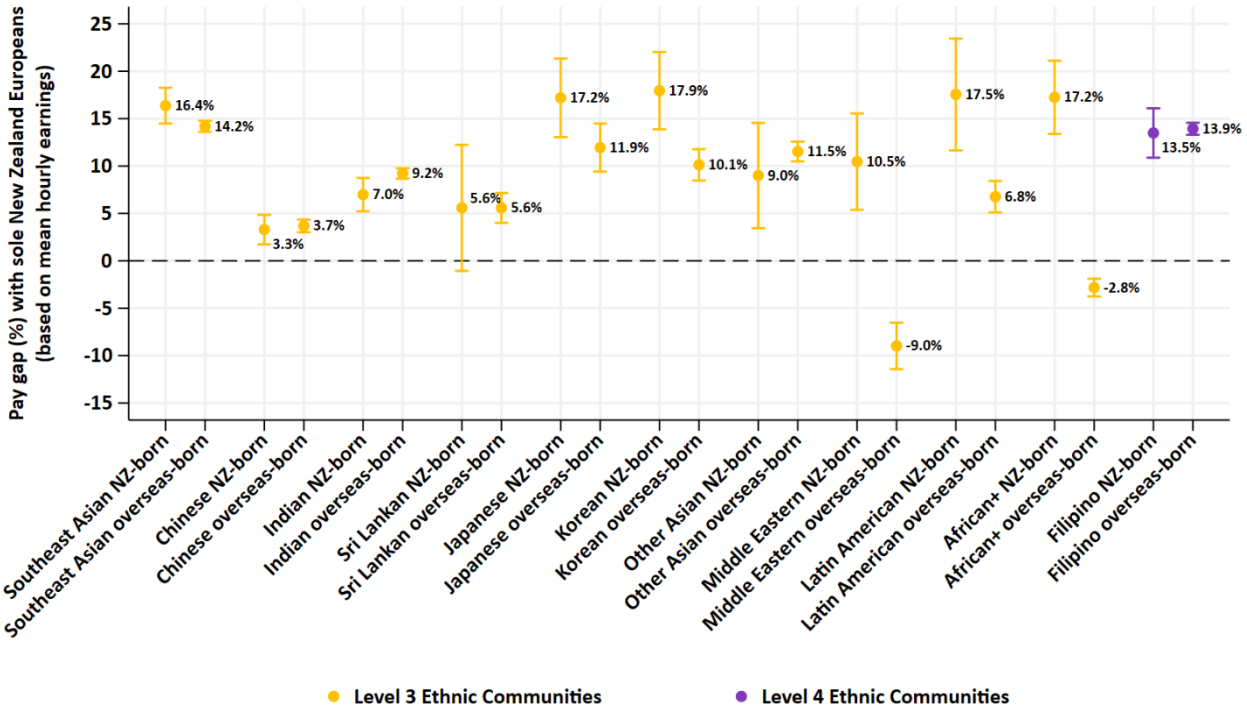


Source: Authors' calculations using data from the Integrated Data Infrastructure.

Figure 9 show that, for Ethnic Communities overall, there is little difference in the pay gaps experienced by those born in New Zealand (7.9%) compared to those born overseas (7.1%). However, at Level 2 we can see that this result is driven primarily by Asians, where the pay gap for New Zealand-born Asians (7.7%) is similar (albeit slightly lower than) the pay gap for overseas-born Asians (9.3%). In contrast, there are stark differences for Continental Europeans and MELAA+ between their New Zealand-born and overseas-born subpopulations, namely wage premiums for the overseas-born (3.9% premium for Continental Europeans and 1.5% premium for MELAA+) and wage penalties for the New Zealand-born (7.5% for Continental European and a considerable 14.4% for MELAA+).

Figure 10 shows that the overall pattern for Asians of broadly similar pay gaps between New Zealand-born and overseas-born (or slightly higher gaps among overseas-born) generally holds true among its constituent Level 3 and 4 subgroups (Koreans are an exception, having a significantly lower pay gap among overseas-born (10.1%) compared to New Zealand-born (17.9%)).

Figure 10. Pay gaps in mean real hourly earnings over 2016 to 2024 between Level 3 and Level 4 Ethnic Communities and Sole New Zealand Europeans, by place of birth



Source: Authors' calculations using data from the Integrated Data Infrastructure.

The patterns among Asians may in part reflect the more recent arrival of the Asian population compared to the more established and longer-settled Continental European and MELAA+ populations whose overseas-born subpopulations have gained more local experience in New Zealand's labour market compared to the overseas-born Asian population. The Continental European and MELAA+ overseas-born populations may also be more highly-skilled than overseas-born Asians, on average, given changes to immigration policy since 2012 towards approving more medium-skilled and lower-skilled migrants, especially on temporary work visas (New Zealand Productivity Commission, 2022).

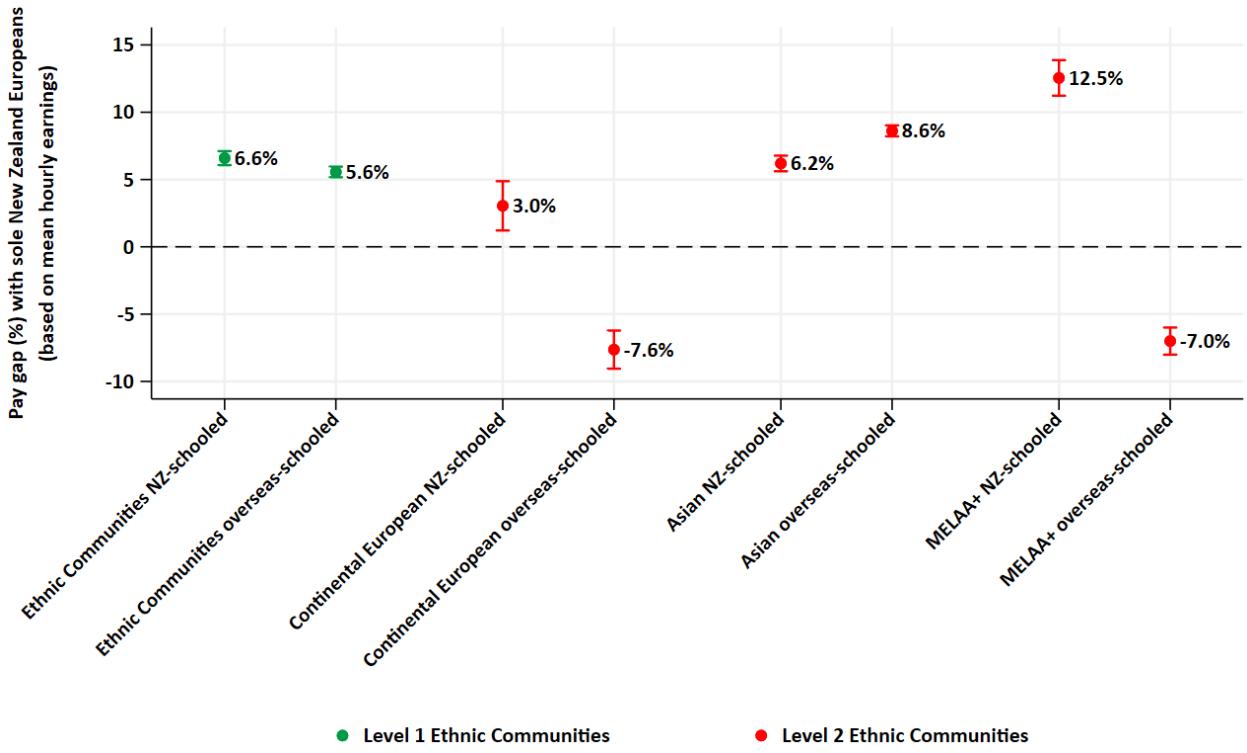
The overall pattern for MELAA+ of wage penalties for New Zealand-born and wage premiums for overseas-born holds true for Middle Eastern and African+, but not for Latin Americans, whose New Zealand-born and overseas-born subpopulations both have wage penalties, but the penalty is much larger for New Zealand-born (17.5% compared to 6.8% for overseas-born).

Pay gaps by place of schooling

We now report estimates of pay gaps broken down by place of schooling. Figure 11 displays pay gaps in mean hourly earnings for Level 1 and Level 2 Ethnic Communities by whether their highest school qualification is a New Zealand qualification (NCEA or its earlier equivalents, which we call 'New Zealand-

schooled') or an "Overseas secondary school qualification" (which we call 'overseas-schooled'), compared to Sole New Zealand Europeans. Figure 12 displays the same but for Level 3 and 4 Ethnic Communities.

Figure 11. Pay gaps in mean real hourly earnings over 2016 to 2024 between Level 1 and Level 2 Ethnic Communities and Sole New Zealand Europeans, by place of schooling



Source: Authors' calculations using data from the Integrated Data Infrastructure.

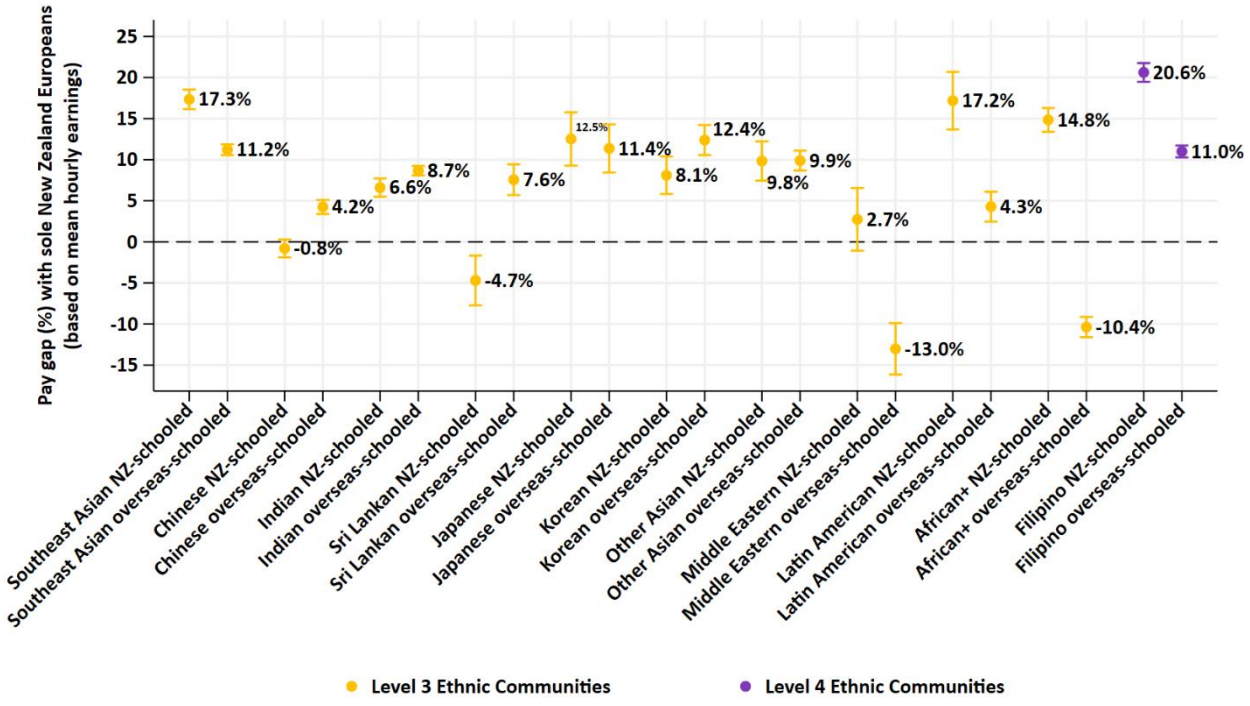
Examining pay gaps by place of schooling provides an important additional lens beyond place of birth. While birthplace may indicate early life context or immigration background, it does not fully capture whether individuals were educated within the New Zealand schooling system, which may more directly influence labour market outcomes. New Zealand-schooled individuals are more likely to have acquired language, cultural familiarity, social networks, and qualifications recognised and valued in the local labour market. These factors can affect how employers assess skills and "fit" within a workplace. In contrast, those who were schooled overseas may face challenges related to the recognition of qualifications, differences in training or work-readiness, or biases related to perceived skill equivalence. By disaggregating pay gaps along this dimension, we can better understand whether educational background mediates the observed ethnic disparities in earnings.

Figure 11 shows a similar pattern to the 'place of birth' results. For Ethnic Communities overall, there is little difference in pay gaps between the New Zealand-schooled (6.6%) and the overseas-schooled (5.6%) subpopulations. But results at Level 2 show that being overseas-schooled is linked to wage premiums for

Continental Europeans (7.6%) and MELAA+ (7.0%) — premiums that are larger than those for the overseas-born — but not for Asians, for whom being overseas-schooled is linked to a wage penalty (8.6%, a similar size to the penalty among Asian overseas-born).

There is some variation among the Level 3 and 4 Asian subgroups (Figure 12). Overseas-schooled Southeast Asians (including the Filipino population within it) have lower wage penalties than their New Zealand-schooled counterparts, while Chinese and Sri Lankans schooled in New Zealand have wage premiums compared to Sole New Zealand Europeans (although the former is not statistically significant).

Figure 12. Pay gaps in mean real hourly earnings over 2016 to 2024 between Level 3 and Level 4 Ethnic Communities and Sole New Zealand Europeans, by place of schooling



Source: Authors' calculations using data from the Integrated Data Infrastructure.

Compared to the overall MELAA+ results, the wage penalty from being schooled in New Zealand is considerably smaller (in fact, not significantly different from zero), and the wage premium from being overseas-schooled is considerably larger, among the Middle Eastern population. Latin Americans again buck the overall MELAA+ trend by having wage penalties for both their New Zealand-born (17.2%) and overseas-born (4.3%) subgroups.

Overall, being overseas-born and (especially) being overseas-schooled is linked to wage premiums among Continental Europeans, Middle Eastern, and African+. Among Asians, pay gaps by place of birth and place of schooling vary widely by ethnic subgroup, although the overall pattern is generally for wage penalties regardless of place of birth or place of schooling (the Sri Lankan population being a notable exception).

4.3 Pay gap decompositions

This section presents the results from the Blinder-Oaxaca decompositions of each pay gap. The Blinder-Oaxaca decomposition is a statistical method used to understand why there are differences in average pay between two groups. The method apportions the pay gap into a component that is statistically attributable to average differences between the two groups in earnings-related characteristics such as differences in age, education, and occupation (the 'explained component') and a component that is not accounted for by these differences (the 'unexplained component'). Figure 13 to Figure 27 below are charts depicting the decomposition results for each Ethnic Community in turn. The charts are presented starting from Level 1 for Ethnic Communities overall, to Level 2 results, and then the more disaggregated Level 3 and 4 results.

The charts have a horizontal axis at the top representing the size and direction of the pay gap (the approximate percentage difference in hourly pay). The mid-point represents no pay gap (zero percent) between the Ethnic Community and Sole New Zealand Europeans; the right side of the axis represents a pay gap favouring Sole New Zealand Europeans (pay gap has a positive value); and the left side of the axis represents a pay gap favouring the Ethnic Community (pay gap has a negative value).

The actual estimated pay gap, after adjusting for selection bias using the Heckman correction, is shown as the orange bar at the bottom of each chart. The Heckman correction accounts for potential bias in each sample due to differences in labour force participation. That is, it adjusts for the fact that employment is not random: those actually observed earning wages may differ systematically from those not in paid work and for reasons that relate to the very factors we include in our analysis (educational attainment, language ability, partnership status, childcare responsibilities, etc.). Moreover, such selection bias may differ across the ethnic groups that we compare (see Section 3.2). In this way, adding the Heckman correction helps ensure that the decomposition reflects true differences in wage determinants rather than artefacts of who is included in the sample. Consequently, the Heckman-corrected pay gaps are not necessarily the same as the raw pay gap estimates presented in Section 4.2. This does not mean that the raw pay gaps are erroneous. Rather, the raw pay gaps describe the *actual differences* in hourly pay that exist in the labour market between a given Ethnic Community and Sole New Zealand Europeans, whereas the Heckman correction is useful for understanding how much of the raw pay gap is driven by compositional differences in who chooses to participate in the labour market between the two groups.

The pay gaps are decomposed into six separate pay gaps represented by the six blue bars. Each blue bar represents the percentage difference in hourly pay that arises because of ethnic differences in that set of characteristics. For example, the first blue bar in each chart – labelled 'Demographic differences' –

represents the pay gap that arises due to differences in demographic characteristics (e.g., age, sex, and country of birth) between Sole New Zealand Europeans and the particular Ethnic Community..[5]

The first five blue bars are all the explained components of the overall pay gap (the orange bar). The sixth blue bar – labelled 'Unexplained differences' – represents the unexplained component of the overall pay gap, that is, unexplained differences that contribute to the overall pay gap.

These differences in characteristics may pull in either direction: some differences may favour the Ethnic Community (in which case the bar pulls to the left and has a negative value), some may favour Sole New Zealand Europeans (in which case the bar pulls to the right and has a positive value), and these will all partially offset each other, leaving the net difference in pay (the Heckman-corrected pay gap) that we estimate from our data. Statistically significant differences are indicated by stars in the bar. The full decomposition results are presented in Appendix Table 5.

Ethnic Communities overall

Figure 13 shows that Ethnic Communities as a whole have a 6.4% pay gap with Sole New Zealand Europeans once adjusted for selection into the labour force using the Heckman correction. This 6.4% pay gap is decomposed as follows: There is a 0.3% pay gap attributable to demographic differences between Ethnic Communities and Sole New Zealand Europeans that favour the latter. There is a 1.6% pay gap attributable to job-related differences (mainly occupational differences) favouring Sole New Zealand Europeans. Regional differences (-2.2% pay gap) and educational differences (-1.6% pay gap) favour Ethnic Communities and thus negatively contribute to the overall 6.4% pay gap. Put differently, there would be an *even larger* pay gap favouring Sole New Zealand Europeans if Ethnic Communities were not more favourably distributed geographically across New Zealand, and more highly qualified on average, than Sole New Zealand Europeans. Industry differences generate no pay gap (0.0% pay gap), so make no contribution to the overall pay gap. Finally, there is an 8.3% pay gap arising from unexplained differences, which is the unexplained component of the overall pay gap. The five explained components and the unexplained component net out to the 6.4% overall pay gap.

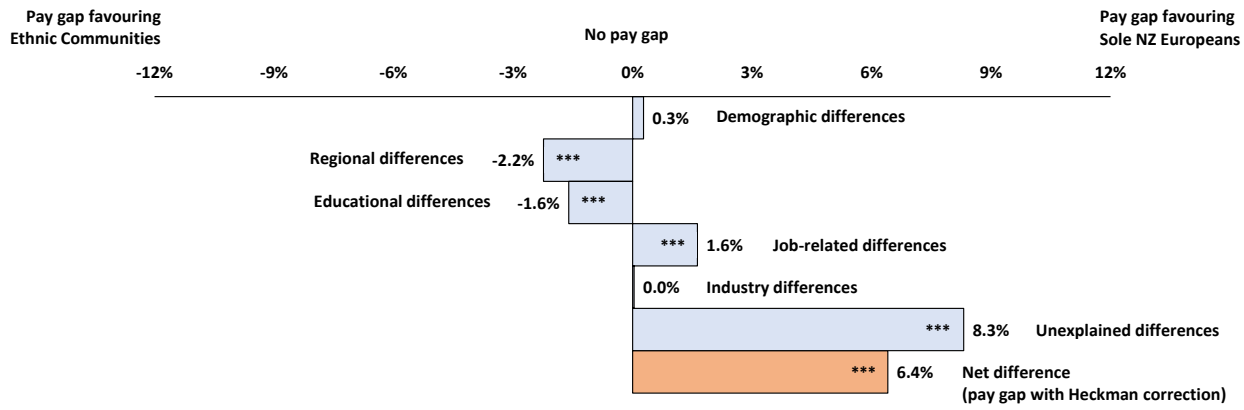
Which specific characteristics contribute to the overall pay gap and which do not? Examination of the more detailed decomposition results (see Appendix Table 5) reveals that the older age distribution of Sole New

[5] As discussed in section 3.2, household characteristics do not feature in the decomposition results because they act as the 'exclusion restriction' which is a variable or set of variables included in the calculation of selection bias but excluded from the prediction of wages in order to achieve 'identification' of the decomposition model (that is, identify the true effect of ethnic differences in characteristics on ethnic pay gaps).

Zealand Europeans contributes to a pay gap in their favour, but this is partially offset by the age-squared term which favours Ethnic Communities, reflecting the fact that there are diminishing returns to earnings as people age – wage growth tends to slow as people get older – so some of the wage advantage that Sole New Zealand Europeans gain from being an older population is offset by their diminishing returns to being older. Differences in English language ability make a small but statistically significant contribution to a pay gap favouring Sole New Zealand Europeans, while differences in place of birth do not significantly contribute to the pay gap either way. Together, these demographic differences favour Sole New Zealand Europeans but not significantly so (that is, the 0.3% pay gap that arises due to demographic differences is statistically indistinguishable from zero).

Regional differences are driven overwhelmingly by Ethnic Communities' concentration in Auckland where wages are higher on average, which generates a significant pay gap in their favour. Educational differences favour Ethnic Communities reflecting their higher proportions with postgraduate and bachelor's degrees.

Figure 13. Results of Blinder-Oaxaca decomposition of pay gap between Ethnic Communities and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

Job-related differences contribute to a pay gap favouring Sole New Zealand Europeans, primarily because they have larger shares employed in higher-paying managerial occupations and longer job tenure (about 6.5 years on average for Sole New Zealand Europeans compared to 3.9 years for Ethnic Communities). Differences in having a permanent job and differences in union membership do not significantly contribute to the pay gap between Ethnic Communities and Sole New Zealand Europeans. Other job-related differences make significant but small contributions that generally favour Sole New Zealand Europeans.

There are significant differences in industry of employment between Ethnic Communities and Sole New Zealand Europeans, but these have the effect of 'cancelling each other out' with respect to the pay gap between them. Specifically, Ethnic Communities have larger shares working in the lower-paid Hospitality

and Retail industries, but these disadvantages are offset by them also having larger shares working in the higher-paid 'Media and Finance' (telecommunications, financial and insurance services, real estate, etc.) and 'Professional Services' (professional, scientific, and technical services) industries (see Table 2 for the proportions working in these industries). Consequently, industry differences between the two groups collectively make no significant contribution to the pay gap between them.

Finally, there are unexplained differences that give rise to a large pay gap favouring Sole New Zealand Europeans. As discussed in Section 3.2, this unexplained component could be due to important earnings-related personal or job-related characteristics that have been left out of our decomposition model (and they may not be observed anywhere in the HLFS or the IDI). They may be due to Ethnic Communities and Sole New Zealand Europeans having different preferences, on average, with respect to non-wage aspects of jobs such as the work-life balance afforded by different types of job. But they may also be due to discriminatory differences in the wages that Ethnic Communities and Sole New Zealand Europeans receive for a given level of skills. However, it is important to emphasise that we cannot know, based on the decomposition results alone, which of these explanations – or what combination – accounts for the unexplained component. By definition, this portion of the pay gap remains unexplained.

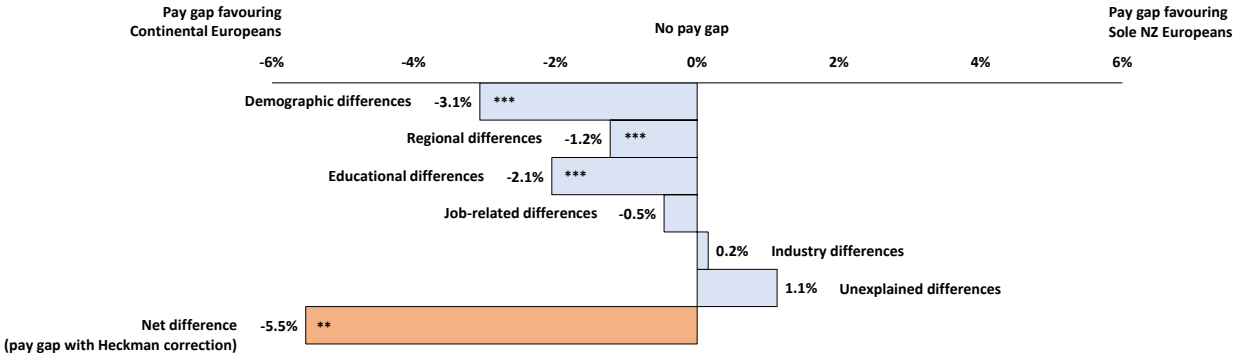
Continental European

Figure 14 shows that, after adjusting for selection into the labour force using the Heckman correction, Continental Europeans earn 5.5% more per hour than Sole New Zealand Europeans, on average. This represents a wage premium rather than a gap, and is one of the few cases where a statistically significant advantage exists in favour of an Ethnic Community.

The decomposition results suggest that this wage premium is largely explained by observed characteristics. There is a 3.1% pay gap arising from demographic differences that favour Continental Europeans. While they have a slightly lower average age than Sole New Zealand Europeans, they have a smaller share in the older working ages when wage growth slows, so the age-squared term contributes to a pay gap in their favour. Continental Europeans also have a higher share who are overseas-born and this turns out to be an advantage with respect to their pay, perhaps reflecting New Zealand immigration settings which focus on selecting immigrants based on their skills. Differences in ability to speak English do not make a statistically significant contribution to the pay gap.

There is a 1.2% pay gap arising from regional differences that favour Continental Europeans, primarily due to their strong presence in Auckland (although they are less concentrated in Auckland compared to other Ethnic Communities).

Figure 14. Results of Blinder-Oaxaca decomposition of pay gap between Continental Europeans and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

There is a 2.1% pay gap attributable to educational differences that favour Continental Europeans, reflecting their higher shares with postgraduate and bachelor's degrees and lower shares at pre-degree levels. Job-related differences and industry differences make small and statistically insignificant contributions to the overall pay gap. Finally, there is a 1.1% pay gap attributable to unexplained differences favouring Sole New Zealand Europeans. This represents a modest portion – about 20% – of the overall pay gap and, as discussed previously, could be due to any (or a combination) of ethnic differences in unmeasured skills, labour market bias, or other factors.

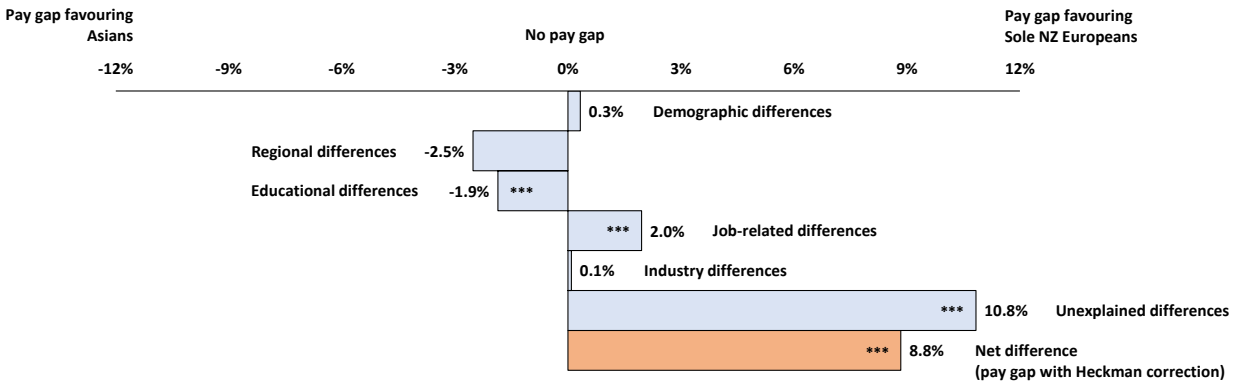
Asian

Figure 15 shows that Asians have an 8.8% pay gap with Sole New Zealand Europeans, after correcting for selection into the labour force. Only a small portion of this gap can be explained by observed differences between the groups.

While Asians' earnings are boosted from having a larger share of males and a smaller share in the older working-age brackets (who face diminishing returns to experience) compared to Sole New Zealand Europeans, these demographic advantages are offset by higher shares who are overseas-born and cannot converse in English, which works in favour of Sole New Zealand Europeans. Consequently, demographic differences make no significant contribution to the pay gap with Sole New Zealand Europeans.

Regional and educational differences give rise to pay gaps favouring Asians of 2.5% and 1.9% respectively, again reflecting Asians' much higher share living in the Auckland region and higher shares with postgraduate and (especially) bachelor's degrees. A pay gap of 2.0% favouring Sole New Zealand Europeans is attributable to job-related differences, primarily Sole New Zealand Europeans' larger share in higher-paying managerial occupations and longer job tenure (about 6.9 years compared to 3.9 years for Asians).

Figure 15. Results of Blinder-Oaxaca decomposition of pay gap between Asians and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

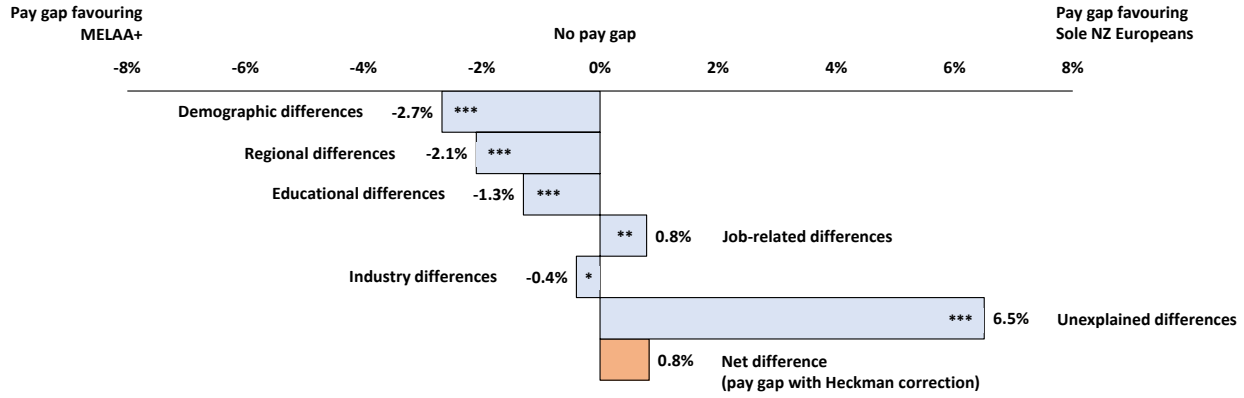
Unexplained differences produce a 10.8% pay gap favouring Sole New Zealand Europeans which exceeds the overall pay gap of 8.8%. This may be because there are important skills or skill-related characteristics that are not captured in our analysis (such as language barriers that may not be captured well by the English language ability variable included in our decomposition, or qualification mismatch among immigrants upon arrival in New Zealand) or because Asian workers are not receiving the same labour market returns for their skills and attributes as Sole New Zealand European workers (perhaps due to Asian immigrants' overseas qualifications not being recognised or being undervalued by some employers, or to discrimination in wage-setting, or other factors).

MELAA+

Figure 16 shows that, after adjusting for selection in the labour force, the pay gap between MELAA+ and Sole New Zealand Europeans is just 0.8%. This small difference, favouring Sole New Zealand Europeans, is not statistically significant, suggesting that, on average, hourly earnings between the two groups are similar once differences in labour force participation are accounted for.

This stands in contrast to the raw (unadjusted) figures presented earlier in Section 4.2, which showed a wage premium for MELAA+. The change in direction implies that the MELAA+ population observed in wage data is a selective subset of the broader working-age MELAA+ group – one that is more likely to be highly educated and strongly attached to the labour market. In other words, MELAA+ individuals in paid work are likely to have stronger employment-relevant characteristics than those not in work, meaning that comparisons based only on employed individuals overstate average earnings for the group as a whole.

Figure 16. Results of Blinder-Oaxaca decomposition of pay gap between MELAA+ and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 ***p<0.01 ***p<0.001

The decomposition shows that most of the observed characteristics actually favour MELAA+ workers relative to Sole New Zealand Europeans. A pay gap of 2.7% favouring MELAA+ is attributable to their more favourable demographic characteristics, primarily a higher share born overseas (an advantage with respect to their pay, in contrast to Asians for whom being overseas-born is a disadvantage) and a lower share in the older age groups who face diminishing returns to experience. Differences in ability to speak English make no significant contribution to the overall pay gap.

As with Continental Europeans and Asians, MELAA+ have more favourable regional and educational characteristics which generate respective pay gaps favouring them of 2.1% and 1.3%, again reflecting the higher shares of MELAA+ living in the Auckland region and with postgraduate and bachelor's degrees, compared to Sole New Zealand Europeans. There is also a small 0.4% pay gap attributable to industry differences favouring MELAA+ reflecting their smaller shares in the lower-paying Agriculture and Retail industries and larger shares in the higher-paying Professional Services industry.

Offsetting these advantages for MELAA+ is a 0.8% pay gap favouring Sole New Zealand Europeans attributable to job-related differences, primarily Sole New Zealand Europeans' higher share in managerial occupations and much longer job tenure (only about 3.5 years for MELAA+). In addition, there is a relatively large pay gap of 6.5% arising from unexplained differences that favour Sole New Zealand Europeans.

Southeast Asian

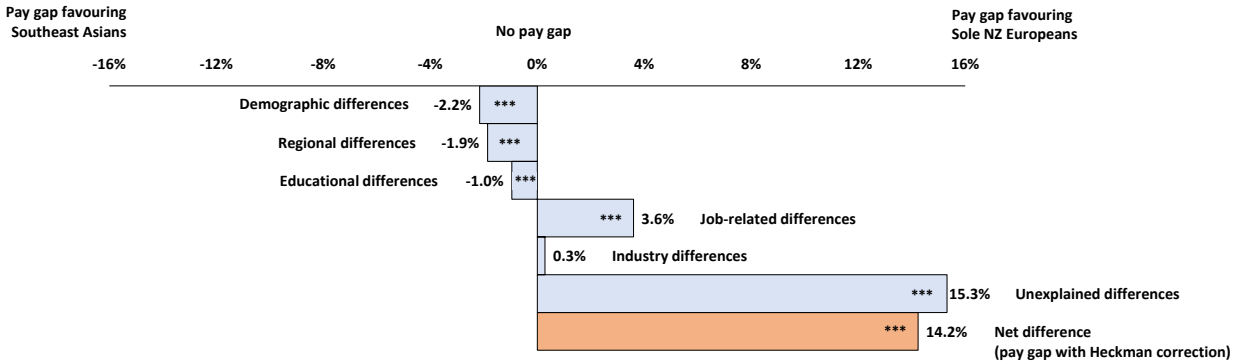
Figure 17 shows that Southeast Asians earn, on average, 14.2% less per hour than Sole New Zealand Europeans, after adjusting for selection into the labour force. This represents the largest adjusted pay gap

among all Ethnic Communities at Levels 1, 2, or 3, eclipsed only by their Level 4 subgroup, Filipinos, who have a 15.8% Heckman-corrected pay gap (discussed in the next section).

Demographic differences give rise to a 2.2% pay gap favouring Southeast Asians, primarily reflecting a higher share of overseas-born and a lower share in the older age groups (when wage growth slows) compared to Sole New Zealand Europeans. Differences in ability to converse in English do not produce any pay gap between the two groups.

Regional and educational differences generate pay gaps favouring Southeast Asians of 1.9% and 1.0% respectively, once again reflecting Southeast Asians' higher share living in the Auckland region and higher shares with bachelor's degrees. However, Southeast Asians (and their Level 4 Filipino subgroup) are the only Ethnic Communities analysed in this report who have a smaller proportion with postgraduate degrees than Sole New Zealand Europeans (9% of Southeast Asians and 7% of Filipinos compared to 11% of Sole New Zealand Europeans). Thus, unlike most other Ethnic Communities, differences in postgraduate educational attainment do not generate pay premiums for Southeast Asians.

Figure 17. Results of Blinder-Oaxaca decomposition of pay gap between Southeast Asians and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

A 3.6% pay gap attributable to job-related differences favours Sole New Zealand Europeans, primarily their much higher share in managerial occupations, lower share in labouring occupations, and longer job tenure, compared to Southeast Asians. While Southeast Asians have a higher share working full-time (86% versus 83% of Sole New Zealand European), this is not enough to overcome the occupational and job tenure differences favouring Sole New Zealand Europeans outlined above.

Southeast Asians have higher shares working in the lower-paying Hospitality and average-paying Healthcare industries, which leads to a small and insignificant pay gap of 0.3% favouring Sole New Zealand

Europeans. Finally, there is a sizable 15.3% pay gap favouring Sole New Zealand Europeans due to unexplained differences with Southeast Asians.

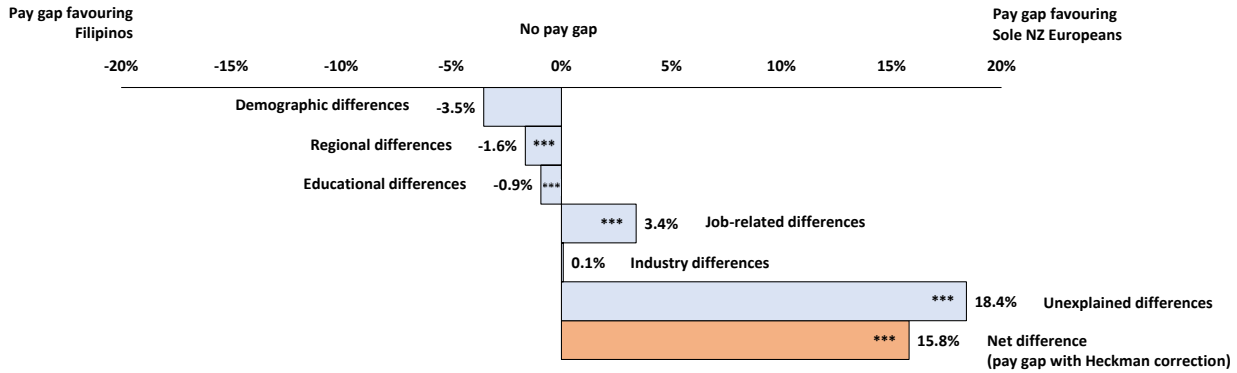
Filipino

Figure 18 shows that Filipino workers earn 15.8% less per hour than Sole New Zealand Europeans, after adjusting for selection into the labour force. This is the largest adjusted pay gap observed across all Ethnic Communities at all levels included in the analysis.

There is a 3.5% pay gap attributable to demographic differences favouring Filipinos, primarily their larger share of males (55% compared to 50% of Sole New Zealand Europeans), smaller share in the older working-age groups (who face diminishing returns to experience), and larger share who were born overseas. Differences in ability to converse in English do not contribute significantly to the pay gap.

Regional and educational differences generate significant pay gaps of 1.6% and 0.9%, respectively, favouring Filipinos, primarily their larger share residing in Auckland and larger share with bachelor's degrees. As noted above, Southeast Asians and Filipinos are the only Ethnic Communities analysed in this report who have a lower share with postgraduate qualifications than Sole New Zealand Europeans (in the case of Filipinos, the difference generates a significant pay gap in favour of Sole New Zealand Europeans).

Figure 18. Results of Blinder-Oaxaca decomposition of pay gap between Filipinos and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

Filipinos benefit from having a larger share employed full-time (89% compared to 83% for Sole New Zealand Europeans) and a larger share employed in technical and trades occupations. But these are more than offset by Sole New Zealand Europeans' larger share employed in managerial occupations, smaller share employed as labourers (Filipinos have about twice the share working in labouring occupations), and longer job tenure. Consequently, there is a 3.4% pay gap favouring Sole New Zealand Europeans that arises due to job-related differences.

While Filipinos and Sole New Zealand Europeans are distributed quite differently across industries — for example, Filipinos have larger shares employed in Healthcare (21% compared to 11% of Sole New Zealand Europeans) and Manufacturing (14% compared to 9% for Sole New Zealand Europeans) — these differences do not translate into a pay gap between them.

There remains a very large 18.4% pay gap attributable to unexplained differences favouring Sole New Zealand Europeans. This may be due to differences in important earnings-related characteristics that are not observed in our data or not included in our analysis, or to the presence of structural disadvantages, such as limited career progression, unrecognised qualifications, language barriers (beyond the ability to speak English), or discrimination – for example, in how caregiving and healthcare support roles (where Filipinos are disproportionately employed) are rewarded in the labour market.

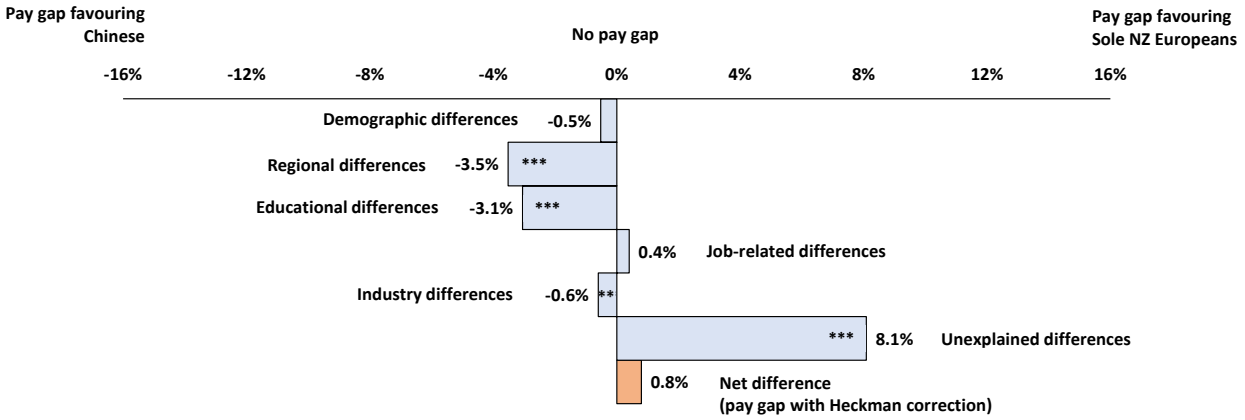
Chinese

Figure 19 shows that, after adjusting for selection into the labour force, Chinese workers earn 0.8% less per hour than Sole New Zealand Europeans, on average. This gap is small and not statistically significant, suggesting near parity in hourly pay once compositional differences in labour market participation are considered.

Compared to Sole New Zealand Europeans, Chinese have over 2.5 times the share living in Auckland where wages tend to be higher, roughly double the share with postgraduate degrees, and nearly double the share with bachelor's degrees, leading to pay gaps attributable to regional and educational differences of 3.5% and 3.1%, respectively, in favour of Chinese. Chinese also have a slightly more favourable distribution across industries; while they have larger shares employed in the lower-paying Retail and Hospitality industries, these are more than offset by larger shares in the higher-paying Media and Finance and Professional Services industries and a lower share in Agriculture, leading to a small but significant 0.6% pay gap attributable to industry differences in their favour.

Demographic differences and job-related differences do not make significant contributions to the pay gap between the two groups. For example, Chinese have a higher share in professional occupations, but this advantage is cancelled out by a lower share in managerial occupations and shorter job tenure, meaning that the net effect of job-related differences on the pay gap is small and statistically insignificant.

Figure 19. Results of Blinder-Oaxaca decomposition of pay gap between Chinese and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

Unexplained differences yield a pay gap of 8.1% favouring Sole New Zealand Europeans. Thus, while Chinese workers are well-qualified, concentrated in high-wage regions, and have an occupational distribution that does not lead to pay disparities with Sole New Zealand Europeans, they do not receive equivalent average pay, pointing to the importance of unobserved or structural factors in shaping labour market outcomes.

Indian

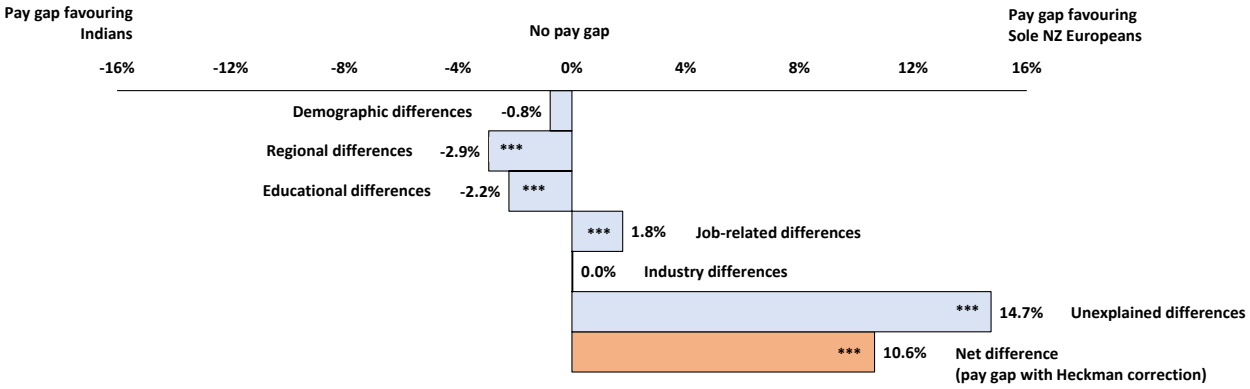
Figure 20 shows that, after correcting for selection into the labour force, Indian workers earn 10.6% less per hour than Sole New Zealand Europeans, on average.

A breakdown of the gap reveals that most observed characteristics actually favour Indian workers. Compared to Sole New Zealand Europeans, Indian workers are much more concentrated in the Auckland region where wages tend to be higher (63% compared to 26% of Sole New Zealand Europeans) and have double the share with postgraduate degrees and a much larger share with bachelor's degrees.

There is a 1.8% pay gap attributable to job-related differences favouring Sole New Zealand Europeans, primarily reflecting Indian workers' smaller share employed in managerial occupations, higher share in sales occupations, and shorter job tenure compared to Sole New Zealand Europeans. Differences in demographic characteristics (including English language ability) make no significant contribution to the pay gap, nor do differences in industry composition (for example, while Indians have larger shares in the lower-paying Retail and Hospitality industries compared to Sole New Zealand Europeans, this is offset by a larger share in the higher-paying Media and Finance industry). There is a large unexplained pay gap of 14.7% which may reflect unobserved skill-related characteristics or differences in returns to observed

characteristics (potentially due to ethnic differences in preferences for non-wage aspects of jobs or discrimination in wage-setting).

Figure 20. Results of Blinder-Oaxaca decomposition of pay gap between Indians and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

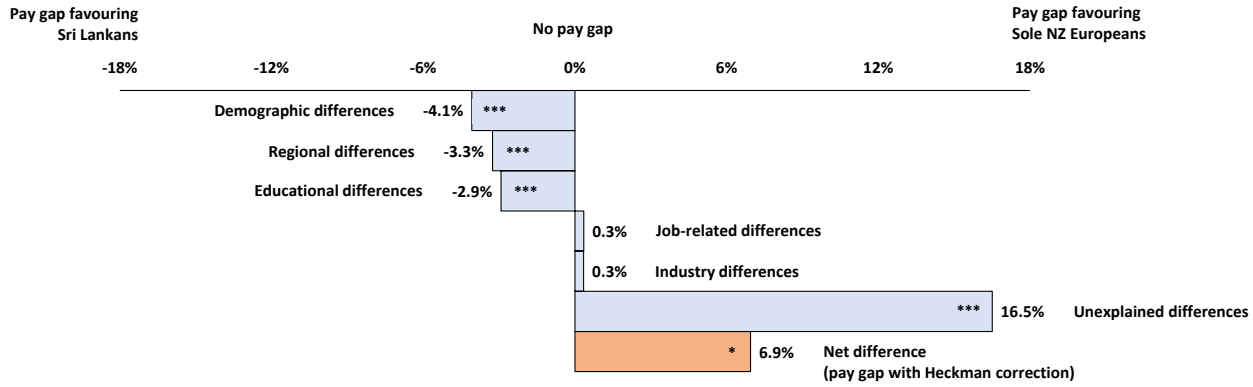
Sri Lankan

Figure 21 shows that Sri Lankan workers earn 6.9% less per hour than Sole New Zealand Europeans on average, after adjusting for selection into the labour force.

Demographic differences give rise to a 4.1% pay gap favouring Sri Lankans, primarily due to their lower share in the older working-age groups (who face diminishing returns to experience in the labour market) and higher share who are overseas-born (which turns out to be an advantage for Sri Lankans) compared to Sole New Zealand Europeans. Differences in ability to converse in English do not contribute significantly to the pay gap between the two groups.

There is a 3.3% pay gap attributable to regional differences which favour Sri Lankans, primarily a higher share living in Auckland but also a higher share living in Wellington (the latter being unusual among Ethnic Communities – only Sri Lankans and Continental Europeans have higher shares living in Wellington than Sole New Zealand Europeans). Wages tend to be higher in these urban centres.

Figure 21. Results of Blinder-Oaxaca decomposition of pay gap between Sri Lankans and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

Sri Lankans have double the share with postgraduate degrees and a much higher share with bachelor's degrees compared to Sole New Zealand Europeans, and this generates a 2.9% pay gap in their favour. There are only small (and statistically insignificant) pay gaps arising from differences in job-related and industry characteristics between Sri Lankans and Sole New Zealand Europeans. For example, while Sri Lankans have a smaller share employed in managerial occupations and shorter job tenure, this is offset by larger shares employed in higher-paying professional occupations and technical and trades occupations. Similarly, while Sri Lankans have larger shares employed in the lower-paying Retail and Hospitality industries, this is offset by higher shares employed in the Media and Finance sector where wages tend to be relatively high.

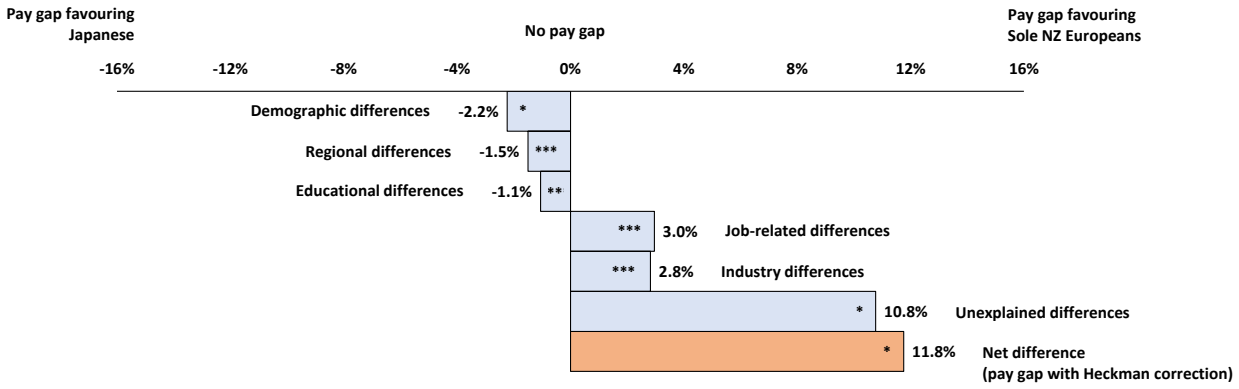
There is a very large 16.5% pay gap attributable to unexplained differences which favour Sole New Zealand Europeans. This may be due to skill-related characteristics which have not been captured in our analysis, ethnic differences in preferences for non-wage features of jobs, discrimination in pay determination, or other factors.

Japanese

Figure 22 shows that, after correcting for selection into the labour force, Japanese workers earn 11.8% less per hour than Sole New Zealand Europeans. However, both the estimated pay gap and the unexplained component of the gap are only statistically significant at the 5% level, suggesting that these estimates should be interpreted with some caution due to sample size constraints.

Differences in demographic characteristics produce a pay gap of 2.2% favouring Japanese. While the Japanese population's much smaller share of males (35% compared to 50% of Sole New Zealand Europeans, see Table 2) produces a pay gap favouring Sole New Zealand Europeans, this is more than offset by the larger share of Japanese who are overseas-born, which is advantageous to their earnings.

Figure 22. Results of Blinder-Oaxaca decomposition of pay gap between Japanese and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

Regional and educational differences produce pay gaps of 1.5% and 1.1% in favour of Japanese. These reflect the fact that, compared to Sole New Zealand Europeans, Japanese have larger shares living in Auckland (where wages tend to be higher) and larger shares with bachelor's degrees (but not postgraduate degrees - ethnic differences in postgraduate educational attainment make no significant contribution to the pay gap).

There is a 3.0% pay gap attributable to job-related differences favouring Sole New Zealand Europeans, primarily their larger share in managerial occupations, smaller share in part-time employment (17% compared to 29% among Japanese), and longer job tenure (6.5 years compared to 4.3 years among Japanese). Likewise, there is a 2.8% pay gap attributable to industry differences favouring Sole New Zealand Europeans, primarily due to their smaller share working in the lower-paid Hospitality industry and larger shares working in the higher-paid Media and Finance and Public Administration sectors compared to Japanese.

There remains a large 10.8% pay gap attributable to unexplained differences in favour of Sole New Zealand Europeans, which may reflect important earnings-related differences between the two groups that are not observed in our data or not included in our analysis, or may reflect ethnic differences in preferences for non-wage aspects of jobs, or discriminatory differences in wage-setting by employers.

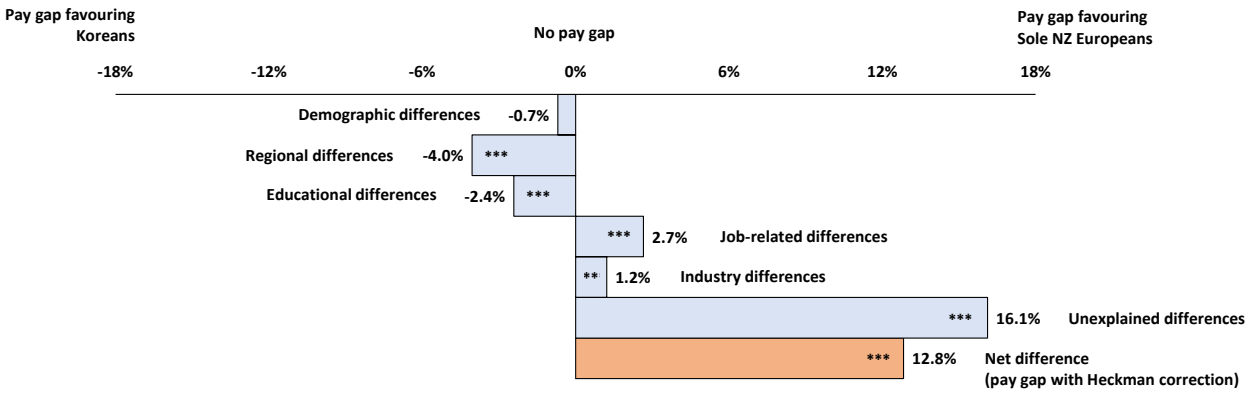
Korean

Figure 23 shows that Korean workers earn 12.8% less per hour than Sole New Zealand Europeans after adjusting for selection into the labour force.

While Koreans' earnings benefit from having a smaller share in the older working-age groups (who face diminishing returns to experience) and a larger share born overseas, this is offset by having a much higher share who cannot converse in English (13% of Koreans). In the end, while demographic differences give rise to a small pay gap of 0.7% in favour of Koreans, this is not significantly different from zero.

Regional and educational differences produce pay gaps of 4.0% and 2.4% in favour of Koreans. These reflect the fact that, compared to Sole New Zealand Europeans, Koreans have larger shares living in Auckland where wages tend to be higher (77% of Korean workers live in Auckland compared to 26% of Sole New Zealand Europeans) and larger shares with bachelor's degrees (48% compared to 22% of Sole New Zealand Europeans).

Figure 23. Results of Blinder-Oaxaca decomposition of pay gap between Koreans and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

There is a 2.7% pay gap attributable to job-related differences favouring Sole New Zealand Europeans, primarily due to their larger share in managerial occupations and longer job tenure. Koreans have a larger share employed in higher-paying professional occupations, but this is not enough to offset the former differences that favour Sole New Zealand Europeans.

Industry differences generate a 1.2% pay gap favouring Sole New Zealand Europeans, primarily reflecting Koreans' larger share employed in the lower-paying Hospitality industry and their smaller share in the higher-paying Public Administration sector.

There is a large 16.1% pay gap attributable to unexplained differences favouring Sole New Zealand Europeans, which may reflect important earnings-related differences between Koreans and Sole New Zealand Europeans that are not observed in our data or not included in our analysis, or may reflect ethnic

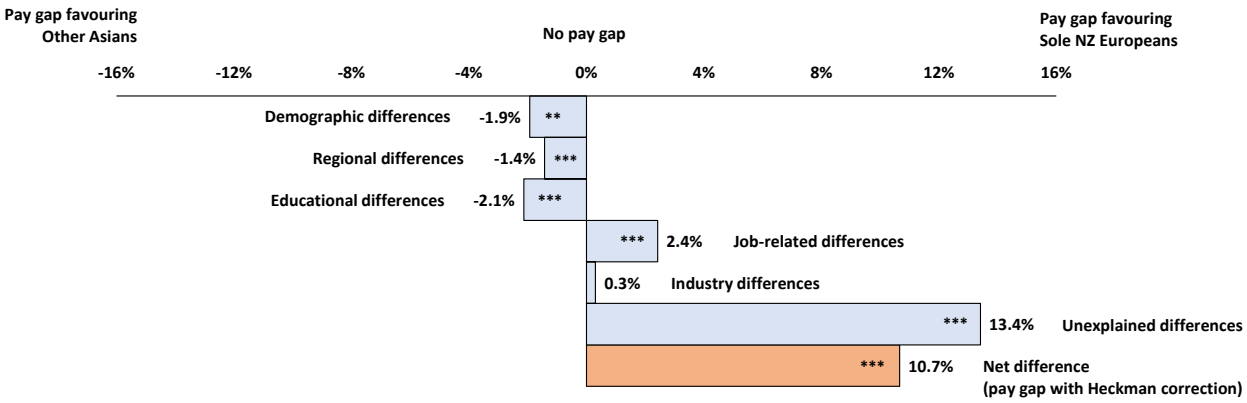
differences in preferences for non-wage aspects of jobs, or discriminatory differences in wage-setting by employers.

Other Asian

Figure 24 shows that Other Asian workers earn 10.7% less per hour than Sole New Zealand Europeans, on average, after adjusting for selection into the labour force. 'Other Asian' includes groups as such as Nepali, Pakistani, Bangladeshi, Afghan, Mongolian, and 'Asians' who are not further defined.

Demographic differences produce a 1.9% pay gap in favour of Other Asians, primarily reflecting their smaller share in the older working-age groups (who face diminishing earnings returns to being older) and larger share born overseas. Differences in ability to speak English do not contribute significantly to the pay gap.

Figure 24. Results of Blinder-Oaxaca decomposition of pay gap between Other Asians and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

Regional and educational differences give rise to pay gaps of 1.4% and 2.1%, respectively, favouring Other Asians, reflecting their larger share living in Auckland and larger shares with postgraduate and bachelor's qualifications (and smaller shares with school and post-school qualifications).

There is a 2.4% pay gap attributable to job-related differences favouring Sole New Zaland Europeans, primarily due to their higher share in managerial occupations and longer job tenure. The industry composition of the Other Asian population does differ significantly from that of Sole New Zealand Europeans (for example, the Other Asian population has larger shares employed in Hospitality and Healthcare and smaller shares in Construction, Public Administration, and Education; see Table 2), but these differences do not generate a significant pay gap between the two groups.

Unexplained differences between the groups give rise to a large 13.4% pay gap in favour of Sole New Zealand Europeans, which may reflect unobserved differences or structural differences affecting disparities in pay between Other Asians and Sole New Zealand Europeans.

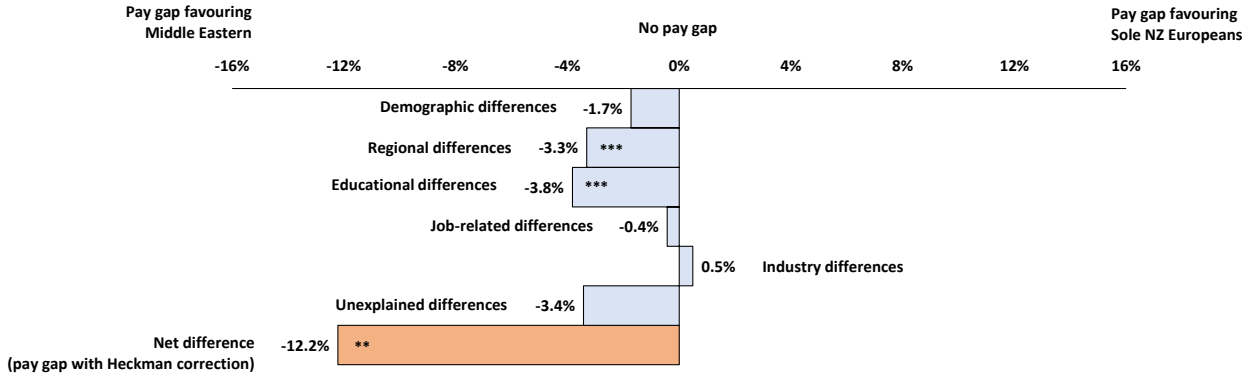
Middle Eastern

Figure 25 shows that Middle Eastern workers earn 12.2% more per hour than Sole New Zealand Europeans, on average, after adjusting for selection into the labour force. This wage premium is notable not just in its direction and size but also in its structure – it is one of the few cases where the premium is explained almost entirely by observed characteristics, unlike most other Ethnic Communities, where the unexplained component dominates.

There is a 1.7% pay gap attributable to demographic differences that favour the Middle Eastern population, although this is not statistically significant. The Middle Eastern population benefit from having a smaller share in the older working-age groups (when wage growth slows) and a larger share born overseas, but these benefits do not produce a statistically significant wage premium (and differences in ability to converse in English are also not a significant contributor to the pay gap).

Regional and educational differences produce significant pay gaps of 3.3% and 3.8% in favour of the Middle Eastern population, reflecting their larger shares residing in Auckland and larger shares with postgraduate degrees (25% compared to 11% of Sole New Zealand Europeans) and bachelor's degrees (35% compared to 22% of Sole New Zealand Europeans).

Figure 25. Results of Blinder-Oaxaca decomposition of pay gap between Middle Eastern and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

While the Middle Eastern population has a much larger share employed in higher-paying professional occupations and a smaller share employed as machinery operators and drivers, Sole New Zealand Europeans have longer job tenure and longer employment continuity over the previous 12 months.

Consequently, on balance, job-related differences do not generate a significant pay gap between the two groups.

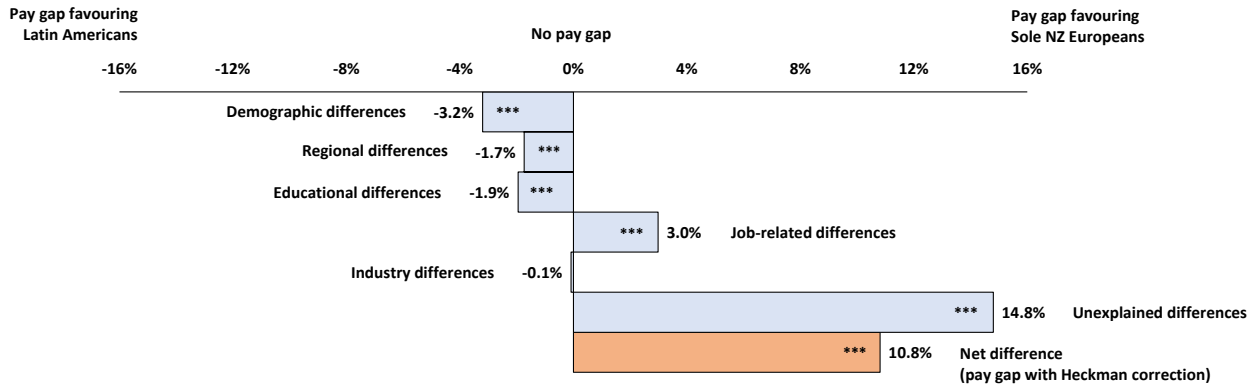
Similarly, industry differences do not produce a significant pay gap. While Sole New Zealand Europeans have a larger share employed in the higher-paying Media and Finance industry, the Middle Eastern population has a larger share employed in the higher-paying Professional Services sector.

Unexplained differences produce a 3.4% pay gap in favour of the Middle Eastern population. Of all Ethnic Communities analysed, this is the only group for whom the unexplained component works to their benefit. This means there are differences between the Middle Eastern and Sole New Zealand European populations that are either unmeasured in our analysis (e.g., skills not observed in our data that are higher on average among the Middle Eastern population) or that reflect structural differences that advantage Middle Eastern workers yielding strong labour market returns to their qualifications and skills.

Latin American

Figure 26 shows that Latin Americans earn 10.8% less per hour than Sole New Zealand Europeans, on average, after adjusting for selection into the labour force. This is the largest pay gap among the MELAA+ subgroups, and the decomposition suggests it arises primarily from unmeasured or structural factors rather than observed characteristics.

Figure 26. Results of Blinder-Oaxaca decomposition of pay gap between Latin Americans and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

There is a 3.2% pay gap attributable to demographic differences favouring Latin Americans, primarily due to their larger share born overseas and smaller share in the older working-age groups who face diminishing earnings returns to work experience. Differences in ability to speak English are not a significant contributor to the pay gap.

There are pay gaps of 1.7% and 1.9% attributable to regional and educational differences, respectively, both favouring Latin Americans. These reflect the Latin American population's larger shares residing in Auckland (42% compared to 26% of Sole New Zealand Europeans) and larger shares with postgraduate degrees (18% compared to 11% of Sole New Zealand Europeans) and bachelor's degrees (36% compared to 22% of Sole New Zealand Europeans).

Job-related differences generate a pay gap of 3.0% favouring Sole New Zealand Europeans, primarily reflecting their longer job tenure (6.5 years compared to 2.7 years for Latin Americans) and more-continuous employment over the previous 12 months (11.4 months compared to 10.8 months for Latin Americans). These differences favouring Sole New Zealand Europeans outweigh the earnings advantage that Latin Americans gain by having a larger share employed in relatively high-paying technical and trades occupations (17% versus 12% of Sole New Zealand Europeans).

Industry differences effectively make no contribution to the pay gap. While Latin Americans have a smaller share employed in the higher-paying Public Administration sector and a larger share employed in the lower-paying Hospitality industry, they also have a higher share employed in the Professional Services sector. There remains a large unexplained pay gap of 14.8% in favour of Sole New Zealand Europeans, which may be due to skill-related characteristics which have not been captured in our analysis, or to ethnic differences in preferences for non-wage features of jobs, or to discrimination in pay determination, or other factors.

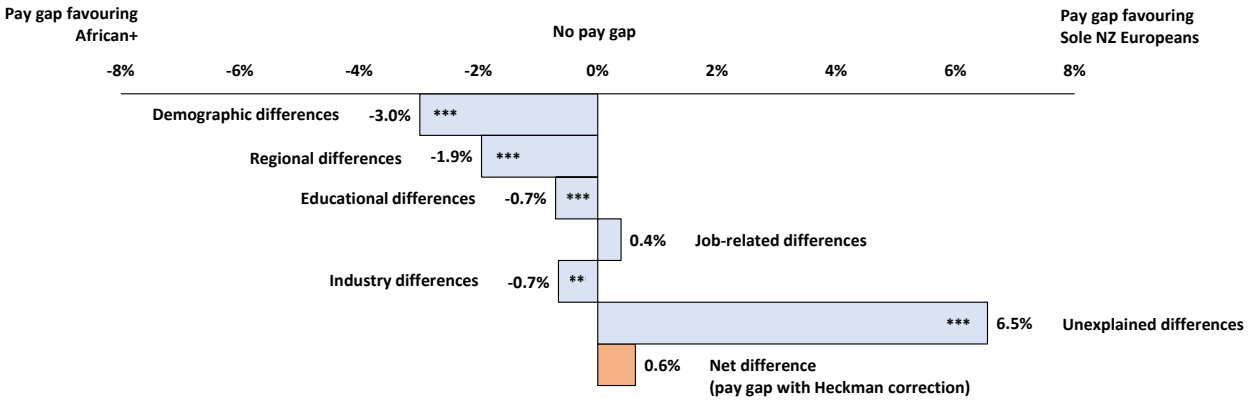
African+

Figure 27 shows that, after adjustment for selection into the labour force, the pay gap between African+ workers and Sole New Zealand Europeans is small — just 0.6% — and not statistically significant. This suggests that there is no clear evidence of a systematic pay penalty or premium for African+ workers after accounting for ethnic differences in labour force participation.

Despite the lack of a significant overall gap, the decomposition reveals some important features. Demographic differences produce a pay gap of 3.0% in favour of African+, reflecting their smaller share in the oldest working-age brackets (when wage growth slows and wages tend to level off or decline) and larger share born overseas. Differences in ability to speak English do not make a significant contribution to the pay gap.

Regional and educational differences generate pay gaps of 1.9% and 0.7%, respectively, in favour of African+. These reflect African+ workers' larger share living in Auckland (where wages are higher) and larger share with postgraduate degrees compared to Sole New Zealand Europeans (but not bachelor's degrees, attainment of which is similar between African+ workers and Sole New Zealand Europeans).

Figure 27. Results of Blinder-Oaxaca decomposition of pay gap between African+ and Sole New Zealand Europeans



Source: Authors' calculations using data from the Integrated Data Infrastructure.
Notes: *p<0.05 **p<0.01 ***p<0.001

There is a small and statistically insignificant pay gap of 0.4% attributable to job-related differences that favour Sole New Zealand Europeans. While the African+ population gains from having larger shares employed full-time and in professional occupations compared to Sole New Zealand Europeans, they are disadvantaged by having shorter job tenure (3.7 years compared to 6.5 years for Sole New Zealand Europeans).

Industry differences produce a pay gap of 0.7% in favour of African+ workers. Alongside Chinese, they are the only two Ethnic Communities where their industry composition generates a significant pay gap in favour of the Ethnic Community. This is driven primarily by the African+ population's smaller share employed in the lower-paying Retail and Agriculture industries and larger shares in the Media and Finance and Professional Services industries. There remains a pay gap of 6.5% attributable to unexplained differences favouring Sole New Zealand Europeans.

5 Conclusions

This report provides the most detailed analysis to date of ethnic pay gaps in Aotearoa New Zealand, with a focus on Asian, Continental European, and Middle Eastern, Latin American, and African+ (MELAA+) communities. Using both raw comparisons and multivariate decomposition techniques, we examined average hourly earnings across a wide range of ethnic subgroups, considering key personal and job-related characteristics.

Our results highlight substantial pay gaps for many Ethnic Communities, particularly within the Asian ethnic group. Subgroups such as Southeast Asian (including Filipino), Korean, and Other Asian workers experience large wage penalties compared to Sole New Zealand Europeans, even after accounting for differences in educational, geographic, and demographic characteristics. While some of this can be explained by job-related characteristics, such as occupation, a large share of the gaps for these groups remain unexplained, pointing to the role of unobserved factors and lower returns to observed factors.

In contrast, some Ethnic Communities — such as Middle Eastern and Continental European workers — exhibit either no gap or statistically significant wage premiums. These cases are unusual in that the premium is largely accounted for by favourable observed characteristics such as high education levels and urban location. For others, such as African+ workers, the adjusted pay gap is statistically insignificant, but some residual unexplained differences persist, warranting continued attention.

Across nearly all groups, the unexplained component of pay gaps is substantial, suggesting that equalising education or job type alone will not close ethnic pay disparities. Structural barriers within the labour market, including how skills and experience are rewarded, who gets hired or promoted, and the way certain types of work are valued, may play a role.

A further important finding is the variation within broad ethnic categories. The data demonstrate that treating ‘Asian’ or ‘MELAA+’ as homogenous groups masks meaningful differences in labour market outcomes. Disaggregated analysis reveals both substantial disadvantage (e.g. Southeast Asian and Filipino workers) and relatively better outcomes (e.g. Middle Eastern workers), reinforcing the importance of granular data and disaggregated analyses.

While the analysis focuses on hourly pay, broader patterns of household income and employment security also matter. Ethnic Communities are overrepresented in fixed-term and casual work and underrepresented in union membership. Despite high rates of tertiary education, these groups may face systemic barriers to progressing into higher-paid or more secure roles.

Taken together, these findings highlight the need for ongoing monitoring and targeted action. Pay transparency, equitable progression pathways, recognition of overseas skills, and proactive diversity policies remain essential tools for addressing ethnic pay gaps.

There are a number of directions in which this research could be extended. For instance, it would be possible to examine trends in ethnic pay gaps over time, annually for Level 1 Ethnic Communities and Level 2 Asians (no pooling of data across years would be required), biennially for Level 2 Indian (pooling over at least two years), and at best triennially for Level 2 Continental European and MELAA+ and Level 3 Southeast Asian, Chinese, and African+ (for these groups, pooling would likely be required over at least three years of HLFS surveys). For all other groups, pay gaps could only be reliably estimated by pooling data over five or more years and hence monitored only infrequently.

Alternatively, annual reporting of pay gaps for some of the Level 2 and 3 groups mentioned above (such as Indian, MELAA+, and Chinese) may be possible if these are estimated on a rolling basis by pooling data over two or three consecutive years and then repeating this every year by adding in the latest year of data and dropping the earliest year (e.g., pool data over 2023, 2024, and 2025 and estimate the pay gap, then in the following year pool data over 2024, 2025, and 2026 and estimate the pay gap, and so on).

A further extension could be to examine pay gaps within specific industries of interest which employ large numbers of workers from Ethnic Communities, for example, the Hospitality (accommodation and food services) and Healthcare industries. Future research should also consider intersectional patterns, including how ethnicity intersects with gender, migration history, and region, to shape labour market outcomes.

References

Blinder, A. S. (1973). Wage discrimination: Reduced form and structural estimates. *The Journal of Human Resources*, *8*(4), 436-455. https://doi.org/10.2307/144855

Cochrane, B., & Pacheco, G. (2022). *Empirical analysis of Pacific, Māori and ethnic pay gaps in New Zealand*. Auckland: New Zealand Work Research Institute. https://workresearch.aut.ac.nz/research/the-pacific-pay-gap-inquiry

Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica, 47*(1), 153–161. https://doi.org/10.2307/1912352

Iusitini, L., Meehan, L. & Pacheco, G. (2024). *Gender and ethnic pay gaps: An industry-level portrait of Aotearoa.* Auckland: New Zealand Policy Research Institute. https://nzpri.aut.ac.nz/__data/assets/pdf_file/0009/926901/Gender-and-ethnic-pay-gaps-An-industry-level-portrait-of-Aotearoa.pdf

Maré, D. (2016). *Urban productivity estimation with heterogeneous prices and labour.* Wellington: Motu Economic and Public Policy Research. https://motu-www.motu.org.nz/wpapers/16_21.pdf

Maré, D. (2022). *Pay gaps – an $18 billion a year issue*. Wellington: Motu Economic and Public Policy Research. https://www.motu.nz/our-research/population-and-labour/individual-and-group-outcomes/pay-gaps

Ministry for Ethnic Communities. (2024). *Ethnic Evidence: Increasing the visibility and value of New Zealand's diversity*. Wellington: Ministry for Ethnic Communities. https://www.ethniccommunities.govt.nz/our-communities/our-communities-in-the-data/

Ministry for Ethnic Communities. (2024). *Ethnic Communities in New Zealand* [website]. Available at: https://www.ethniccommunities.govt.nz/resources/ethnic-communities-in-new-zealand

Ministry of Business, Innovation and Employment. (2024). *Working conditions of migrant employees (2021 & 2022)*. Wellington: Ministry of Business, Innovation and Employment. https://www.mbie.govt.nz/immigration-and-tourism/immigration/migration-research-and-evaluation/migrant-and-community-experience-of-migration/working-conditions-of-migrant-employees-2021-and-2022

Neumark, D. (1988). Employers' discriminatory behavior and the estimation of wage discrimination. *Journal of Human Resources, 23*, 279–295. https://www.jstor.org/stable/145830

New Zealand Productivity Commission. (2022). *Immigration – Fit for the future*. *Final report*. Wellington: New Zealand Productivity Commission. https://www.treasury.govt.nz/publications/final-report-immigration-fit-future

New Zealand Treasury. (2018). *Statistical Analysis of Ethnic Wage Gaps in New Zealand*. Wellington: New Zealand Treasury. https://www.treasury.govt.nz/publications/ap/ap-18-03-html

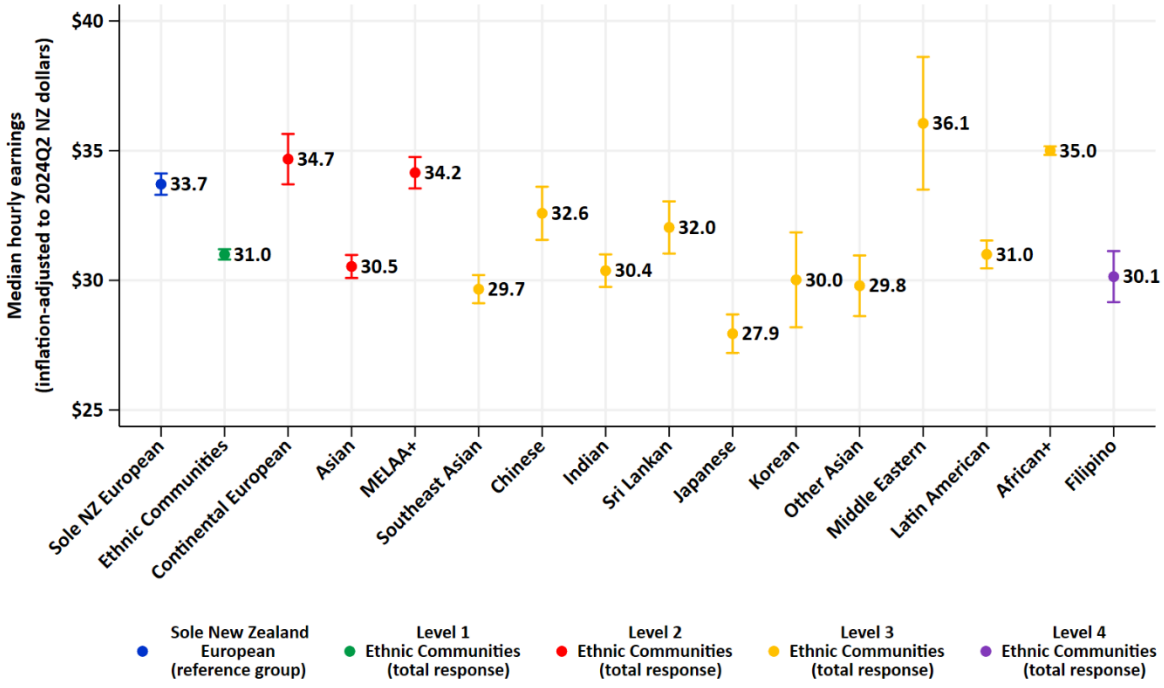
Oaxaca, R. (1973). Male-female wage differentials in urban labor markets. *International Economic Review, 14*(3), 693-709. https://doi.org/10.2307/2525981

Stats NZ (2025). *Ethnic Communities View of ETHNIC05 V2.1 V1.0.0*. Available from: https://aria.stats.govt.nz/aria/#ClassificationView:uri=http://stats.govt.nz/cms/ClassificationVersion/z33qcKjnLyEf858G

Stillman, S., & Maré, D. (2009). *The Labour Market Adjustment of Immigrants in New Zealand* (Motu Working Paper 09-10). Wellington: Motu Economic and Public Policy Research. https://motu-www.motu.org.nz/wpapers/09_10.pdf

Appendices

Appendix Figure 1. Median real hourly earnings over 2016 to 2024 by Ethnic Communities Levels 1 to 4



Source: Authors' calculations using HLFS data from the Integrated Data Infrastructure.

Appendix Table 1. Demographic and socioeconomic characteristics of Level 3 (Southeast Asian, Chinese, and Indian) Ethnic Communities analysis samples

Categorical variable	Reference group	Level 3 Ethnic Communities					
	Sole NZ European	Southeast Asian		Chinese		Indian	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Sex			0.013		0.0127		<0.001
Male	49.9	52.2		47.6		56.5	
Female	50.1	47.8		52.4		43.5	
Place of birth			<0.001		<0.001		<0.001
Born in New Zealand	88.9	7.3		17.1		8.2	
Born overseas	11.0	91.4		81.7		90.4	
Missing	0.2	1.4		1.3		1.3	
English language ability			<0.001		<0.001		<0.001
Cannot speak English	0.1	3.0		6.5		3.2	
Can speak English	92.2	75.4		78.1		75.8	
Missing	7.6	21.6		15.4		21.1	
Household type			<0.001		<0.001		<0.001
Couple only	24.2	13.3		19.2		17.0	
Couple with dependent child(ren)[1]	33.2	37.6		35.8		38.3	
One parent with dependent child(ren)[1]	4.3	3.0		3.1		2.3	
One-person household	8.5	3.7		6.1		3.0	
All other household types	29.7	42.5		35.6		39.3	
Missing	0.1	S		0.1		0.1	
Partnership status			<0.001		0.8401		<0.001
Not partnered	34.9	40.6		34.4		31.0	
Partnered	65.1	59.4		65.6		69.0	
Region			<0.001		<0.001		<0.001
Northland	2.8	1.3		0.3		1.0	
Auckland	25.8	48.6		69.2		63.2	
Waikato	9.6	7.2		6.6		9.1	
Bay of Plenty	6.0	3.8		1.8		4.0	
Gisborne/Hawke's Bay	4.0	2.0		0.9		1.8	
Taranaki	2.6	1.2		0.4		0.6	
Manawatu-Wanganui	5.4	2.7		1.8		1.9	

Categorical variable	Reference group	Level 3 Ethnic Communities					
	Sole NZ European	Southeast Asian		Chinese		Indian	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Wellington	12.8	11.7		9.0		8.4	
Nelson/Tasman/Marlborough/West Coast	5.0	2.6		0.6		0.8	
Canterbury	16.8	13.4		7.8		6.7	
Otago	6.5	3.3		1.2		1.9	
Southland	2.7	2.2		0.3		0.6	
Highest educational qualification			<0.001		<0.001		<0.001
Postgraduate (level 8 to 10) qualification	10.8	8.7		22.9		20.2	
Bachelor's degree or other level 7 qual.	22.4	36.2		40.4		36.1	
Post-school (level 4 to 6) qualification	25.4	15.6		11.7		20.3	
School qualification	30.0	29.4		19.8		19.4	
No qualification	9.5	8.8		4.4		3.4	
Missing	1.9	1.3		0.8		0.7	
Occupation in main job[2]			<0.001		<0.001		<0.001
Manager	17.4	9.7		12.4		13.4	
Professional	27.3	23.7		36.1		27.4	
Technician and Trades Worker	11.8	17.3		10.3		11.7	
Community and Personal Service Worker	8.7	11.8		7.3		8.7	
Clerical and Administrative Worker	12.5	8.1		13.2		11.0	
Sales Worker	8.9	8.2		10.8		12.3	
Machinery Operator and Driver	5.2	5.0		2.9		6.9	
Labourer	7.7	15.5		5.9		7.8	
Missing	0.5	0.6		1.0		0.7	
Industry of main job[3]			<0.001		<0.001		<0.001
Agriculture	4.2	5.1		0.9		2.5	
Manufacturing	9.4	13.7		8.1		8.6	
Construction	9.8	10.5		7.2		5.8	
Wholesale Trade	4.6	2.8		5.3		4.0	
Retail Trade	9.8	8.8		11.2		14.1	
Hospitality	4.3	9.5		9.4		8.9	
Logistics	3.8	2.4		2.7		6.0	
Media & Finance	6.9	4.8		10.3		8.4	

Categorical variable	Reference group	Level 3 Ethnic Communities					
	Sole NZ European	Southeast Asian		Chinese		Indian	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Professional Services	9.0	6.9		14.3		8.5	
Administrative Services	2.5	4.2		2.9		3.2	
Public Administration	8.3	3.8		5.4		6.0	
Education	10.1	4.1		7.3		5.3	
Healthcare	10.8	17.3		8.6		14.1	
Arts & Recreation	5.8	4.7		5.0		3.4	
Missing	0.7	1.4		1.3		1.2	
Full-time/part-time status			<0.001		0.9615		<0.001
Full-time	82.6	85.9		82.6		88.0	
Part-time	17.4	14.1		17.4		12.0	
Employment relationship in main job			<0.001		<0.001		<0.001
Permanent employee	93.7	91.2		90.9		92.1	
Casual employee	2.9	4.5		4.8		4.5	
Fixed term employee	2.1	2.1		2.2		1.8	
Seasonal employee	0.7	0.8		0.5		0.5	
Temporary employee	0.4	0.9		0.7		0.6	
Missing	0.2	0.6		0.9		0.5	
Union member in main job			0.034		<0.001		<0.001
Not union member	78.6	79.7		84.0		80.2	
Union member	19.3	17.7		12.8		17.0	
Missing	2.1	2.7		3.3		2.7	

Continuous variable	Reference group	Level 3 Ethnic Communities					
	Sole NZ European	Southeast Asian		Chinese		Indian	
	Mean (standard error)	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test
Age (in years)	40.5 (0.07)	37.5 (0.21)	<0.001	37.4 (0.22)	<0.001	35.4 (0.19)	<0.001
Number of dependent children in family	0.7 (0.01)	0.7 (0.02)	0.752	0.6 (0.03)	0.2203	0.6 (0.02)	0.0107
Weekly hours worked in main job[4]	37.4 (0.07)	37.2 (0.21)	0.412	35.8 (0.21)	<0.001	37.7 (0.13)	0.0203
Usual hours of work last week in main job	37.6 (0.07)	37.1 (0.20)	0.040	35.9 (0.22)	<0.001	37.8 (0.13)	0.1745
Actual hours worked last week in main job	34.7 (0.08)	35.4 (0.24)	0.004	33.9 (0.24)	0.0015	35.7 (0.15)	<0.001
Job tenure in main job (in weeks)	338.2 (2.23)	188.6 (5.01)	<0.001	224.2 (5.17)	<0.001	208.9 (4.42)	<0.001

Continuous variable	Reference group	Level 3 Ethnic Communities					
	Sole NZ European	Southeast Asian		Chinese		Indian	
	Mean (standard error)	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test
No. months employed over past 12 months	11.4 (0.01)	11.1 (0.04)	<0.001	10.9 (0.05)	<0.001	11.2 (0.03)	<0.001
Total weekly household income ($)	$2,768.60 ($14.09)	$2,978.10 ($61.15)	0.001	$2,504.50 ($34.59)	<0.001	$2,721.80 ($31.49)	0.1758
Number of observations (weighted)	9,311,500	675,800		720,500		1,225,600	

Symbols:

S = Suppressed.

Notes:

[1] This category includes both those with and those without adult children or others in the household.

[2] Coded to level 1 (major group) of the *Australian and New Zealand Standard Classification of Occupations*.

[3] Coded to level 1 (division) of the *Australian and New Zealand Standard Industrial Classification 2006* and then collapsed to 14 categories as follows: 'Agriculture' = Agriculture, Forestry, Fishing and Mining; 'Manufacturing' = Manufacturing; 'Construction' = Electricity, Gas, Water, Waste Services and Construction; 'Wholesale Trade' = Wholesale Trade; 'Retail Trade' = Retail Trade; 'Hospitality' = Accommodation and Food Services; 'Logistics' = Transport, Postal and Warehousing; 'Media & Finance' = Information Media, Telecommunications, Financial and Insurance Services, Rental, Hiring and Real Estate Services; 'Professional Services' = Professional, Scientific and Technical Services; 'Administrative Services' = Administrative and Support Services; 'Public Administration' = Public Administration and Safety; 'Education' = Education and Training; 'Healthcare' = Health Care and Social Assistance; 'Arts & Recreation' = Arts, Recreation, and Other Services.

[4] Includes hours on paid leave.

Appendix Table 2. Demographic and socioeconomic characteristics of Level 3 (Sri Lankan, Japanese, Korean, Other Asian) Ethnic Communities analysis samples

Categorical variable	Reference group	Level 3 Ethnic Communities							
	Sole NZ European	Sri Lankan		Japanese		Korean		Other Asian	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Sex			<0.001		<0.001		0.1979		0.0016
Male	49.9	59.9		35.2		52.2		55.0	
Female	50.1	40.1		64.8		47.8		45.0	
Place of birth			<0.001		<0.001		<0.001		<0.001
Born in New Zealand	88.9	4.2		16.6		6.2		6.2	
Born overseas	11.0	94.2		81.9		93.1		91.9	
Missing	0.2	1.6		1.5		0.8		2.0	
English language ability			<0.001		<0.001		<0.001		<0.001
Cannot speak English	0.1	4.0		4.0		13.3		6.7	
Can speak English	92.2	72.5		82.3		71.5		71.1	
Missing	7.6	23.5		13.7		15.2		22.2	
Household type			<0.001		0.0415		<0.001		<0.001
Couple only	24.2	14.5		22.0		17.8		13.7	
Couple with dependent child(ren)[1]	33.2	50.7		44.3		27.9		42.1	
One parent with dependent child(ren)[1]	4.3	0.8		2.8		2.4		2.4	
One-person household	8.5	3.0		4.9		3.4		7.0	
All other household types	29.7	31.0		26.0		48.6		34.8	
Missing	0.1	S		S		S		S	
Partnership status			0.007		0.5667		0.0492		0.9879
Not partnered	34.9	27.0		31.5		40.5		35.0	
Partnered	65.1	73.0		68.5		59.5		65.0	
Region			<0.001		<0.001		<0.001		<0.001
Northland	2.8	1.3		S		1.6		1.0	
Auckland	25.8	53.0		43.4		76.8		45.0	
Waikato	9.6	8.0		5.7		2.7		6.2	
Bay of Plenty	6.0	3.6		2.4		2.6		6.3	
Gisborne/Hawke's Bay	4.0	1.7		1.2		0.6		0.7	
Taranaki	2.6	S		1.6		S		1.7	
Manawatu-Wanganui	5.4	1.3		2.5		0.8		5.1	

Categorical variable	Reference group	Level 3 Ethnic Communities							
	Sole NZ European	Sri Lankan		Japanese		Korean		Other Asian	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Wellington	12.8	17.4		9.5		4.3		10.4	
Nelson/Tasman/Marlborough/West Coast	5.0	1.3		3.8		0.9		2.2	
Canterbury	16.8	7.4		19.0		7.0		12.7	
Otago	6.5	3.6		9.7		1.7		6.4	
Southland	2.7	1.4		S		0.9		2.4	
Highest educational qualification			<0.001		0.0013		<0.001		<0.001
Postgraduate (level 8 to 10) qualification	10.8	22.0		11.8		13.5		19.2	
Bachelor's degree or other level 7 qual.	22.4	35.1		33.8		47.9		31.3	
Post-school (level 4 to 6) qualification	25.4	20.8		19.5		12.4		18.4	
School qualification	30.0	18.1		27.9		23.1		21.6	
No qualification	9.5	2.7		5.3		2.9		8.8	
Missing	1.9	1.3		1.7		S		0.6	
Occupation in main job[2]			0.0975		<0.001		<0.001		<0.001
Manager	17.4	14.3		10.7		10.7		12.4	
Professional	27.3	32.6		26.0		32.6		28.2	
Technician and Trades Worker	11.8	14.0		13.3		15.3		14.0	
Community and Personal Service Worker	8.7	10.0		14.9		9.8		12.7	
Clerical and Administrative Worker	12.5	10.0		10.9		10.2		7.1	
Sales Worker	8.9	7.8		11.7		8.7		9.0	
Machinery Operator and Driver	5.2	3.3		1.4		5.3		4.4	
Labourer	7.7	7.0		10.4		6.1		11.3	
Missing	0.5	S		S		1.2		0.8	
Industry of main job[3]			<0.001		<0.001		<0.001		<0.001
Agriculture	4.2	3.0		1.9		0.5		5.3	
Manufacturing	9.4	6.9		7.6		7.8		9.9	
Construction	9.8	6.2		4.0		7.0		6.1	
Wholesale Trade	4.6	3.9		3.0		4.1		5.6	
Retail Trade	9.8	13.4		13.7		11.5		9.9	
Hospitality	4.3	8.4		21.8		15.1		13.0	
Logistics	3.8	2.6		3.2		3.7		3.3	
Media & Finance	6.9	9.9		3.5		5.1		5.4	

Categorical variable	Reference group	Level 3 Ethnic Communities							
	Sole NZ European	Sri Lankan		Japanese		Korean		Other Asian	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Professional Services	9.0	8.8		8.0		10.1		8.0	
Administrative Services	2.5	2.2		2.7		3.2		2.7	
Public Administration	8.3	5.9		4.1		4.3		4.7	
Education	10.1	8.8		8.4		9.1		6.3	
Healthcare	10.8	11.7		11.1		11.5		15.2	
Arts & Recreation	5.8	6.7		6.0		5.8		3.7	
Missing	0.7	1.5		S		1.2		0.9	
Full-time/part-time status			0.217		<0.001		0.244		0.661
Full-time	82.6	84.4		71.4		80.7		82.0	
Part-time	17.4	15.6		28.6		19.3		18.0	
Employment relationship in main job			0.1399		<0.001		<0.001		<0.001
Permanent employee	93.7	90.9		88.2		89.0		89.0	
Casual employee	2.9	4.7		2.7		5.9		6.6	
Fixed term employee	2.1	3.1		5.9		2.9		2.4	
Seasonal employee	0.7	S		S		S		0.5	
Temporary employee	0.4	S		S		1.5		0.9	
Missing	0.2	S		1.8		S		0.7	
Union member in main job			<0.001		0.003		0.162		<0.001
Not union member	78.6	86.4		80.8		80.8		84.1	
Union member	19.3	12.2		14.8		16.3		13.1	
Missing	2.1	1.4		4.4		2.8		2.8	

Continuous variable	Reference group	Level 3 Ethnic Communities							
	Sole NZ European	Sri Lankan		Japanese		Korean		Other Asian	
	Mean (standard error)	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test
Age (in years)	40.5 (0.07)	38.2 (0.52)	<0.001	38.8 (0.76)	0.0266	37.4 (0.51)	<0.001	36.1 (0.44)	<0.001
Number of dependent children in family	0.7 (0.01)	0.8 (0.06)	0.0066	0.8 (0.09)	0.1479	0.5 (0.05)	<0.001	0.8 (0.05)	0.0115
Weekly hours worked in main job[4]	37.4 (0.07)	37.0 (0.45)	0.4748	33.6 (0.90)	<0.001	34.7 (0.50)	<0.001	35.6 (0.43)	<0.001
Usual hours worked last week in main job	37.6 (0.07)	36.7 (0.42)	0.0379	33.5 (0.90)	<0.001	35.1 (0.49)	<0.001	35.9 (0.40)	<0.001
Actual hours worked last week in main job	34.7 (0.08)	34.9 (0.48)	0.6374	31.0 (0.93)	<0.001	33.1 (0.62)	0.0095	33.5 (0.50)	0.0198
Job tenure in main job (in weeks)	338.2 (2.23)	201.6 (14.33)	<0.001	222.4 (17.31)	<0.001	160.9 (8.15)	<0.001	171.6 (8.93)	<0.001

Continuous variable	Reference group	Level 3 Ethnic Communities							
	Sole NZ European	Sri Lankan		Japanese		Korean		Other Asian	
	Mean (standard error)	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test
No. months employed over past 12 months	11.4 (0.01)	10.9 (0.13)	<0.001	11.2 (0.12)	0.166	10.7 (0.10)	<0.001	11.0 (0.09)	<0.001
Total weekly household income ($)	$2,768.60 ($14.09)	$2,665.80 ($101.88)	0.3239	$2,283.30 ($84.15)	<0.001	$2,353.30 ($72.63)	<0.001	$2,490.40 ($75.39)	<0.001
Number of observations (weighted)	9,311,500	91,100		57,600		131,200		172,300	

Symbols:

S = Suppressed.

Notes:

[1] This category includes both those with and those without adult children or others in the household.

[2] Coded to level 1 (major group) of the *Australian and New Zealand Standard Classification of Occupations*.

[3] Coded to level 1 (division) of the *Australian and New Zealand Standard Industrial Classification 2006* and then collapsed to 14 categories as follows: 'Agriculture' = Agriculture, Forestry, Fishing and Mining; 'Manufacturing' = Manufacturing; 'Construction' = Electricity, Gas, Water, Waste Services and Construction; 'Wholesale Trade' = Wholesale Trade; 'Retail Trade' = Retail Trade; 'Hospitality' = Accommodation and Food Services; 'Logistics' = Transport, Postal and Warehousing; 'Media & Finance' = Information Media, Telecommunications, Financial and Insurance Services, Rental, Hiring and Real Estate Services; 'Professional Services' = Professional, Scientific and Technical Services; 'Administrative Services' = Administrative and Support Services; 'Public Administration' = Public Administration and Safety; 'Education' = Education and Training; 'Healthcare' = Health Care and Social Assistance; 'Arts & Recreation' = Arts, Recreation, and Other Services.

[4] Includes hours on paid leave.

Appendix Table 3. Demographic and socioeconomic characteristics of Level 3 (Middle Eastern, Latin American, African+) and Level 4 (Filipino) Ethnic Communities analysis samples

Categorical variable	Reference group	Level 3 Ethnic Communities						Level 4 Ethnic Communities	
	Sole NZ European	Middle Eastern		Latin American		African+		Filipino	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Sex			0.0129		0.3004		0.1791		<0.001
Male	49.9	56.7		52.0		51.3		54.6	
Female	50.1	43.3		48.0		48.7		45.4	
Place of birth			<0.001		<0.001		<0.001		<0.001
Born in New Zealand	88.9	16.5		5.3		3.0		4.8	
Born overseas	11.0	83.2		93.9		96.4		93.7	
Missing	0.2	S		S		0.7		1.5	
English language ability			<0.001		<0.001		<0.001		<0.001
Cannot speak English	0.1	3.8		3.4		1.4		1.8	
Can speak English	92.2	81.4		71.3		78.3		75.1	
Missing	7.6	14.8		25.3		20.3		23.1	
Household type			0.0014		0.0079		<0.001		<0.001
Couple only	24.2	23.4		31.0		22.3		11.7	
Couple with dependent child(ren)[1]	33.2	44.7		36.0		43.1		39.8	
One parent with dependent child(ren)[1]	4.3	3.9		3.4		3.7		2.5	
One-person household	8.5	4.9		5.3		4.0		3.8	
All other household types	29.7	22.8		24.4		26.9		42.2	
Missing	0.1	S		S		S		S	
Partnership status			0.7232		0.0034		<0.001		<0.001
Not partnered	34.9	32.7		26.5		25.8		39.5	
Partnered	65.1	67.3		73.5		74.2		60.5	
Region			<0.001		<0.001		<0.001		<0.001
Northland	2.8	S		S		2.7		1.4	
Auckland	25.8	62.9		42.2		48.6		45.1	
Waikato	9.6	5.9		7.2		11.2		7.8	
Bay of Plenty	6.0	1.9		7.2		5.3		4.6	
Gisborne/Hawke's Bay	4.0	S		1.8		3.9		2.0	
Taranaki	2.6	1.4		1.4		1.3		1.5	
Manawatu-Wanganui	5.4	1.5		1.5		3.4		2.5	

Categorical variable	Reference group	Level 3 Ethnic Communities						Level 4 Ethnic Communities	
	Sole NZ European	Middle Eastern		Latin American		African+		Filipino	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Wellington	12.8	11.8		11.9		10.2		11.1	
Nelson/Tasman/Marlborough/West Coast	5.0	1.2		3.4		1.8		1.9	
Canterbury	16.8	9.5		12.7		8.4		16.0	
Otago	6.5	2.6		8.7		2.1		3.7	
Southland	2.7	S		1.5		1.0		2.5	
Highest educational qualification			<0.001		<0.001		<0.001		<0.001
Postgraduate (level 8 to 10) qualification	10.8	24.7		17.7		15.7		7.2	
Bachelor's degree or other level 7 qual.	22.4	35.0		36.1		22.5		39.0	
Post-school (level 4 to 6) qualification	25.4	13.3		17.0		29.6		16.2	
School qualification	30.0	22.0		23.9		26.1		29.9	
No qualification	9.5	4.1		3.8		5.2		6.5	
Missing	1.9	S		1.4		0.9		1.1	
Occupation in main job[2]			<0.001		<0.001		<0.001		<0.001
Manager	17.4	13.0		15.4		17.2		9.7	
Professional	27.3	41.0		23.6		31.1		24.0	
Technician and Trades Worker	11.8	12.3		16.5		14.3		18.3	
Community and Personal Service Worker	8.7	7.8		10.9		7.4		11.2	
Clerical and Administrative Worker	12.5	8.0		11.2		12.9		8.2	
Sales Worker	8.9	8.1		5.4		7.8		7.6	
Machinery Operator and Driver	5.2	2.9		3.8		3.4		5.4	
Labourer	7.7	5.5		12.6		5.5		15.2	
Missing	0.5	1.3		0.6		0.5		0.5	
Industry of main job[3]			0.001		<0.001		<0.001		<0.001
Agriculture	4.2	1.2		4.3		1.9		6.4	
Manufacturing	9.4	7.6		11.7		10.3		13.6	
Construction	9.8	6.8		10.8		10.6		12.0	
Wholesale Trade	4.6	3.3		3.3		6.0		2.7	
Retail Trade	9.8	10.5		6.3		6.9		8.6	
Hospitality	4.3	7.3		11.3		3.7		6.1	
Logistics	3.8	3.0		3.5		3.2		2.4	
Media & Finance	6.9	4.7		6.6		7.3		4.4	

Categorical variable	Reference group	Level 3 Ethnic Communities						Level 4 Ethnic Communities	
	Sole NZ European	Middle Eastern		Latin American		African+		Filipino	
	%	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test	%	*p*-value χ^2 test
Professional Services	9.0	15.8		11.3		10.3		6.3	
Administrative Services	2.5	2.2		5.7		2.9		4.6	
Public Administration	8.3	7.6		4.0		7.1		3.6	
Education	10.1	12.1		6.1		9.0		3.4	
Healthcare	10.8	10.3		7.6		12.9		21.0	
Arts & Recreation	5.8	5.8		7.1		6.8		3.5	
Missing	0.7	1.7		S		1.0		1.4	
Full-time/part-time status			0.0281		0.0385		<0.001		<0.001
Full-time	82.6	77.3		86.2		86.7		89.3	
Part-time	17.4	22.7		13.8		13.3		10.7	
Employment relationship in main job			<0.001		0.0051		0.7608		0.0022
Permanent employee	93.7	89.2		89.9		93.5		93.0	
Casual employee	2.9	5.6		4.6		3.1		3.3	
Fixed term employee	2.1	3.8		3.2		2.1		1.8	
Seasonal employee	0.7	S		S		0.4		0.6	
Temporary employee	0.4	S		1.2		0.6		1.0	
Missing	0.2	S		S		S		0.3	
Union member in main job			0.0135		<0.001		0.008		0.7063
Not union member	78.6	84.9		86.7		81.7		78.0	
Union member	19.3	12.9		9.9		16.0		20.0	
Missing	2.1	2.2		3.4		2.3		2.0	

Continuous variable	Reference group	Level 3 Ethnic Communities						Level 4 Ethnic Communities	
	Sole NZ European	Middle Eastern		Latin American		African+		Filipino	
	Mean (standard error)	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test
Age (in years)	40.5 (0.07)	37.0 (0.73)	<0.001	36.4 (0.48)	<0.001	38.6 (0.33)	<0.001	38.2 (0.23)	<0.001
Number of dependent children in family	0.7 (0.01)	0.8 (0.07)	0.0377	0.6 (0.04)	0.0511	0.8 (0.04)	<0.001	0.7 (0.03)	0.1662
Weekly hours worked in main job[4]	37.4 (0.07)	35.0 (0.74)	0.0019	37.0 (0.45)	0.4843	38.1 (0.28)	0.0086	38.1 (0.25)	0.0039
Usual hours of work last week in main job	37.6 (0.07)	35.3 (0.80)	0.0068	37.4 (0.44)	0.6738	38.3 (0.27)	0.0158	38.1 (0.23)	0.0494
Actual hours worked last week in main job	34.7 (0.08)	33.6 (0.87)	0.2125	35.2 (0.52)	0.2999	36.1 (0.35)	<0.001	36.4 (0.28)	<0.001
Job tenure in main job (in weeks)	338.2 (2.23)	213.4 (18.51)	<0.001	143.1 (8.17)	<0.001	191.3 (6.98)	<0.001	186.2 (5.84)	<0.001

Continuous variable	Reference group	Level 3 Ethnic Communities						Level 4 Ethnic Communities	
	Sole NZ European	Middle Eastern		Latin American		African+		Filipino	
	Mean (standard error)	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test	Mean (standard error)	*p*-value t-test
No. months employed over past 12 months	11.4 (0.01)	10.8 (0.14)	<0.001	10.8 (0.11)	<0.001	11.2 (0.05)	<0.001	11.2 (0.04)	<0.001
Total weekly household income ($)	$2,768.60 ($14.09)	$2,634.30 ($108.43)	0.229	$2,580.30 ($76.82)	0.0162	$2,943.90 ($64.30)	0.0076	$3,148.10 (80.32)	<0.001
Number of observations (weighted)	9,311,500	70,000		110,000		331,700		471,200	

Symbols:

S = Suppressed.

Notes:

[1] This category includes both those with and those without adult children or others in the household.

[2] Coded to level 1 (major group) of the *Australian and New Zealand Standard Classification of Occupations*.

[3] Coded to level 1 (division) of the *Australian and New Zealand Standard Industrial Classification 2006* and then collapsed to 14 categories as follows: 'Agriculture' = Agriculture, Forestry, Fishing and Mining; 'Manufacturing' = Manufacturing; 'Construction' = Electricity, Gas, Water, Waste Services and Construction; 'Wholesale Trade' = Wholesale Trade; 'Retail Trade' = Retail Trade; 'Hospitality' = Accommodation and Food Services; 'Logistics' = Transport, Postal and Warehousing; 'Media & Finance' = Information Media, Telecommunications, Financial and Insurance Services, Rental, Hiring and Real Estate Services; 'Professional Services' = Professional, Scientific and Technical Services; 'Administrative Services' = Administrative and Support Services; 'Public Administration' = Public Administration and Safety; 'Education' = Education and Training; 'Healthcare' = Health Care and Social Assistance; 'Arts & Recreation' = Arts, Recreation, and Other Services.

[4] Includes hours on paid leave.

Appendix Table 4. Full results of pay gap estimates

Pay gap comparison	Ethnic Community over 2016 to 2024				Sole New Zealand European over 2016 to 2024				Pay gap in mean hourly earnings over 2016 to 2024			Pay gap in median hourly earnings over 2016 to 2024		
	Mean hourly earnings	Median hourly earnings	Unweighted n	Weighted n	Mean hourly earnings	Median hourly earnings	Unweighted n	Weighted n	Pay gap	95% CI lower limit	95% CI upper limit	Pay gap	95% CI lower limit	95% CI upper limit
Ethnic Communities vs. Sole NZ European	36.08	31.00	26,460	3,785,100	38.86	33.71	68,361	9,311,400	7.2	6.8	7.5	8.0	7.6	8.5
Continental European vs. Sole NZ European	39.44	34.67	1,716	241,500	38.86	33.71	68,364	9,311,400	-1.5	-2.7	-0.3	-2.9	-3.9	-1.8
Asian vs. Sole NZ European	35.31	30.53	21,279	3,050,800	38.86	33.71	68,364	9,311,400	9.1	8.8	9.5	9.4	8.8	10.0
MELAA+ vs. Sole NZ European	39.10	34.15	3,585	510,100	38.86	33.71	68,364	9,311,400	-0.6	-1.3	0.1	-1.3	-2.0	-0.6
Southeast Asian vs. Sole NZ European	33.28	29.66	5,064	675,800	38.86	33.71	68,361	9,311,400	14.3	13.8	14.9	12.0	11.3	12.7
Chinese vs. Sole NZ European	37.45	32.58	4,770	720,500	38.86	33.71	68,361	9,311,400	3.6	3.0	4.3	3.3	2.2	4.4
Indian vs. Sole NZ European	35.35	30.37	8,526	1,225,500	38.86	33.71	68,364	9,311,400	9.0	8.5	9.6	9.9	9.2	10.6
Sri Lankan vs. Sole NZ European	36.69	32.04	639	91,100	38.86	33.71	68,361	9,311,400	5.6	4.0	7.1	5.0	3.9	6.0
Japanese vs. Sole NZ European	33.84	27.94	414	57,700	38.86	33.71	68,361	9,311,400	12.9	10.7	15.2	17.1	16.3	17.9
Korean vs. Sole NZ European	34.76	30.02	807	131,200	38.86	33.71	68,364	9,311,400	10.5	9.0	12.1	10.9	9.1	12.8
Other Asian vs. Sole NZ European	34.42	29.79	1,227	172,200	38.86	33.71	68,361	9,311,400	11.4	10.4	12.5	11.6	10.4	12.8
Middle Eastern vs. Sole NZ European	41.10	36.05	492	70,000	38.86	33.71	68,361	9,311,400	-5.8	-8.1	-3.4	-7.0	-9.5	-4.4
Latin American vs. Sole NZ European	36.01	31.00	786	110,000	38.86	33.71	68,361	9,311,400	7.3	5.8	8.9	8.0	7.4	8.7
African+ vs. Sole NZ European	39.73	35.00	2,322	331,700	38.86	33.71	68,361	9,311,400	-2.2	-3.1	-1.3	-3.8	-4.3	-3.4
Filipino vs. Sole NZ European	33.45	30.14	3,540	471,200	38.86	33.71	68,361	9,311,400	13.9	13.3	14.5	10.6	9.5	11.6
Men vs. men														
Ethnic Communities men vs. Sole NZ European men	37.61	32.21	13,368	1,991,400	41.14	35.72	32,889	4,642,600	8.6	8.1	9.0	9.8	9.4	10.3
Continental European men vs. Sole NZ European men	42.06	37.16	801	117,900	41.14	35.72	32,889	4,642,600	-2.2	-4.1	-0.4	-4.0	-6.7	-1.4
Asian men vs. Sole NZ European men	36.51	31.26	10,791	1,614,600	41.14	35.72	32,886	4,642,600	11.2	10.8	11.7	12.5	11.7	13.3
MELAA+ men vs. Sole NZ European men	42.35	37.47	1,827	266,200	41.14	35.72	32,889	4,642,600	-3.0	-4.0	-1.9	-4.9	-6.5	-3.3
Southeast Asian men vs. Sole NZ European men	34.10	30.68	2,514	352,600	41.14	35.72	32,889	4,642,600	17.1	16.3	17.9	14.1	13.7	14.5
Chinese men vs. Sole NZ European men	39.25	34.04	2,163	343,300	41.14	35.72	32,889	4,642,600	4.6	3.7	5.5	4.7	3.1	6.3
Indian men vs. Sole NZ European men	36.39	30.98	4,626	692,500	41.14	35.72	32,889	4,642,600	11.5	10.8	12.3	13.3	12.7	13.8
Sri Lankan men vs. Sole NZ European men	38.66	33.86	372	54,600	41.14	35.72	32,886	4,642,600	6.0	3.9	8.1	5.2	2.8	7.6
Japanese men vs. Sole NZ European men	36.42	30.45	141	20,300	41.14	35.72	32,889	4,642,600	11.5	8.0	14.9	14.8	9.5	20.0
Korean men vs. Sole NZ European men	36.14	31.06	420	68,500	41.14	35.72	32,886	4,642,600	12.2	10.2	14.1	13.0	9.7	16.4
Other Asian men vs. Sole NZ European men	35.69	30.37	642	94,800	41.14	35.72	32,889	4,642,600	13.2	11.7	14.7	15.0	13.0	16.9
Middle Eastern men vs. Sole NZ European men	45.08	41.71	273	39,700	41.14	35.72	32,889	4,642,600	-9.6	-12.6	-6.5	-16.8	-20.0	-13.5
Latin American men vs. Sole NZ European men	38.71	33.19	399	57,200	41.14	35.72	32,889	4,642,600	5.9	3.5	8.3	7.1	4.7	9.5
African+ men vs. Sole NZ European men	42.95	38.64	1,158	170,300	41.14	35.72	32,889	4,642,600	-4.4	-5.7	-3.1	-8.2	-9.8	-6.5
Filipino men vs. Sole NZ European men	34.12	31.00	1,836	257,200	41.14	35.72	32,889	4,642,600	17.1	16.2	17.9	13.2	12.5	13.9

Pay gap comparison	Ethnic Community over 2016 to 2024				Sole New Zealand European over 2016 to 2024				Pay gap in mean hourly earnings over 2016 to 2024			Pay gap in median hourly earnings over 2016 to 2024		
	Mean hourly earnings	Median hourly earnings	Unweighted n	Weighted n	Mean hourly earnings	Median hourly earnings	Unweighted n	Weighted n	Pay gap	95% CI lower limit	95% CI upper limit	Pay gap	95% CI lower limit	95% CI upper limit
Women vs. women														
Ethnic Communities women vs. Sole NZ European women	34.37	30.00	13,092	1,793,700	36.60	31.80	35,472	4,668,800	6.1	5.7	6.5	5.7	5.3	6.0
Continental European women vs. Sole NZ European women	36.94	32.01	915	123,600	36.60	31.80	35,475	4,668,800	-0.9	-2.4	0.5	-0.7	-2.7	1.4
Asian women vs. Sole NZ European women	33.95	29.59	10,488	1,436,200	36.60	31.80	35,475	4,668,800	7.2	6.8	7.7	6.9	6.3	7.5
MELAA+ women vs. Sole NZ European women	35.55	31.06	1,761	243,900	36.60	31.80	35,475	4,668,800	2.9	2.0	3.7	2.3	1.1	3.5
Southeast Asian women vs. Sole NZ European women	32.39	28.25	2,553	323,200	36.60	31.80	35,475	4,668,800	11.5	10.8	12.2	11.2	10.7	11.6
Chinese women vs. Sole NZ European women	35.81	31.54	2,604	377,200	36.60	31.80	35,475	4,668,800	2.1	1.4	2.9	0.8	0.2	1.5
Indian women vs. Sole NZ European women	33.99	29.83	3,897	533,000	36.60	31.80	35,475	4,668,800	7.1	6.5	7.7	6.2	5.3	7.1
Sri Lankan women vs. Sole NZ European women	33.74	29.87	267	36,500	36.60	31.80	35,475	4,668,800	7.8	5.8	9.8	6.1	2.7	9.5
Japanese women vs. Sole NZ European women	32.44	26.60	276	37,400	36.60	31.80	35,475	4,668,800	11.3	8.4	14.3	16.4	13.6	19.1
Korean women vs. Sole NZ European women	33.26	29.12	390	62,700	36.60	31.80	35,475	4,668,800	9.1	6.8	11.4	8.4	6.9	10.0
Other Asian women vs. Sole NZ European women	32.86	29.12	585	77,500	36.60	31.80	35,472	4,668,800	10.2	8.9	11.5	8.4	5.6	11.2
Middle Eastern women vs. Sole NZ European women	35.89	30.58	216	30,300	36.60	31.80	35,472	4,668,800	1.9	-0.9	4.8	3.8	-0.8	8.5
Latin American women vs. Sole NZ European women	33.08	29.09	387	52,800	36.60	31.80	35,472	4,668,800	9.6	8.0	11.2	8.5	7.5	9.6
African+ women vs. Sole NZ European women	36.32	31.95	1,161	161,400	36.60	31.80	35,472	4,668,800	0.7	-0.3	1.7	-0.5	-1.4	0.5
Filipino women vs. Sole NZ European women	32.65	28.97	1,707	213,900	36.60	31.80	35,475	4,668,800	10.8	10.0	11.6	8.9	8.2	9.6
Overseas-born vs. Sole NZ European														
Ethnic Communities overseas-born vs. Sole NZ European	36.11	31.02	23,877	3,408,300	38.86	33.71	68,361	9,311,400	7.1	6.7	7.4	8.0	7.5	8.4
Continental European overseas-born vs. Sole NZ European	40.38	36.01	1,359	190,400	38.86	33.71	68,361	9,311,400	-3.9	-5.2	-2.6	-6.8	-8.1	-5.6
Asian overseas-born vs. Sole NZ European	35.25	30.49	19,203	2,747,300	38.86	33.71	68,361	9,311,400	9.3	8.9	9.7	9.5	9.1	10.0
MELAA+ overseas-born vs. Sole NZ European	39.43	34.68	3,405	482,700	38.86	33.71	68,364	9,311,400	-1.5	-2.2	-0.7	-2.9	-4.4	-1.4
Southeast Asian overseas-born vs. Sole NZ European	33.35	29.73	4,719	626,600	38.86	33.71	68,361	9,311,400	14.2	13.6	14.8	11.8	11.3	12.3
Chinese overseas-born vs. Sole NZ European	37.43	32.33	3,948	596,700	38.86	33.71	68,361	9,311,400	3.7	3.0	4.3	4.1	2.8	5.4
Indian overseas-born vs. Sole NZ European	35.28	30.37	7,806	1,124,100	38.86	33.71	68,361	9,311,400	9.2	8.7	9.8	9.9	9.4	10.4
Sri Lankan overseas-born vs. Sole NZ European	36.69	32.04	615	87,300	38.86	33.71	68,364	9,311,400	5.6	4.0	7.2	5.0	3.4	6.5
Japanese overseas-born vs. Sole NZ European	34.22	28.00	351	48,000	38.86	33.71	68,364	9,311,400	11.9	9.4	14.5	16.9	14.7	19.1
Korean overseas-born vs. Sole NZ European	34.92	30.29	762	123,000	38.86	33.71	68,361	9,311,400	10.1	8.5	11.8	10.1	8.8	11.5
Other Asian overseas-born vs. Sole NZ European	34.38	29.94	1,149	161,100	38.86	33.71	68,361	9,311,400	11.5	10.5	12.6	11.2	9.9	12.5
Middle Eastern overseas-born vs. Sole NZ European	42.35	37.60	420	58,500	38.86	33.71	68,364	9,311,400	-9.0	-11.4	-6.5	-11.5	-17.2	-5.9
Latin American overseas-born vs. Sole NZ European	36.23	31.17	750	104,100	38.86	33.71	68,361	9,311,400	6.8	5.1	8.4	7.5	5.8	9.2
African+ overseas-born vs. Sole NZ European	39.95	35.23	2,250	321,700	38.86	33.71	68,361	9,311,400	-2.8	-3.8	-1.9	-4.5	-5.9	-3.1
Filipino overseas-born vs. Sole NZ European	33.45	30.20	3,381	448,600	38.86	33.71	68,364	9,311,400	13.9	13.3	14.6	10.4	9.7	11.2

Pay gap comparison	Ethnic Community over 2016 to 2024				Sole New Zealand European over 2016 to 2024				Pay gap in mean hourly earnings over 2016 to 2024			Pay gap in median hourly earnings over 2016 to 2024		
	Mean hourly earnings	Median hourly earnings	Unweighted n	Weighted n	Mean hourly earnings	Median hourly earnings	Unweighted n	Weighted n	Pay gap	95% CI lower limit	95% CI upper limit	Pay gap	95% CI lower limit	95% CI upper limit
NZ-born vs. Sole NZ European														
Ethnic Communities NZ-born vs. Sole NZ European	35.78	30.82	2,568	374,500	38.86	33.71	68,361	9,311,400	7.9	7.1	8.8	8.6	7.5	9.6
Continental European NZ-born vs. Sole NZ European	35.93	30.42	357	51,000	38.86	33.71	68,361	9,311,400	7.5	5.5	9.6	9.8	6.0	13.5
Asian NZ-born vs. Sole NZ European	35.85	31.04	2,061	301,300	38.86	33.71	68,361	9,311,400	7.7	6.8	8.7	7.9	6.7	9.1
MELAA+ NZ-born vs. Sole NZ European	33.25	27.31	180	27,200	38.86	33.71	68,361	9,311,400	14.4	11.6	17.3	19.0	15.0	23.0
Southeast Asian NZ-born vs. Sole NZ European	32.50	28.49	345	49,000	38.86	33.71	68,361	9,311,400	16.4	14.5	18.3	15.5	13.0	18.0
Chinese NZ-born vs. Sole NZ European	37.58	33.09	816	122,900	38.86	33.71	68,361	9,311,400	3.3	1.7	4.9	1.8	1.1	2.5
Indian NZ-born vs. Sole NZ European	36.15	31.49	717	100,900	38.86	33.71	68,364	9,311,400	7.0	5.2	8.7	6.6	3.7	9.4
Sri Lankan NZ-born vs. Sole NZ European	36.69	32.50	24	3,800	38.86	33.71	68,364	9,311,400	5.6	-1.1	12.2	3.6	-7.6	14.8
Japanese NZ-born vs. Sole NZ European	32.18	26.71	63	9,600	38.86	33.71	68,361	9,311,400	17.2	13.1	21.3	20.8	3.2	38.3
Korean NZ-born vs. Sole NZ European	31.88	28.93	48	8,100	38.86	33.71	68,364	9,311,400	17.9	13.9	22.0	14.2	9.8	18.5
Other Asian NZ-born vs. Sole NZ European	35.36	29.33	78	10,600	38.86	33.71	68,361	9,311,400	9.0	3.4	14.6	13.0	4.1	21.9
Middle Eastern NZ-born vs. Sole NZ European	34.79	25.88	72	11,500	38.86	33.71	68,361	9,311,400	10.5	5.4	15.5	23.2	10.8	35.7
Latin American NZ-born vs. Sole NZ European	32.04	27.31	39	5,900	38.86	33.71	68,361	9,311,400	17.5	11.6	23.4	19.0	17.9	20.1
African+ NZ-born vs. Sole NZ European	32.16	27.91	69	9,800	38.86	33.71	68,361	9,311,400	17.2	13.4	21.1	17.2	10.9	23.5
Filipino NZ-born vs. Sole NZ European	33.62	29.39	156	22,600	38.86	33.71	68,364	9,311,400	13.5	10.9	16.1	12.8	10.1	15.5
Overseas-schooled vs. Sole NZ European														
Ethnic Communities overseas-schooled vs. Sole NZ European	36.70	31.59	17,271	2,455,200	38.86	33.71	68,364	9,311,400	5.6	5.2	6.0	6.3	5.8	6.8
Continental European overseas-schooled vs. Sole NZ European	41.83	37.82	1,011	139,400	38.86	33.71	68,361	9,311,400	-7.6	-9.1	-6.2	-12.2	-15.7	-8.7
Asian overseas-schooled vs. Sole NZ European	35.51	30.70	13,875	1,977,500	38.86	33.71	68,364	9,311,400	8.6	8.2	9.0	8.9	8.4	9.4
MELAA+ overseas-schooled vs. Sole NZ European	41.58	36.70	2,442	345,800	38.86	33.71	68,361	9,311,400	-7.0	-8.0	-6.0	-8.9	-10.3	-7.4
Southeast Asian overseas-schooled vs. Sole NZ European	34.50	30.69	3,315	435,100	38.86	33.71	68,364	9,311,400	11.2	10.6	11.9	9.0	8.2	9.7
Chinese overseas-schooled vs. Sole NZ European	37.21	32.21	2,574	383,100	38.86	33.71	68,361	9,311,400	4.2	3.4	5.1	4.4	3.5	5.4
Indian overseas-schooled vs. Sole NZ European	35.49	30.44	6,114	887,400	38.86	33.71	68,361	9,311,400	8.7	8.1	9.2	9.7	8.9	10.6
Sri Lankan overseas-schooled vs. Sole NZ European	35.92	30.81	453	65,200	38.86	33.71	68,364	9,311,400	7.6	5.7	9.4	8.6	6.2	11.0
Japanese overseas-schooled vs. Sole NZ European	34.44	28.23	270	36,800	38.86	33.71	68,364	9,311,400	11.4	8.4	14.3	16.3	14.2	18.3
Korean overseas-schooled vs. Sole NZ European	34.04	29.26	432	67,400	38.86	33.71	68,361	9,311,400	12.4	10.6	14.2	13.2	12.4	14.0
Other Asian overseas-schooled vs. Sole NZ European	35.01	30.00	810	115,800	38.86	33.71	68,361	9,311,400	9.9	8.7	11.1	11.0	10.6	11.4
Middle Eastern overseas-schooled vs. Sole NZ European	43.92	39.06	279	39,400	38.86	33.71	68,361	9,311,400	-13.0	-16.1	-9.9	-15.9	-19.5	-12.2
Latin American overseas-schooled vs. Sole NZ European	37.20	32.03	612	85,300	38.86	33.71	68,361	9,311,400	4.3	2.5	6.1	5.0	3.6	6.3
African+ overseas-schooled vs. Sole NZ European	42.89	38.88	1,560	222,200	38.86	33.71	68,361	9,311,400	-10.4	-11.6	-9.1	-15.3	-16.6	-14.0
Filipino overseas-schooled vs. Sole NZ European	34.58	31.00	2,592	336,100	38.86	33.71	68,361	9,311,400	11.0	10.3	11.7	8.0	7.6	8.4

Pay gap comparison	Ethnic Community over 2016 to 2024				Sole New Zealand European over 2016 to 2024				Pay gap in mean hourly earnings over 2016 to 2024			Pay gap in median hourly earnings over 2016 to 2024		
	Mean hourly earnings	Median hourly earnings	Unweighted n	Weighted n	Mean hourly earnings	Median hourly earnings	Unweighted n	Weighted n	Pay gap	95% CI lower limit	95% CI upper limit	Pay gap	95% CI lower limit	95% CI upper limit
NZ-schooled vs. Sole NZ European														
Ethnic Communities NZ-schooled vs. Sole NZ European	36.30	31.26	6,735	1,000,400	38.86	33.71	68,361	9,311,400	6.6	6.1	7.1	7.3	6.4	8.2
Continental European NZ-schooled vs. Sole NZ European	37.68	32.65	531	77,600	38.86	33.71	68,361	9,311,400	3.0	1.2	4.9	3.1	-0.3	6.6
Asian NZ-schooled vs. Sole NZ European	36.45	31.52	5,430	811,600	38.86	33.71	68,364	9,311,400	6.2	5.6	6.8	6.5	5.3	7.7
MELAA+ NZ-schooled vs. Sole NZ European	33.98	28.93	825	119,300	38.86	33.71	68,361	9,311,400	12.5	11.2	13.9	14.2	13.2	15.2
Southeast Asian NZ-schooled vs. Sole NZ European	32.12	27.97	1,050	151,900	38.86	33.71	68,361	9,311,400	17.3	16.2	18.5	17.0	16.2	17.9
Chinese NZ-schooled vs. Sole NZ European	39.17	34.68	1,782	278,600	38.86	33.71	68,364	9,311,400	-0.8	-1.9	0.3	-2.9	-4.1	-1.6
Indian NZ-schooled vs. Sole NZ European	36.29	31.32	1,836	262,500	38.86	33.71	68,364	9,311,400	6.6	5.5	7.7	7.1	5.7	8.4
Sri Lankan NZ-schooled vs. Sole NZ European	40.68	36.05	141	20,600	38.86	33.71	68,364	9,311,400	-4.7	-7.7	-1.7	-7.0	-9.5	-4.4
Japanese NZ-schooled vs. Sole NZ European	33.99	29.12	105	15,400	38.86	33.71	68,361	9,311,400	12.5	9.3	15.8	13.6	7.0	20.2
Korean NZ-schooled vs. Sole NZ European	35.71	31.77	333	57,000	38.86	33.71	68,364	9,311,400	8.1	5.8	10.4	5.7	0.6	10.9
Other Asian NZ-schooled vs. Sole NZ European	35.03	30.01	246	33,900	38.86	33.71	68,364	9,311,400	9.8	7.5	12.2	11.0	10.3	11.7
Middle Eastern NZ-schooled vs. Sole NZ European	37.80	33.84	165	24,600	38.86	33.71	68,361	9,311,400	2.7	-1.1	6.6	-0.4	-6.7	5.9
Latin American NZ-schooled vs. Sole NZ European	32.18	27.63	105	14,000	38.86	33.71	68,361	9,311,400	17.2	13.7	20.7	18.0	15.0	21.1
African+ NZ-schooled vs. Sole NZ European	33.09	28.37	561	81,000	38.86	33.71	68,361	9,311,400	14.8	13.4	16.3	15.8	14.9	16.7
Filipino NZ-schooled vs. Sole NZ European	30.85	27.90	585	85,700	38.86	33.71	68,361	9,311,400	20.6	19.5	21.8	17.2	15.6	18.9

Appendix Table 5. Blinder-Oaxaca pay gap decomposition results

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Ethnic Communities (unweighted n=19,947) vs. Sole NZ European (unweighted n=58,974)					
Age	0.108	0.005	<0.001	0.099	0.118
Age squared	-0.104	0.004	<0.001	-0.113	-0.096
Sex	-0.001	0.000	<0.001	-0.002	-0.001
Place of birth	-0.001	0.003	0.754	-0.007	0.005
English language ability	0.001	0.000	0.002	0.001	0.002
Northland region	0.001	0.000	<0.001	0.000	0.001
Auckland region	-0.040	0.002	<0.001	-0.045	-0.035
Waikato region	0.001	0.000	<0.001	0.001	0.002
Bay of Plenty region	0.001	0.000	<0.001	0.001	0.002
Gisborne/Hawke's Bay region	0.001	0.000	<0.001	0.001	0.002
Taranaki region	0.001	0.000	<0.001	0.001	0.002
Manawatu/Wanganui region	0.001	0.000	<0.001	0.000	0.002
Wellington region	0.003	0.000	<0.001	0.002	0.004
Nelson/Tasman/Marlborough/West Coast region	0.001	0.000	0.003	0.000	0.001
Canterbury region	0.005	0.001	<0.001	0.004	0.006
Otago region	0.002	0.000	<0.001	0.001	0.003
Southland region	[omitted]				
Postgraduate qualification	-0.008	0.001	<0.001	-0.009	-0.007
Bachelor's qualification	-0.005	0.001	<0.001	-0.007	-0.004
Post-school qualification	-0.002	0.000	<0.001	-0.002	-0.001
School qualification	-0.001	0.000	0.005	-0.002	0.000
No qualification	[omitted]				
Manager	0.009	0.001	<0.001	0.008	0.011
Professional	-0.007	0.001	<0.001	-0.009	-0.005
Technician or Trades worker	0.000	0.000	0.016	0.000	0.000
Community or Personal Service worker	[omitted]				
Clerical or Administrative worker	0.000	0.000	0.001	0.000	0.001
Sales worker	0.000	0.000	0.208	0.000	0.000
Machinery Operator or Driver	0.000	0.000	0.030	-0.001	0.000
Labourer	0.000	0.000	0.037	0.000	0.001
Part-time employment	-0.001	0.000	<0.001	-0.001	0.000
Permanent job	0.000	0.000	0.343	0.000	0.000
Job tenure	0.013	0.001	<0.001	0.012	0.014
Employment continuity	0.001	0.000	<0.001	0.000	0.001
Union member	0.000	0.000	0.866	0.000	0.000
Agriculture	0.000	0.000	0.012	-0.001	0.000
Manufacturing	0.000	0.000	0.286	0.000	0.000
Construction	0.001	0.000	<0.001	0.001	0.001
Wholesale	0.000	0.000	0.201	0.000	0.000
Retail	0.001	0.000	<0.001	0.000	0.002
Hospitality	0.003	0.000	<0.001	0.003	0.004
Logistics	0.000	0.000	0.707	0.000	0.000
Media & Finance	-0.002	0.000	<0.001	-0.002	-0.001
Professional Services	-0.001	0.000	<0.001	-0.002	-0.001
Administrative Services	[omitted]				
Public Administration	0.002	0.000	<0.001	0.002	0.003
Education	-0.003	0.000	<0.001	-0.004	-0.003
Healthcare	0.000	0.000	0.319	-0.001	0.000
Arts & Recreation	0.000	0.000	0.003	-0.001	0.000
Total explained component	-0.019	0.004	<0.001	-0.027	-0.011
Unexplained component	0.083	0.006	<0.001	0.070	0.096
Adjusted log pay gap	0.064	0.006	<0.001	0.053	0.075
Raw log pay gap	0.051	0.004	<0.001	0.044	0.059

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Continental European (unweighted n=1,365) vs. Sole NZ European (unweighted n=58,974)					
Age	0.027	0.016	0.097	-0.005	0.059
Age squared	-0.037	0.013	0.004	-0.062	-0.012
Sex	0.001	0.001	0.650	-0.002	0.003
Place of birth	-0.021	0.003	<0.001	-0.027	-0.015
English language ability	0.000	0.000	0.237	-0.001	0.000
Northland region	-0.001	0.000	0.079	-0.002	0.000
Auckland region	-0.015	0.003	<0.001	-0.020	-0.010
Waikato region	0.001	0.001	0.500	-0.001	0.002
Bay of Plenty region	0.001	0.000	0.003	0.000	0.002
Gisborne/Hawke's Bay region	0.000	0.000	0.544	0.000	0.001
Taranaki region	0.001	0.000	<0.001	0.001	0.002
Manawatu/Wanganui region	0.001	0.000	0.004	0.000	0.001
Wellington region	-0.004	0.002	0.010	-0.007	-0.001
Nelson/Tasman/Marlborough/West Coast region	0.001	0.000	0.028	0.000	0.001
Canterbury region	0.002	0.001	0.052	0.000	0.004
Otago region	0.001	0.000	0.022	0.000	0.002
Southland region	[omitted]				
Postgraduate qualification	[omitted]				
Bachelor's qualification	0.003	0.001	0.015	0.001	0.005
Post-school qualification	-0.008	0.002	<0.001	-0.012	-0.004
School qualification	-0.008	0.002	0.001	-0.013	-0.003
No qualification	-0.007	0.001	<0.001	-0.010	-0.005
Manager	0.004	0.004	0.287	-0.003	0.011
Professional	-0.020	0.004	<0.001	-0.028	-0.011
Technician or Trades worker	-0.001	0.001	0.290	-0.003	0.001
Community or Personal Service worker	-0.001	0.001	0.220	-0.002	0.000
Clerical or Administrative worker	0.002	0.001	0.030	0.000	0.004
Sales worker	0.002	0.001	0.001	0.001	0.003
Machinery Operator or Driver	[omitted]				
Labourer	0.000	0.000	0.041	0.000	0.001
Part-time employment	0.000	0.000	0.786	-0.001	0.000
Permanent job	0.000	0.000	0.902	0.000	0.000
Job tenure	0.009	0.001	<0.001	0.006	0.011
Employment continuity	0.000	0.000	0.284	0.000	0.000
Union member	0.000	0.000	0.746	0.000	0.000
Agriculture	0.000	0.000	0.222	-0.001	0.000
Manufacturing	0.000	0.000	0.546	-0.001	0.001
Construction	0.000	0.001	0.482	-0.001	0.001
Wholesale	0.001	0.000	0.041	0.000	0.001
Retail	-0.003	0.001	0.001	-0.004	-0.001
Hospitality	0.002	0.001	0.003	0.001	0.004
Logistics	0.000	0.000	0.413	0.000	0.001
Media & Finance	0.001	0.001	0.622	-0.002	0.003
Professional Services	-0.003	0.001	0.009	-0.006	-0.001
Administrative Services	[omitted]				
Public Administration	0.000	0.001	0.789	-0.002	0.002
Education	0.004	0.001	0.016	0.001	0.006
Healthcare	0.000	0.000	0.957	0.000	0.000
Arts & Recreation	-0.001	0.000	0.020	-0.001	0.000
Total explained component	-0.067	0.009	<0.001	-0.084	-0.049
Unexplained component	0.011	0.016	0.488	-0.021	0.043
Adjusted log pay gap	-0.055	0.018	0.002	-0.090	-0.020
Raw log pay gap	-0.037	0.013	0.004	-0.061	-0.012

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Asian (unweighted n=15,993) vs. Sole NZ European (unweighted n=58,974)					
Age	0.121	0.005	<0.001	0.111	0.131
Age squared	-0.115	0.005	<0.001	-0.124	-0.106
Sex	-0.002	0.000	<0.001	-0.002	-0.001
Place of birth	-0.002	0.003	0.457	-0.009	0.004
English language ability	0.002	0.001	0.001	0.001	0.003
Northland region	0.000	0.000	0.052	-0.001	0.000
Auckland region	-0.021	0.003	<0.001	-0.026	-0.015
Waikato region	0.000	0.000	0.604	0.000	0.001
Bay of Plenty region	0.000	0.000	0.245	-0.001	0.000
Gisborne/Hawke's Bay region	-0.001	0.000	0.016	-0.001	0.000
Taranaki region	[omitted]				
Manawatu/Wanganui region	-0.001	0.000	<0.001	-0.002	-0.001
Wellington region	0.002	0.000	<0.001	0.001	0.002
Nelson/Tasman/Marlborough/West Coast region	-0.002	0.000	<0.001	-0.002	-0.001
Canterbury region	0.000	0.001	0.806	-0.001	0.001
Otago region	-0.001	0.000	0.038	-0.001	0.000
Southland region	-0.001	0.000	<0.001	-0.002	-0.001
Postgraduate qualification	[omitted]				
Bachelor's qualification	0.011	0.001	<0.001	0.009	0.012
Post-school qualification	-0.013	0.001	<0.001	-0.014	-0.011
School qualification	-0.011	0.001	<0.001	-0.012	-0.009
No qualification	-0.006	0.000	<0.001	-0.007	-0.005
Manager	0.011	0.001	<0.001	0.009	0.013
Professional	-0.006	0.001	<0.001	-0.008	-0.004
Technician or Trades worker	0.000	0.000	0.050	0.000	0.000
Community or Personal Service worker	[omitted]				
Clerical or Administrative worker	0.000	0.000	0.001	0.000	0.001
Sales worker	0.000	0.000	0.205	0.000	0.000
Machinery Operator or Driver	0.000	0.000	0.548	0.000	0.000
Labourer	0.000	0.000	0.002	0.000	0.001
Part-time employment	-0.001	0.000	<0.001	-0.001	0.000
Permanent job	0.000	0.000	0.309	0.000	0.000
Job tenure	0.013	0.001	<0.001	0.012	0.015
Employment continuity	0.001	0.000	<0.001	0.000	0.001
Union member	0.000	0.000	0.751	0.000	0.000
Agriculture	-0.001	0.000	<0.001	-0.002	-0.001
Manufacturing	0.000	0.000	0.336	0.000	0.000
Construction	-0.001	0.000	0.011	-0.001	0.000
Wholesale	0.000	0.000	0.191	0.000	0.000
Retail	0.003	0.001	<0.001	0.002	0.004
Hospitality	0.007	0.001	<0.001	0.006	0.008
Logistics	[omitted]				
Media & Finance	-0.001	0.000	<0.001	-0.002	-0.001
Professional Services	0.000	0.000	0.013	-0.001	0.000
Administrative Services	0.000	0.000	0.008	0.000	0.001
Public Administration	0.001	0.000	<0.001	0.000	0.001
Education	-0.007	0.001	<0.001	-0.008	-0.006
Healthcare	0.002	0.000	<0.001	0.001	0.002
Arts & Recreation	-0.002	0.000	<0.001	-0.002	-0.001
Total explained component	-0.020	0.004	<0.001	-0.029	-0.011
Unexplained component	0.108	0.007	<0.001	0.095	0.122
Adjusted log pay gap	0.088	0.006	<0.001	0.076	0.101
Raw log pay gap	0.069	0.004	<0.001	0.061	0.077

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
MELAA+ (unweighted n=2,691) vs. Sole NZ European (unweighted n=58,974)					
Age	0.080	0.011	<0.001	0.058	0.102
Age squared	-0.081	0.009	<0.001	-0.099	-0.064
Sex	-0.001	0.001	0.479	-0.002	0.001
Place of birth	-0.024	0.004	<0.001	-0.032	-0.017
English language ability	-0.001	0.001	0.186	-0.002	0.000
Northland region	0.000	0.000	0.208	0.000	0.000
Auckland region	-0.018	0.002	<0.001	-0.022	-0.013
Waikato region	0.000	0.000	0.710	0.000	0.000
Bay of Plenty region	0.000	0.000	0.642	0.000	0.000
Gisborne/Hawke's Bay region	0.000	0.000	0.107	-0.001	0.000
Taranaki region	[omitted]				
Manawatu/Wanganui region	-0.001	0.000	0.001	-0.002	0.000
Wellington region	0.001	0.000	0.013	0.000	0.002
Nelson/Tasman/Marlborough/West Coast region	-0.001	0.000	<0.001	-0.002	-0.001
Canterbury region	0.000	0.001	0.778	-0.001	0.002
Otago region	-0.001	0.000	0.075	-0.001	0.000
Southland region	-0.001	0.000	<0.001	-0.002	-0.001
Postgraduate qualification	-0.009	0.001	<0.001	-0.012	-0.006
Bachelor's qualification	-0.003	0.001	<0.001	-0.005	-0.002
Post-school qualification	0.000	0.000	0.086	-0.001	0.000
School qualification	0.000	0.000	0.186	-0.001	0.000
No qualification	[omitted]				
Manager	0.001	0.002	0.470	-0.002	0.005
Professional	-0.006	0.002	0.005	-0.010	-0.002
Technician or Trades worker	0.000	0.000	0.054	-0.001	0.000
Community or Personal Service worker	[omitted]				
Clerical or Administrative worker	0.000	0.000	0.811	0.000	0.000
Sales worker	0.000	0.000	0.403	0.000	0.000
Machinery Operator or Driver	-0.001	0.000	<0.001	-0.002	-0.001
Labourer	0.000	0.000	0.153	-0.001	0.000
Part-time employment	-0.001	0.000	0.008	-0.001	0.000
Permanent job	0.000	0.000	0.854	0.000	0.000
Job tenure	0.014	0.001	<0.001	0.013	0.016
Employment continuity	0.001	0.000	0.003	0.000	0.001
Union member	0.000	0.000	0.340	0.000	0.000
Agriculture	-0.002	0.000	<0.001	-0.003	-0.001
Manufacturing	0.000	0.000	0.414	0.000	0.000
Construction	0.000	0.000	0.705	0.000	0.000
Wholesale	0.000	0.000	0.333	0.000	0.000
Retail	-0.003	0.001	0.001	-0.005	-0.001
Hospitality	0.002	0.001	0.026	0.000	0.003
Logistics	[omitted]				
Media & Finance	0.000	0.001	0.819	-0.001	0.001
Professional Services	-0.001	0.000	0.035	-0.002	0.000
Administrative Services	0.000	0.000	0.171	0.000	0.001
Public Administration	0.000	0.000	0.146	0.000	0.001
Education	-0.002	0.001	0.086	-0.005	0.000
Healthcare	0.001	0.001	0.196	0.000	0.002
Arts & Recreation	0.001	0.001	0.111	0.000	0.002
Total explained component	-0.057	0.007	<0.001	-0.071	-0.043
Unexplained component	0.065	0.013	<0.001	0.039	0.091
Adjusted log pay gap	0.008	0.014	0.545	-0.019	0.035
Raw log pay gap	-0.012	0.009	0.188	-0.030	0.006

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Southeast Asian (unweighted n=3,747) vs. Sole NZ European (unweighted n=58,974)					
Age	0.098	0.010	<0.001	0.079	0.117
Age squared	-0.097	0.008	<0.001	-0.112	-0.082
Sex	-0.001	0.001	0.469	-0.002	0.001
Place of birth	-0.022	0.004	<0.001	-0.030	-0.015
English language ability	0.000	0.001	0.707	-0.001	0.001
Northland region	[omitted]				
Auckland region	-0.021	0.002	<0.001	-0.025	-0.016
Waikato region	0.001	0.000	0.012	0.000	0.001
Bay of Plenty region	0.000	0.000	0.158	0.000	0.001
Gisborne/Hawke's Bay region	0.000	0.000	0.847	0.000	0.001
Taranaki region	0.000	0.000	0.066	0.000	0.001
Manawatu/Wanganui region	0.000	0.000	0.130	-0.001	0.000
Wellington region	0.001	0.001	0.146	0.000	0.002
Nelson/Tasman/Marlborough/West Coast region	0.000	0.000	0.080	-0.001	0.000
Canterbury region	0.001	0.000	0.020	0.000	0.002
Otago region	0.000	0.000	0.591	0.000	0.001
Southland region	0.000	0.000	0.698	0.000	0.000
Postgraduate qualification	[omitted]				
Bachelor's qualification	0.012	0.001	<0.001	0.010	0.015
Post-school qualification	-0.017	0.001	<0.001	-0.020	-0.015
School qualification	-0.003	0.001	0.082	-0.005	0.000
No qualification	-0.002	0.001	0.014	-0.004	0.000
Manager	0.020	0.002	<0.001	0.016	0.024
Professional	0.004	0.002	0.076	0.000	0.009
Technician or Trades worker	-0.003	0.001	<0.001	-0.004	-0.002
Community or Personal Service worker	-0.002	0.000	<0.001	-0.003	-0.001
Clerical or Administrative worker	0.003	0.001	<0.001	0.002	0.004
Sales worker	0.000	0.000	0.562	-0.001	0.001
Machinery Operator or Driver	[omitted]				
Labourer	-0.001	0.000	0.013	-0.002	0.000
Part-time employment	-0.001	0.000	0.001	-0.001	0.000
Permanent job	0.000	0.000	0.928	0.000	0.000
Job tenure	0.014	0.001	<0.001	0.013	0.016
Employment continuity	0.000	0.000	0.011	0.000	0.001
Union member	0.000	0.000	0.772	0.000	0.000
Agriculture	0.000	0.000	0.283	0.000	0.001
Manufacturing	0.001	0.000	0.009	0.000	0.002
Construction	0.000	0.000	0.572	0.000	0.000
Wholesale	0.000	0.000	0.221	-0.001	0.000
Retail	-0.001	0.001	0.370	-0.003	0.001
Hospitality	0.006	0.001	<0.001	0.004	0.008
Logistics	[omitted]				
Media & Finance	0.001	0.000	0.002	0.001	0.002
Professional Services	0.000	0.000	0.091	0.000	0.001
Administrative Services	0.001	0.000	0.002	0.000	0.001
Public Administration	0.001	0.000	<0.001	0.001	0.002
Education	-0.011	0.001	<0.001	-0.013	-0.009
Healthcare	0.004	0.001	<0.001	0.003	0.006
Arts & Recreation	-0.001	0.000	0.012	-0.002	0.000
Total explained component	-0.011	0.006	0.086	-0.023	0.002
Unexplained component	0.153	0.011	<0.001	0.133	0.174
Adjusted log pay gap	0.142	0.010	<0.001	0.122	0.163
Raw log pay gap	0.119	0.007	<0.001	0.105	0.132

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Chinese (unweighted n=3,651) vs. Sole NZ European (unweighted n=58,974)					
Age	0.114	0.010	<0.001	0.095	0.133
Age squared	-0.109	0.008	<0.001	-0.125	-0.094
Sex	0.001	0.001	0.293	-0.001	0.002
Place of birth	-0.013	0.003	<0.001	-0.020	-0.007
English language ability	0.003	0.001	0.023	0.000	0.005
Northland region	0.000	0.000	0.098	-0.001	0.000
Auckland region	-0.031	0.004	<0.001	-0.038	-0.023
Waikato region	0.000	0.000	0.501	0.000	0.001
Bay of Plenty region	0.000	0.000	0.529	-0.001	0.001
Gisborne/Hawke's Bay region	-0.001	0.000	0.041	-0.001	0.000
Taranaki region	[omitted]				
Manawatu/Wanganui region	-0.001	0.000	<0.001	-0.002	-0.001
Wellington region	0.002	0.000	<0.001	0.001	0.003
Nelson/Tasman/Marlborough/West Coast region	-0.002	0.000	<0.001	-0.003	-0.001
Canterbury region	0.000	0.001	0.811	-0.001	0.002
Otago region	-0.001	0.000	0.080	-0.002	0.000
Southland region	-0.002	0.000	<0.001	-0.002	-0.001
Postgraduate qualification	-0.017	0.002	<0.001	-0.020	-0.014
Bachelor's qualification	-0.011	0.001	<0.001	-0.014	-0.009
Post-school qualification	-0.002	0.001	0.007	-0.004	-0.001
School qualification	-0.001	0.000	0.269	-0.002	0.000
No qualification	[omitted]				
Manager	0.014	0.002	<0.001	0.010	0.018
Professional	-0.023	0.003	<0.001	-0.028	-0.017
Technician or Trades worker	0.001	0.001	0.034	0.000	0.002
Community or Personal Service worker	0.001	0.000	0.008	0.000	0.002
Clerical or Administrative worker	-0.001	0.001	0.369	-0.002	0.001
Sales worker	-0.001	0.000	0.003	-0.002	0.000
Machinery Operator or Driver	[omitted]				
Labourer	0.000	0.000	0.044	0.000	0.001
Part-time employment	0.000	0.000	0.419	0.000	0.000
Permanent job	0.000	0.000	0.963	0.000	0.000
Job tenure	0.011	0.001	<0.001	0.010	0.013
Employment continuity	0.001	0.000	<0.001	0.001	0.002
Union member	0.000	0.000	0.262	-0.001	0.000
Agriculture	-0.003	0.000	<0.001	-0.003	-0.002
Manufacturing	0.000	0.000	0.086	-0.001	0.000
Construction	-0.001	0.000	0.021	-0.001	0.000
Wholesale	0.000	0.000	0.271	0.000	0.000
Retail	0.003	0.001	0.012	0.001	0.004
Hospitality	0.007	0.001	<0.001	0.005	0.008
Logistics	[omitted]				
Media & Finance	-0.003	0.001	<0.001	-0.004	-0.002
Professional Services	-0.002	0.001	<0.001	-0.003	-0.001
Administrative Services	0.000	0.000	0.202	0.000	0.001
Public Administration	0.001	0.000	0.003	0.000	0.002
Education	-0.005	0.001	<0.001	-0.008	-0.003
Healthcare	-0.001	0.000	0.002	-0.002	0.000
Arts & Recreation	-0.001	0.000	0.026	-0.002	0.000
Total explained component	-0.073	0.006	<0.001	-0.085	-0.061
Unexplained component	0.081	0.013	<0.001	0.056	0.106
Adjusted log pay gap	0.008	0.013	0.538	-0.017	0.033
Raw log pay gap	0.028	0.008	<0.001	0.013	0.044

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Indian (unweighted n=6,399) vs. Sole NZ European (unweighted n=58,974)					
Age	0.160	0.008	<0.001	0.145	0.175
Age squared	-0.148	0.007	<0.001	-0.161	-0.135
Sex	-0.004	0.001	<0.001	-0.005	-0.003
Place of birth	-0.016	0.004	<0.001	-0.024	-0.009
English language ability	0.000	0.001	0.455	-0.001	0.002
Northland region	0.001	0.000	<0.001	0.000	0.001
Auckland region	-0.051	0.003	<0.001	-0.057	-0.045
Waikato region	0.001	0.000	0.061	0.000	0.001
Bay of Plenty region	0.001	0.000	<0.001	0.001	0.002
Gisborne/Hawke's Bay region	0.001	0.000	<0.001	0.001	0.001
Taranaki region	0.001	0.000	<0.001	0.001	0.002
Manawatu/Wanganui region	0.001	0.000	<0.001	0.000	0.002
Wellington region	0.004	0.001	<0.001	0.003	0.006
Nelson/Tasman/Marlborough/West Coast region	0.001	0.000	0.003	0.000	0.002
Canterbury region	0.008	0.001	<0.001	0.006	0.009
Otago region	0.002	0.000	<0.001	0.002	0.003
Southland region	[omitted]				
Postgraduate qualification	[omitted]				
Bachelor's qualification	0.009	0.001	<0.001	0.008	0.011
Post-school qualification	-0.008	0.001	<0.001	-0.010	-0.006
School qualification	-0.015	0.001	<0.001	-0.017	-0.013
No qualification	-0.008	0.001	<0.001	-0.009	-0.007
Manager	0.011	0.002	<0.001	0.007	0.014
Professional	-0.003	0.002	0.196	-0.006	0.001
Technician or Trades worker	0.000	0.000	0.854	-0.001	0.001
Community or Personal Service worker	0.000	0.000	0.925	-0.001	0.001
Clerical or Administrative worker	0.001	0.000	0.049	0.000	0.002
Sales worker	-0.002	0.000	<0.001	-0.003	-0.001
Machinery Operator or Driver	[omitted]				
Labourer	0.000	0.000	0.071	0.000	0.000
Part-time employment	-0.001	0.000	<0.001	-0.002	-0.001
Permanent job	0.000	0.000	0.629	0.000	0.000
Job tenure	0.012	0.001	<0.001	0.011	0.013
Employment continuity	0.000	0.000	0.003	0.000	0.001
Union member	0.000	0.000	0.445	0.000	0.000
Agriculture	-0.002	0.000	<0.001	-0.002	-0.001
Manufacturing	0.000	0.000	0.585	0.000	0.000
Construction	-0.001	0.000	0.004	-0.002	0.000
Wholesale	0.000	0.000	0.150	0.000	0.000
Retail	0.007	0.001	<0.001	0.005	0.008
Hospitality	0.006	0.001	<0.001	0.004	0.007
Logistics	[omitted]				
Media & Finance	-0.002	0.000	<0.001	-0.003	-0.001
Professional Services	0.000	0.000	0.535	0.000	0.001
Administrative Services	0.000	0.000	0.128	0.000	0.001
Public Administration	0.001	0.000	0.005	0.000	0.001
Education	-0.008	0.001	<0.001	-0.010	-0.006
Healthcare	0.002	0.000	<0.001	0.001	0.003
Arts & Recreation	-0.003	0.000	<0.001	-0.003	-0.002
Total explained component	-0.041	0.005	<0.001	-0.052	-0.030
Unexplained component	0.147	0.010	<0.001	0.129	0.166
Adjusted log pay gap	0.106	0.009	<0.001	0.088	0.125
Raw log pay gap	0.061	0.006	<0.001	0.050	0.073

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Sri Lankan (unweighted n=435) vs. Sole NZ European (unweighted n=58,974)					
Age	0.087	0.024	<0.001	0.040	0.135
Age squared	-0.095	0.020	<0.001	-0.134	-0.056
Sex	-0.005	0.002	0.015	-0.010	-0.001
Place of birth	-0.027	0.004	<0.001	-0.035	-0.019
English language ability	0.000	0.001	0.909	-0.003	0.002
Northland region	[omitted]				
Auckland region	-0.028	0.004	<0.001	-0.036	-0.020
Waikato region	0.000	0.000	0.508	-0.001	0.001
Bay of Plenty region	0.000	0.000	0.238	0.000	0.001
Gisborne/Hawke's Bay region	0.000	0.000	0.972	-0.001	0.001
Taranaki region	0.001	0.000	0.088	0.000	0.001
Manawatu/Wanganui region	-0.001	0.000	0.083	-0.002	0.000
Wellington region	-0.004	0.002	0.024	-0.008	-0.001
Nelson/Tasman/Marlborough/West Coast region	-0.001	0.001	0.047	-0.002	0.000
Canterbury region	0.002	0.001	0.035	0.000	0.003
Otago region	0.000	0.000	0.705	-0.001	0.001
Southland region	-0.001	0.000	<0.001	-0.002	-0.001
Postgraduate qualification	-0.017	0.004	<0.001	-0.025	-0.009
Bachelor's qualification	-0.010	0.002	<0.001	-0.015	-0.006
Post-school qualification	-0.001	0.000	0.059	-0.002	0.000
School qualification	-0.001	0.001	0.312	-0.002	0.001
No qualification	[omitted]				
Manager	0.009	0.006	0.128	-0.003	0.021
Professional	-0.019	0.007	0.007	-0.033	-0.005
Technician or Trades worker	0.000	0.001	0.834	-0.003	0.003
Community or Personal Service worker	-0.001	0.001	0.210	-0.004	0.001
Clerical or Administrative worker	0.001	0.002	0.412	-0.002	0.004
Sales worker	0.001	0.001	0.187	-0.001	0.003
Machinery Operator or Driver	[omitted]				
Labourer	0.000	0.000	0.242	0.000	0.001
Part-time employment	0.000	0.000	0.797	-0.001	0.001
Permanent job	0.000	0.000	0.977	0.000	0.000
Job tenure	0.012	0.002	<0.001	0.009	0.015
Employment continuity	0.001	0.000	0.069	0.000	0.001
Union member	0.000	0.000	0.317	-0.001	0.000
Agriculture	-0.001	0.001	0.209	-0.003	0.001
Manufacturing	-0.001	0.000	0.074	-0.002	0.000
Construction	-0.001	0.000	0.165	-0.002	0.000
Wholesale	0.000	0.000	0.620	0.000	0.000
Retail	0.005	0.003	0.120	-0.001	0.012
Hospitality	0.005	0.002	0.037	0.000	0.009
Logistics	[omitted]				
Media & Finance	-0.004	0.002	0.034	-0.007	0.000
Professional Services	0.000	0.001	0.826	-0.001	0.001
Administrative Services	0.000	0.000	0.515	-0.001	0.001
Public Administration	0.001	0.001	0.143	0.000	0.002
Education	-0.002	0.003	0.564	-0.009	0.005
Healthcare	0.001	0.001	0.468	-0.002	0.003
Arts & Recreation	0.001	0.001	0.667	-0.002	0.003
Total explained component	-0.096	0.015	<0.001	-0.124	-0.067
Unexplained component	0.165	0.026	<0.001	0.115	0.215
Adjusted log pay gap	0.069	0.028	0.013	0.015	0.124
Raw log pay gap	0.022	0.021	0.287	-0.018	0.062

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Japanese (unweighted n=333) vs. Sole NZ European (unweighted n=58,974)					
Age	0.032	0.033	0.335	-0.033	0.097
Age squared	-0.040	0.026	0.114	-0.091	0.010
Sex	0.009	0.003	<0.001	0.004	0.014
Place of birth	-0.022	0.004	<0.001	-0.029	-0.015
English language ability	-0.001	0.001	0.380	-0.004	0.001
Northland region	[omitted]				
Auckland region	-0.016	0.004	<0.001	-0.023	-0.009
Waikato region	0.001	0.001	0.096	0.000	0.002
Bay of Plenty region	0.001	0.000	0.196	0.000	0.001
Gisborne/Hawke's Bay region	0.000	0.000	0.952	-0.001	0.001
Taranaki region	0.000	0.000	0.552	0.000	0.001
Manawatu/Wanganui region	-0.001	0.000	0.116	-0.001	0.000
Wellington region	0.003	0.001	0.082	0.000	0.005
Nelson/Tasman/Marlborough/West Coast region	0.000	0.000	0.284	-0.001	0.000
Canterbury region	-0.001	0.001	0.172	-0.003	0.000
Otago region	0.000	0.000	0.744	-0.001	0.000
Southland region	-0.001	0.000	<0.001	-0.002	-0.001
Postgraduate qualification	0.000	0.004	0.888	-0.007	0.006
Bachelor's qualification	-0.009	0.003	<0.001	-0.014	-0.004
Post-school qualification	-0.001	0.000	0.093	-0.002	0.000
School qualification	0.000	0.000	0.844	0.000	0.000
No qualification	[omitted]				
Manager	0.012	0.005	0.009	0.003	0.021
Professional	0.004	0.006	0.499	-0.007	0.015
Technician or Trades worker	0.000	0.000	0.446	-0.001	0.001
Community or Personal Service worker	[omitted]				
Clerical or Administrative worker	0.000	0.000	0.475	-0.001	0.001
Sales worker	0.000	0.000	0.677	0.000	0.000
Machinery Operator or Driver	-0.002	0.001	<0.001	-0.003	-0.001
Labourer	0.002	0.001	0.050	0.000	0.004
Part-time employment	0.003	0.001	0.001	0.001	0.004
Permanent job	0.000	0.000	0.944	0.000	0.001
Job tenure	0.011	0.002	<0.001	0.007	0.015
Employment continuity	0.000	0.000	0.466	0.000	0.001
Union member	0.000	0.000	0.384	-0.001	0.000
Agriculture	-0.002	0.001	0.060	-0.004	0.000
Manufacturing	0.000	0.000	0.522	-0.001	0.001
Construction	-0.001	0.001	0.025	-0.003	0.000
Wholesale	0.000	0.000	0.368	-0.001	0.000
Retail	0.005	0.003	0.156	-0.002	0.012
Hospitality	0.025	0.004	<0.001	0.016	0.033
Logistics	[omitted]				
Media & Finance	0.003	0.001	0.002	0.001	0.005
Professional Services	0.000	0.001	0.717	-0.001	0.002
Administrative Services	0.000	0.001	0.965	-0.001	0.001
Public Administration	0.001	0.001	0.039	0.000	0.002
Education	-0.001	0.004	0.769	-0.009	0.007
Healthcare	-0.001	0.001	0.626	-0.004	0.002
Arts & Recreation	0.000	0.002	0.917	-0.003	0.003
Total explained component	0.010	0.017	0.563	-0.024	0.044
Unexplained component	0.108	0.055	0.048	0.001	0.215
Adjusted log pay gap	0.118	0.056	0.036	0.008	0.227
Raw log pay gap	0.137	0.026	<0.001	0.086	0.188

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Korean (unweighted n=609) vs. Sole NZ European (unweighted n=58,974)					
Age	0.108	0.025	<0.001	0.060	0.156
Age squared	-0.097	0.020	<0.001	-0.135	-0.059
Sex	-0.002	0.002	0.217	-0.006	0.001
Place of birth	-0.027	0.004	<0.001	-0.034	-0.019
English language ability	0.011	0.004	0.005	0.003	0.019
Northland region	[omitted]				
Auckland region	-0.049	0.005	<0.001	-0.059	-0.038
Waikato region	0.002	0.001	0.010	0.000	0.003
Bay of Plenty region	0.000	0.000	0.181	0.000	0.001
Gisborne/Hawke's Bay region	0.000	0.000	0.935	-0.001	0.001
Taranaki region	0.000	0.000	0.093	0.000	0.001
Manawatu/Wanganui region	-0.001	0.000	0.078	-0.002	0.000
Wellington region	0.006	0.001	<0.001	0.004	0.008
Nelson/Tasman/Marlborough/West Coast region	-0.001	0.001	0.047	-0.002	0.000
Canterbury region	0.002	0.001	0.017	0.000	0.004
Otago region	0.000	0.000	0.713	-0.001	0.001
Southland region	-0.001	0.000	<0.001	-0.002	-0.001
Postgraduate qualification	[omitted]				
Bachelor's qualification	0.020	0.002	<0.001	0.015	0.024
Post-school qualification	-0.019	0.003	<0.001	-0.025	-0.014
School qualification	-0.014	0.003	<0.001	-0.020	-0.007
No qualification	-0.010	0.001	<0.001	-0.013	-0.008
Manager	0.018	0.003	<0.001	0.012	0.024
Professional	-0.010	0.005	0.031	-0.019	-0.001
Technician or Trades worker	-0.001	0.000	0.068	-0.002	0.000
Community or Personal Service worker	[omitted]				
Clerical or Administrative worker	0.001	0.000	0.116	0.000	0.001
Sales worker	0.000	0.000	0.737	0.000	0.000
Machinery Operator or Driver	0.001	0.001	0.430	-0.001	0.002
Labourer	-0.001	0.000	0.261	-0.001	0.000
Part-time employment	0.000	0.000	0.680	-0.001	0.001
Permanent job	0.000	0.000	0.931	0.000	0.000
Job tenure	0.017	0.001	<0.001	0.015	0.020
Employment continuity	0.001	0.000	0.003	0.001	0.002
Union member	0.000	0.000	0.574	0.000	0.000
Agriculture	-0.003	0.000	<0.001	-0.004	-0.002
Manufacturing	-0.001	0.000	0.149	-0.001	0.000
Construction	-0.001	0.000	0.142	-0.001	0.000
Wholesale	0.000	0.000	0.584	0.000	0.000
Retail	0.002	0.002	0.291	-0.002	0.007
Hospitality	0.014	0.003	<0.001	0.009	0.019
Logistics	[omitted]				
Media & Finance	0.001	0.001	0.187	-0.001	0.003
Professional Services	-0.001	0.001	0.246	-0.002	0.001
Administrative Services	0.000	0.000	0.869	-0.001	0.001
Public Administration	0.001	0.001	0.016	0.000	0.002
Education	-0.002	0.003	0.431	-0.008	0.004
Healthcare	0.001	0.001	0.513	-0.001	0.003
Arts & Recreation	0.000	0.001	0.965	-0.002	0.002
Total explained component	-0.033	0.012	0.007	-0.057	-0.009
Unexplained component	0.161	0.029	<0.001	0.105	0.218
Adjusted log pay gap	0.128	0.030	<0.001	0.070	0.186
Raw log pay gap	0.093	0.018	<0.001	0.058	0.128

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Other Asian (unweighted n=912) vs. Sole NZ European (unweighted n=58,974)					
Age	0.147	0.017	<0.001	0.113	0.181
Age squared	-0.140	0.014	<0.001	-0.167	-0.113
Sex	-0.004	0.001	0.010	-0.007	-0.001
Place of birth	-0.025	0.004	<0.001	-0.033	-0.018
English language ability	0.003	0.002	0.151	-0.001	0.006
Northland region	0.000	0.000	0.128	-0.001	0.000
Auckland region	-0.014	0.002	<0.001	-0.018	-0.009
Waikato region	0.000	0.000	0.602	0.000	0.001
Bay of Plenty region	0.000	0.000	0.533	0.000	0.000
Gisborne/Hawke's Bay region	-0.001	0.000	0.041	-0.001	0.000
Taranaki region	[omitted]				
Manawatu/Wanganui region	0.000	0.000	0.724	-0.001	0.001
Wellington region	0.001	0.001	0.022	0.000	0.003
Nelson/Tasman/Marlborough/West Coast region	-0.001	0.000	0.002	-0.002	0.000
Canterbury region	0.000	0.000	0.823	-0.001	0.001
Otago region	0.000	0.000	0.982	0.000	0.000
Southland region	0.000	0.001	0.863	-0.001	0.001
Postgraduate qualification	[omitted]				
Bachelor's qualification	0.007	0.002	<0.001	0.004	0.010
Post-school qualification	-0.013	0.003	<0.001	-0.018	-0.008
School qualification	-0.015	0.003	<0.001	-0.020	-0.010
No qualification	-0.001	0.002	0.633	-0.004	0.002
Manager	0.016	0.004	<0.001	0.008	0.023
Professional	-0.010	0.005	0.038	-0.019	-0.001
Technician or Trades worker	-0.001	0.001	0.344	-0.004	0.001
Community or Personal Service worker	-0.002	0.001	0.024	-0.004	0.000
Clerical or Administrative worker	0.005	0.001	<0.001	0.003	0.007
Sales worker	0.000	0.001	0.884	-0.001	0.002
Machinery Operator or Driver	[omitted]				
Labourer	-0.001	0.000	0.050	-0.001	0.000
Part-time employment	0.000	0.000	0.633	-0.001	0.000
Permanent job	0.000	0.000	0.943	0.000	0.000
Job tenure	0.017	0.001	<0.001	0.015	0.019
Employment continuity	0.001	0.000	0.023	0.000	0.001
Union member	0.000	0.000	0.433	-0.001	0.000
Agriculture	0.000	0.000	0.180	0.000	0.001
Manufacturing	-0.001	0.001	0.322	-0.002	0.000
Construction	0.002	0.001	0.003	0.001	0.003
Wholesale	-0.001	0.001	0.133	-0.002	0.000
Retail	0.000	0.001	0.848	-0.002	0.002
Hospitality	0.004	0.001	0.001	0.002	0.006
Logistics	0.000	0.000	0.640	-0.001	0.001
Media & Finance	0.000	0.002	0.882	-0.003	0.003
Professional Services	0.000	0.001	0.748	-0.002	0.003
Administrative Services	[omitted]				
Public Administration	0.003	0.001	<0.001	0.001	0.005
Education	-0.005	0.001	<0.001	-0.008	-0.003
Healthcare	0.000	0.000	0.885	-0.001	0.001
Arts & Recreation	-0.001	0.000	0.013	-0.002	0.000
Total explained component	-0.028	0.011	0.011	-0.049	-0.006
Unexplained component	0.134	0.021	<0.001	0.092	0.176
Adjusted log pay gap	0.107	0.022	<0.001	0.063	0.150
Raw log pay gap	0.082	0.014	<0.001	0.055	0.110

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Middle Eastern (unweighted n=384) vs. Sole NZ European (unweighted n=58,974)					
Age	0.123	0.029	<0.001	0.065	0.180
Age squared	-0.113	0.023	<0.001	-0.159	-0.068
Sex	-0.003	0.002	0.191	-0.008	0.002
Place of birth	-0.022	0.004	<0.001	-0.029	-0.015
English language ability	-0.001	0.001	0.313	-0.004	0.001
Northland region	0.000	0.000	0.153	-0.001	0.000
Auckland region	-0.027	0.004	<0.001	-0.035	-0.019
Waikato region	0.000	0.000	0.465	0.000	0.001
Bay of Plenty region	0.000	0.000	0.582	-0.001	0.001
Gisborne/Hawke's Bay region	-0.001	0.000	0.059	-0.001	0.000
Taranaki region	[omitted]				
Manawatu/Wanganui region	-0.002	0.000	<0.001	-0.002	-0.001
Wellington region	0.000	0.001	0.702	-0.002	0.003
Nelson/Tasman/Marlborough/West Coast region	-0.002	0.000	<0.001	-0.003	-0.001
Canterbury region	0.000	0.001	0.681	-0.001	0.002
Otago region	-0.001	0.000	0.106	-0.001	0.000
Southland region	-0.002	0.000	<0.001	-0.002	-0.001
Postgraduate qualification	[omitted]				
Bachelor's qualification	0.011	0.003	<0.001	0.006	0.016
Post-school qualification	-0.022	0.004	<0.001	-0.029	-0.014
School qualification	-0.014	0.004	0.001	-0.022	-0.006
No qualification	-0.008	0.002	<0.001	-0.011	-0.005
Manager	0.008	0.004	0.081	-0.001	0.016
Professional	-0.025	0.006	<0.001	-0.036	-0.013
Technician or Trades worker	0.000	0.000	0.901	-0.001	0.001
Community or Personal Service worker	[omitted]				
Clerical or Administrative worker	0.001	0.000	0.069	0.000	0.002
Sales worker	0.000	0.000	0.625	0.000	0.000
Machinery Operator or Driver	-0.001	0.001	0.024	-0.003	0.000
Labourer	-0.001	0.001	0.260	-0.002	0.001
Part-time employment	0.001	0.001	0.069	0.000	0.002
Permanent job	0.000	0.000	0.947	0.000	0.000
Job tenure	0.012	0.002	<0.001	0.008	0.016
Employment continuity	0.002	0.001	0.008	0.000	0.003
Union member	0.000	0.000	0.371	-0.001	0.000
Agriculture	-0.001	0.000	0.075	-0.001	0.000
Manufacturing	0.001	0.001	0.113	0.000	0.002
Construction	0.001	0.001	0.136	0.000	0.002
Wholesale	0.001	0.001	0.407	-0.001	0.002
Retail	0.000	0.002	0.935	-0.003	0.003
Hospitality	0.002	0.001	0.072	0.000	0.005
Logistics	0.001	0.001	0.433	-0.001	0.002
Media & Finance	0.004	0.002	0.034	0.000	0.007
Professional Services	-0.008	0.003	0.003	-0.013	-0.003
Administrative Services	[omitted]				
Public Administration	0.000	0.002	0.824	-0.004	0.003
Education	0.004	0.003	0.122	-0.001	0.009
Healthcare	0.000	0.000	0.974	0.000	0.000
Arts & Recreation	0.000	0.000	0.984	-0.001	0.001
Total explained component	-0.082	0.018	<0.001	-0.117	-0.048
Unexplained component	-0.039	0.039	0.322	-0.115	0.038
Adjusted log pay gap	-0.121	0.041	0.003	-0.201	-0.041
Raw log pay gap	-0.046	0.026	0.074	-0.096	0.005

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Latin American (unweighted n=564) vs. Sole NZ European (unweighted n=58,974)					
Age	0.136	0.019	<0.001	0.099	0.173
Age squared	-0.140	0.015	<0.001	-0.169	-0.112
Sex	0.000	0.002	0.995	-0.004	0.004
Place of birth	-0.026	0.004	<0.001	-0.034	-0.018
English language ability	-0.001	0.001	0.273	-0.004	0.001
Northland region	[omitted]				
Auckland region	-0.018	0.003	<0.001	-0.024	-0.011
Waikato region	0.000	0.000	0.319	0.000	0.001
Bay of Plenty region	0.000	0.000	0.513	-0.001	0.000
Gisborne/Hawke's Bay region	0.000	0.000	0.950	-0.001	0.001
Taranaki region	0.000	0.000	0.169	0.000	0.001
Manawatu/Wanganui region	-0.001	0.000	0.086	-0.002	0.000
Wellington region	0.000	0.001	0.948	-0.003	0.002
Nelson/Tasman/Marlborough/West Coast region	0.000	0.000	0.150	-0.001	0.000
Canterbury region	0.001	0.001	0.037	0.000	0.003
Otago region	0.000	0.000	0.789	0.000	0.000
Southland region	0.000	0.000	0.188	-0.001	0.000
Postgraduate qualification	[omitted]				
Bachelor's qualification	0.009	0.002	<0.001	0.005	0.013
Post-school qualification	-0.014	0.003	<0.001	-0.020	-0.008
School qualification	-0.008	0.004	0.029	-0.015	-0.001
No qualification	-0.007	0.002	<0.001	-0.010	-0.004
Manager	0.004	0.005	0.493	-0.007	0.014
Professional	0.011	0.006	0.062	-0.001	0.022
Technician or Trades worker	-0.004	0.002	0.014	-0.007	-0.001
Community or Personal Service worker	-0.001	0.001	0.237	-0.003	0.001
Clerical or Administrative worker	0.000	0.001	0.947	-0.003	0.003
Sales worker	0.002	0.001	0.028	0.000	0.003
Machinery Operator or Driver	[omitted]				
Labourer	-0.001	0.000	0.133	-0.001	0.000
Part-time employment	0.000	0.000	0.176	-0.001	0.000
Permanent job	0.000	0.000	0.983	0.000	0.000
Job tenure	0.019	0.001	<0.001	0.017	0.022
Employment continuity	0.001	0.000	0.017	0.000	0.002
Union member	0.000	0.000	0.353	-0.001	0.000
Agriculture	0.000	0.000	0.492	-0.001	0.000
Manufacturing	-0.001	0.001	0.295	-0.002	0.001
Construction	0.000	0.001	0.714	-0.001	0.001
Wholesale	0.000	0.001	0.476	-0.001	0.001
Retail	-0.001	0.001	0.297	-0.003	0.001
Hospitality	0.004	0.001	0.001	0.002	0.007
Logistics	0.000	0.001	0.796	-0.001	0.001
Media & Finance	-0.001	0.002	0.702	-0.005	0.004
Professional Services	-0.001	0.002	0.484	-0.005	0.002
Administrative Services	[omitted]				
Public Administration	0.004	0.001	<0.001	0.002	0.006
Education	-0.005	0.001	<0.001	-0.008	-0.002
Healthcare	0.000	0.000	0.981	-0.001	0.001
Arts & Recreation	0.000	0.000	0.459	-0.001	0.001
Total explained component	-0.040	0.012	0.001	-0.064	-0.016
Unexplained component	0.148	0.020	<0.001	0.110	0.186
Adjusted log pay gap	0.108	0.022	<0.001	0.065	0.151
Raw log pay gap	0.040	0.018	0.023	0.006	0.075

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
African+ (unweighted n=1,749) vs. Sole NZ European (unweighted n=58,974)					
Age	0.055	0.014	<0.001	0.027	0.083
Age squared	-0.057	0.012	<0.001	-0.079	-0.034
Sex	0.000	0.001	0.772	-0.002	0.002
Place of birth	-0.027	0.004	<0.001	-0.035	-0.019
English language ability	0.000	0.000	0.342	-0.001	0.000
Northland region	0.000	0.000	0.604	0.000	0.001
Auckland region	-0.033	0.003	<0.001	-0.039	-0.028
Waikato region	-0.001	0.001	0.108	-0.002	0.000
Bay of Plenty region	0.000	0.000	0.382	-0.001	0.001
Gisborne/Hawke's Bay region	0.000	0.000	0.220	0.000	0.001
Taranaki region	0.001	0.000	0.004	0.000	0.001
Manawatu/Wanganui region	0.001	0.000	0.024	0.000	0.001
Wellington region	0.003	0.001	0.002	0.001	0.006
Nelson/Tasman/Marlborough/West Coast region	0.001	0.000	0.006	0.000	0.001
Canterbury region	0.006	0.001	<0.001	0.004	0.008
Otago region	0.002	0.000	<0.001	0.001	0.003
Southland region	[omitted]				
Postgraduate qualification	-0.006	0.002	<0.001	-0.009	-0.003
Bachelor's qualification	-0.001	0.001	0.287	-0.003	0.001
Post-school qualification	0.000	0.000	0.232	0.000	0.001
School qualification	0.000	0.000	0.246	-0.001	0.000
No qualification	[omitted]				
Manager	0.000	0.003	0.895	-0.007	0.006
Professional	-0.008	0.003	0.018	-0.015	-0.001
Technician or Trades worker	-0.001	0.001	0.138	-0.003	0.000
Community or Personal Service worker	0.001	0.000	0.151	0.000	0.002
Clerical or Administrative worker	-0.001	0.001	0.315	-0.003	0.001
Sales worker	0.001	0.001	0.105	0.000	0.002
Machinery Operator or Driver	[omitted]				
Labourer	0.000	0.000	0.041	0.000	0.001
Part-time employment	-0.001	0.000	0.001	-0.001	0.000
Permanent job	0.000	0.000	0.696	0.000	0.000
Job tenure	0.013	0.001	<0.001	0.012	0.015
Employment continuity	0.000	0.000	0.185	0.000	0.000
Union member	0.000	0.000	0.403	0.000	0.000
Agriculture	-0.002	0.000	<0.001	-0.003	-0.001
Manufacturing	0.000	0.000	0.290	0.000	0.001
Construction	0.000	0.000	0.971	0.000	0.000
Wholesale	0.000	0.000	0.267	0.000	0.001
Retail	-0.004	0.001	<0.001	-0.006	-0.002
Hospitality	-0.001	0.001	0.347	-0.002	0.001
Logistics	[omitted]				
Media & Finance	-0.001	0.001	0.483	-0.002	0.001
Professional Services	0.000	0.000	0.384	-0.001	0.000
Administrative Services	0.000	0.000	0.784	0.000	0.001
Public Administration	0.000	0.000	0.572	0.000	0.001
Education	-0.002	0.002	0.127	-0.006	0.001
Healthcare	0.002	0.001	0.015	0.000	0.003
Arts & Recreation	0.001	0.001	0.131	0.000	0.003
Total explained component	-0.059	0.008	<0.001	-0.075	-0.043
Unexplained component	0.065	0.016	<0.001	0.033	0.097
Adjusted log pay gap	0.006	0.017	0.713	-0.027	0.040
Raw log pay gap	-0.021	0.011	0.061	-0.043	0.001

Pay gap decomposition	Coefficient	S.E.	*p*-value	95% confidence interval	
				Lower limit	Upper limit
Filipino (unweighted n=2,628) vs. Sole NZ European (unweighted n=58,974)					
Age	0.073	0.011	<0.001	0.052	0.095
Age squared	-0.081	0.009	<0.001	-0.098	-0.064
Sex	-0.002	0.001	0.029	-0.004	0.000
Place of birth	-0.025	0.004	<0.001	-0.033	-0.017
English language ability	0.000	0.001	0.435	-0.001	0.001
Northland region	0.000	0.000	0.129	-0.001	0.000
Auckland region	-0.014	0.002	<0.001	-0.018	-0.010
Waikato region	0.000	0.000	0.458	0.000	0.001
Bay of Plenty region	0.000	0.000	0.526	0.000	0.000
Gisborne/Hawke's Bay region	-0.001	0.000	0.062	-0.001	0.000
Taranaki region	[omitted]				
Manawatu/Wanganui region	-0.001	0.000	<0.001	-0.002	0.000
Wellington region	0.001	0.000	0.038	0.000	0.002
Nelson/Tasman/Marlborough/West Coast region	-0.001	0.000	<0.001	-0.002	-0.001
Canterbury region	0.000	0.000	0.711	0.000	0.000
Otago region	0.000	0.000	0.093	-0.001	0.000
Southland region	0.000	0.000	0.607	0.000	0.001
Postgraduate qualification	0.004	0.001	<0.001	0.002	0.006
Bachelor's qualification	-0.012	0.001	<0.001	-0.014	-0.009
Post-school qualification	-0.001	0.001	0.018	-0.002	0.000
School qualification	0.000	0.000	0.466	0.000	0.000
No qualification	[omitted]				
Manager	0.015	0.002	<0.001	0.012	0.019
Professional	0.003	0.002	0.212	-0.002	0.007
Technician or Trades worker	-0.001	0.000	0.005	-0.001	0.000
Community or Personal Service worker	[omitted]				
Clerical or Administrative worker	0.001	0.000	0.001	0.000	0.001
Sales worker	0.000	0.000	0.443	0.000	0.000
Machinery Operator or Driver	0.000	0.000	0.730	-0.001	0.001
Labourer	0.003	0.001	<0.001	0.002	0.004
Part-time employment	-0.001	0.000	<0.001	-0.002	-0.001
Permanent job	0.000	0.000	0.954	0.000	0.000
Job tenure	0.014	0.001	<0.001	0.013	0.016
Employment continuity	0.000	0.000	0.293	0.000	0.000
Union member	0.000	0.000	0.721	0.000	0.000
Agriculture	0.001	0.001	0.018	0.000	0.003
Manufacturing	0.001	0.000	0.017	0.000	0.002
Construction	0.000	0.000	0.200	0.000	0.001
Wholesale	0.000	0.000	0.226	-0.001	0.000
Retail	-0.001	0.001	0.337	-0.003	0.001
Hospitality	0.002	0.001	0.003	0.001	0.004
Logistics	[omitted]				
Media & Finance	0.002	0.001	0.001	0.001	0.003
Professional Services	0.001	0.000	0.021	0.000	0.001
Administrative Services	0.001	0.000	0.001	0.000	0.002
Public Administration	0.001	0.000	0.001	0.001	0.002
Education	-0.013	0.001	<0.001	-0.015	-0.010
Healthcare	0.007	0.001	<0.001	0.004	0.009
Arts & Recreation	-0.002	0.000	<0.001	-0.003	-0.001
Total explained component	-0.026	0.007	<0.001	-0.040	-0.012
Unexplained component	0.184	0.011	<0.001	0.163	0.206
Adjusted log pay gap	0.158	0.011	<0.001	0.137	0.179
Raw log pay gap	0.108	0.008	<0.001	0.093	0.123

NEW ZEALAND POLICY RESEARCH INSTITUTE

TE KĀHUI RANGAHAU MANA TAURITE

Auckland University of Technology, Auckland, New Zealand

policy.research@aut.ac.nz | **www.nzpri.aut.ac.nz**

AUT UNIVERSITY
NEW ZEALAND