Research note: Empirical analysis of ethnic pay gaps in New Zealand

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1 Introduction

This research note explores the factors contributing to ethnic pay gaps in New Zealand. The emphasis here is on description, as a causal analysis is beyond the capability of the methods used. The gaps between the average (as well as median) hourly wages for the European workforce relative to Māori and Pacific workers are substantial. A statistical analysis by Treasury in 2018 also showed that the ratio in average hourly wages (based on published survey estimates by Stats NZ) for both ethnic groups relative to European had stayed at a similar level for the last decade; as they state "there has been movement from year to year but no consistent upward or downward trend" (Treasury, 2018, p.1).

The substantive and persistent ethnic pay gaps warrant empirical analysis, as controlling for differences in characteristics is essential. These include individual household, occupation, industry as well as other job characteristics of the individuals. The analysis within this research note has been undertaken as an input to the Pacific Pay Gap Inquiry that was undertaken by the Human Rights Commission (HRC) in New Zealand. Their motivation for the Inquiry is to better understand why the Pacific Pay Gap exists and how it can be closed. In addition to this research input, the HRC is also collecting evidence via surveys, submissions, workshops and Talanoa. The results of these activities are not reported here, but can be found on the Pacific Pay Gap Inquiry web page (https://pacificpaygap.hrc.co.nz/about-the-inquiry/pacific-pay-gap-inquiry-reports/).

Given that this study is a short note wholly focussing on the empirical analysis of ethnic pay gaps in New Zealand, we have not delved into the wider employment picture for these population groups, such as the mechanisms by which various groups acquire labour market attributes (such as educational attainment), the functioning of labour market institutions or the nature of potential discriminatory practices. A useful starting point for building a more comprehensive picture of Pacific workers in New Zealand is research undertaken on a range of aspects of this population by the Ministry of Pacific Peoples (2021).

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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 Statistics Act 1975. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers.

This analysis makes use of unit record Income Survey data from Stats NZ to estimate the ethnic pay gaps for three groups relative to Europeans: Māori; Pacific, and Asians. We employ the Oaxaca-Blinder decomposition technique, which apportions each of these gaps into two parts: the explained and unexplained. Simply put, the explained reflects differences in the observable characteristics of the ethnic groups; while the unexplained reflects differences in returns.

The format of the remainder of this note is as follows: Section 2 describes the data, key variables and descriptives of our sample; while Section 3 details the method and results. The results include ethnic comparisons for the aggregate survey population and ethnic differences by gender.

2 Data and descriptives

Data

The data used in this study is sourced from the June 2019 and June 2020 quarters of the Income Survey. The Income Survey is a supplemental survey to the Household Labour Force Survey (HLFS). While the HLFS is conducted quarterly, the Income Survey is only conducted in the June quarter of each year.

The HLFS is the standard data source for analysing hourly earnings information in New Zealand. It provides earnings data for approximately 15,000 households per quarter (around 30,000 individuals). The survey asks for information on pay and hours and provides a comprehensive picture of the labour market concerning a range of individual, household, and job characteristics (including data on an individual's occupation and industry category). An alternative data source for earnings information is Inland Revenue New Zealand. This provides more frequent data (monthly) on earnings and is population-wide, but unfortunately does not include hours information for our sample period; therefore, our reliance on the HLFS.

Our key results are based on analysis using the June 2020 sample. However, because the Covid-19 pandemic hit in late March 2020, and New Zealand entered a lockdown period from then till mid-May, we also repeat our analysis with the June 2019 sample in case any of the results from 2020 are Covid-affected. In the results section, for the sake of brevity, we only report the results from the 2020 sample. It is worth noting that, in most cases, the 2019 and 2020 results are qualitatively very similar.

We limit our sample to the working-age population (i.e. aged 16 to 64). We also trim the sample to remove the top and bottom one per centof hourly wage earnings and exclude the self-employed[1].

Ethnic groups

Ethnic groups available in our data can be categorised as European, Māori, Pacific, Asian, Middle Eastern, Latin American and African (MELAA) and Other. Our focus in this empirical analysis is comparing the earnings outcomes (and factors contributing to earnings gaps) for

[1] All imputed and proxy observations are included in our sample.

Māori, Pacific and Asian relative to European. Due to their small sample size, we do not delve into the outcomes for MELAA or the 'Other' ethnicity category.

Focussing on these four ethnic groups, we find that those who list only European as their ethnicity account for 58.5 per cent of our sample; whereas the corresponding proportions that only list Māori, Pacific, and Asian are 6.7, 4.9 and 14.3 per cent, respectively, With respect to overlaps across ethnic groups, where an individual reports affiliation to more than one ethnic group, the largest overlap is between European and Māori – this accounts for 4.6 per cent of our sample. European and Pacific are less than one per cent; as are Māori and Pacific; European and Asian; and those who report the three ethnic affiliations of European, Māori and Pacific.

For the purposes of our decomposition analysis, we use prioritised ethnicity classifications so as to create mutually exclusive ethnic categories. The order of prioritisation is Māori, Pacific, Asian, MELAA, Other, and lastly, European.

Descriptives

Table 1 provides definitions of the outcome variable (usual hourly earnings) and the characteristics to be included in the empirical analysis. They cover the following domains: individual characteristics; highest educational attainment; household characteristics; region; occupation; industry; and other job characteristics.

Table 2, then, provides descriptives for all the variables by prioritised ethnic group and gender. All descriptives are weighted by weights provided by Stats NZ (2016). Furthermore, the descriptives are derived from the regression sample.

Table 1: Variable definitions

Variable	Definition
Hourly wage	Usual hourly total earnings from main job ($)
Individual characteristics	
Age	Age in years
Ethnicity	6 Dummy variables for prioritised ethnicity: Māori; Pacific; Asian; MELAA; Other; European
Born in NZ	Dummy variable: 1 = Born in NZ; 0 otherwise
Educational attainment	
Education	6 Dummy variables for highest educational attainment: No school qualification; Post-school; Bachelor's; Post-graduate; PhD
Household characteristics	
Sole parent	Dummy variable: 1 = one parent with one or more dependent children; 0 otherwise
Partnered	Dummy variable: 1 = Married / living as married; 0 otherwise
Number of dependent children	Number of children in the household aged less than 18 years who are not employed full time
Household income decile	Income deprivation decile ranging from 1 (most deprived) to 10 (least deprived)
Region	
Regional council	12 Dummy variables for regional council: Northland; Auckland; Waikato; Bay of Plenty; Gisborne/Hawke's Bay; Taranaki; Manawatu-Wanganui; Wellington; Nelson/Tasman/Marlborough; Canterbury; Otago; Southland
Occupational characteristics	
Occupation	9 Dummy variables for occupation based on the ANZSCO Level 1 classification: Manager; Professional; Technical and trades worker; Community and personal service worker; Clerical and administrative worker; Sales worker; Machinery operator or driver; Labourer; Other
Industry characteristics	
Industry	15 Dummy variables for industry based on the ANZSIC Level 1 classification[2]: Agriculture, forestry, fishing and mining; Manufacturing; Electricity, gas, water and waste services, and construction; Wholesale trade; Retail trade; Accommodation and food services; Transport, postal and warehousing; Information media and telecommunications, and financial and insurance services, and Rental, hiring and real estate services; Professional services; Administrative and support services; Public administration and safety; Education and training; Health care and social assistance; Arts and recreation services; Other services
Other job characteristics	
Part-time	Dummy variable: 1 = part-time, i.e. working less than 30 hours per week; 0 otherwise
Permanent	Dummy variable: 1 = permanent employment; 0 otherwise

Notes: Variables sourced from HLFS June 2020.

[2] Traditionally there are 19 industry categories at ANZSIC Level 1, but due to small size of ethnic groups in some categories, we have collapsed several, to reduce these to 15 categories.

Table 2 Descriptive profile of ethnic groups, by gender

Variable	European		Māori		Pacific		Asian	
	Male	Female	Male	Female	Male	Female	Male	Female
Hourly earnings ($)	35.72	31.34	28.92	27.58	27.32	26.67	30.68	28.62
Age (years)	39.83	40.35	36.10	37.89	36.95	37.43	36.12	37.63
Born in NZ	77.10%	78.57%	98.41%	98.24%	50.43%	51.19%	8.41%	7.34%
No school	10.13%	7.07%	20.86%	16.69%	27.09%	15.50%	5.01%	4.20%
School	6.01%	6.39%	8.83%	7.26%	4.40%	7.01%	1.03%	0.74%
Post-school	52.56%	43.68%	56.81%	51.44%	56.46%	56.38%	38.69%	31.79%
Bachelor's	25.43%	35.92%	11.39%	22.11%	10.38%	19.51%	42.87%	52.94%
Post-graduate	4.62%	5.63%	2.03%	2.22%	1.68%	1.60%	10.89%	8.63%
PhD	1.24%	1.30%	0.08%	0.27%	S	S	1.51%	1.69%
Sole parent	1.84%	4.91%	3.33%	10.39%	1.06%	6.62%	0.52%	2.61%
Partnered	67.13%	66.44%	59.99%	55.99%	63.54%	52.47%	61.92%	73.88%
No. of dependents	0.72	0.67	0.97	0.89	1.13	0.95	0.64	0.69
Household income decile	7.57	7.43	7.27	7.21	7.43	7.34	7.13	7.20
Northland	2.69%	2.84%	7.79%	6.76%	S	2.01%	0.93%	0.92%
Auckland	26.70%	28.23%	18.99%	22.21%	72.48%	71.20%	58.05%	61.38%
Waikato	9.75%	9.31%	12.51%	11.86%	4.33%	5.16%	8.38%	8.10%
Bay of Plenty	5.92%	5.80%	10.74%	11.56%	2.61%	3.35%	3.76%	3.41%
Gisborne/Hawke's Bay	3.65%	3.81%	11.05%	9.65%	S	0.91%	1.71%	0.95%
Taranaki	2.48%	2.36%	2.62%	4.30%	S	0.16%	0.72%	0.59%
Manawatu-Wanganui	5.34%	5.02%	7.71%	8.03%	3.31%	2.47%	2.78%	2.02%
Wellington	13.55%	13.87%	11.41%	10.65%	11.42%	10.80%	9.34%	9.84%
Nelson/Tasman/Marlborough/West Coast	4.83%	4.39%	4.44%	2.37%	S	0.91%	1.11%	1.05%
Canterbury	16.29%	15.58%	7.95%	8.00%	5.00%	2.78%	8.40%	8.23%
Otago	6.48%	6.60%	2.72%	2.01%	S	S	2.98%	2.36%
Southland	2.31%	2.18%	2.07%	2.58%	0.85%	0.26%	1.83%	1.16%
Manager	20.71%	15.27%	12.84%	11.37%	7.08%	7.73%	15.26%	8.96%
Professional	24.73%	34.04%	13.72%	26.53%	11.47%	22.06%	27.44%	33.92%
Technician and Trades Worker	18.95%	4.32%	17.91%	3.64%	20.61%	4.02%	18.10%	5.20%
Community and personal service worker	4.75%	11.60%	7.18%	14.29%	7.60%	15.58%	6.06%	13.53%
Clerical and administrative worker	6.47%	17.25%	4.48%	15.86%	6.51%	17.30%	6.61%	15.40%
Sales worker	6.67%	11.30%	4.81%	12.18%	5.13%	14.34%	9.31%	12.05%

Machinery operator or driver	8.01%	1.05%	18.19%	3.09%	21.74%	2.55%	7.53%	1.73%
Labourer	9.22%	4.53%	20.17%	12.01%	19.05%	15.43%	9.00%	8.44%
Other	0.49%	0.64%	0.70%	1.03%	0.80%	0.98%	0.69%	0.78%
Agriculture, forestry, fishing, mining	5.36%	2.53%	8.18%	3.32%	2.15%	0.56%	4.27%	1.64%
Manufacturing	13.36%	5.58%	17.48%	8.70%	20.44%	9.21%	10.44%	6.92%
Electricity, gas, water and waste services, construction	16.08%	3.44%	20.20%	3.19%	15.90%	2.97%	10.94%	2.59%
Wholesale trade	5.51%	3.43%	5.08%	2.11%	8.42%	3.07%	4.82%	3.26%
Retail trade	8.11%	10.37%	8.78%	11.66%	9.30%	12.52%	13.13%	12.11%
Accommodation and food services	2.79%	4.44%	1.96%	6.56%	2.34%	7.43%	10.98%	9.54%
Transport, postal and warehousing	5.02%	2.44%	7.18%	3.85%	7.39%	7.11%	5.65%	2.31%
Information and media, financial services, and real estate services	7.17%	7.50%	2.71%	5.31%	4.23%	4.83%	7.40%	7.74%
Professional services	10.62%	8.49%	3.92%	3.27%	3.99%	4.01%	10.72%	8.66%
Administrative and support services	2.38%	3.12%	2.64%	3.43%	2.73%	5.37%	1.89%	4.23%
Public administration and safety	7.82%	8.85%	8.05%	10.90%	7.00%	8.88%	4.91%	5.34%
Education and training	4.90%	14.13%	5.82%	15.03%	4.59%	6.39%	3.86%	8.94%
Healthcare and social assistance	3.51%	19.70%	3.82%	17.47%	5.35%	22.06%	5.64%	22.49%
Arts, recreation and other services	7.38%	5.97%	4.18%	5.22%	6.18%	5.59%	5.38%	4.22%
Part-time	7.13%	25.91%	8.46%	23.64%	4.94%	18.01%	10.74%	21.35%
Permanent	96.08%	93.91%	93.75%	91.68%	94.86%	93.11%	94.75%	91.82%
Sample size (unweighted)	4,305	4,623	855	969	432	447	1,194	1,128

Notes: Definitions of all variables are provided in Table 1. All means are weighted by weights provided by Stats New Zealand. Descriptives are derived from the regression sample. S = suppressed due to small sample size.

Table 2 begins with the wage profile comparison across ethnic and gender groups. In particular, average hourly earnings are provided from the main job (excluding overtime earnings). As expected, European wages are higher than other ethnic groups, irrespective of gender. Our sample's average European male hourly earnings in June 2020 is $35.72. The corresponding figure for Māori males is 81 per cent of that figure, and for Pacific males, it is 76 per cent. To understand if the regression sample constructed using the HLFS is representative of the wage profile of the full survey, we compare these ratios to those available from public estimates from the HLFS (Stats NZ, 2021). It is important to note the differences between the regression sample and the full survey before the comparison. As detailed earlier, we trim the bottom and top one per cent of the wage distribution to exclude the influence of outliers; we also remove the self-employed; our ethnic groups are based on prioritised ethnicity, and we focus on 16-64-year-olds.

In comparison, the available estimates for the full survey use the population aged 15+; they do not prioritise ethnic groups or make any other exclusions. Interestingly, we find almost identical wage ratios between ethnic groups in our comparison. For example, the average hourly wage ratio for Māori, Pacific, and Asian females relative to European females is 88 per cent, 85 per cent and 91 per cent, respectively, in our regression sample; and 89 per cent, 85 per cent and 92 per cent in the published estimates for the full survey. This illustrates the representativeness of our regression sample with respect to the full survey.

The educational attainment section of Table 2 illustrates that, on average, males are more likely to have a post-school qualification relative to females; the reverse is true regarding bachelor's qualifications. The proportion of Māori males without a school qualification is approximately double the proportion for European males; the likelihood that Pacific males do not have a school qualification is just over 2.7 times that for European males.

In terms of household characteristics, females are much more likely than males to be a sole parent. Further, while the proportion of European females that fall into this category is just under five per cent; the corresponding figure for Pacific females is nearly seven per cent; and over 10 per cent for Māori females. Additionally, Pacific households tend to be larger, on average, relative to the other ethnic groups.

Next in Table 2 are descriptives to illustrate the regional distribution for these ethnic sub-groups. It is clear that Pacific workers are heavily concentrated in the Auckland region; and a similar pattern is evident for Asians. Nearly three-quarters of Pacific workers in our sample reside in Auckland. The comparable number for Europeans is just over a quarter; and approximately one-fifth for Māori.

The remainder of Table 2 is dedicated to job-related characteristics. Apart from the 'Other' category for occupation, the classification hierarchy ranges from Labourer through to Manager. Pacific workers are the least likely to be a Manager and, aside from Māori males, are the most likely to be in a labour-type occupation. Pacific are also the most likely to work in the Manufacturing industry. In terms of hours of work, approximately seven per cent of European males work part-time. The comparable figure for Māori and Asian males is approximately eight and 11 per cent, respectively.

In contrast, just under five per cent of Pacific males work part-time. The same pattern is also evident for females, with Pacific women being the least likely to work part-time. The last variable of interest in Table 2 relates to security of employment and is a binary indicator of

whether the individual has a permanent employment contract. There is not a lot of variation evident here; for most population groups, the probability if employed to have a permanent contract is over 90 per cent. The groups with the lowest probability (but not by much) are Māori and Pacific, females.

3 Method and results

Method

We use the standard approach to decomposing pay disparities in the literature, as introduced by Oaxaca (1973) and Blinder (1973). This involves initially estimating, separately, the wage models for two ethnic groups. These are labelled in the following equations as group 1 and group 2.

$$ln(w_i^1) = \beta^1 X_i^1 + \varepsilon_i^1 \quad (1)$$

$$ln(w_i^2) = \beta^2 X_i^2 + \varepsilon_i^2 \quad (2)$$

In the above wage models, the *i* subscript refers to the *i*th wage earner, *w* stands for hourly wages, *X* is the vector of explanatory variables (as shown in Table 1). The outcome in the wage models is the natural logarithm of usual hourly wages. The ethnic pay gap is calculated in (3) and decomposed in (4):

$$\overline{\ln(w^1)} - \overline{\ln(w^2)} = \widehat{\beta^1}\overline{X^1} - \widehat{\beta^2}\overline{X^2} \quad (3)$$

$$\overline{\ln(w^1)} - \overline{\ln(w^2)} = \widehat{\beta^1}(\overline{X^1} - \overline{X^2}) + (\widehat{\beta^1} - \widehat{\beta^2})\,\overline{X^2} \quad (4)$$

Based on the decomposition shown in (4), the first part of the right-hand side is the component of the ethnic pay gap that can be explained by differences in the average characteristics of the two ethnic groups. This is essentially the 'explained' component of the pay gap, and as will be shown in the results, this can be further broken down to the contribution of each of the domains in Table 1.

The second part of the right-hand side of equation (4) is the component of the ethnic pay gap that is left unexplained. This equates to differences in the returns to characteristics in the labour market. Why are there unexplained differences? There are several possible reasons. These include: (i) unobserved differences in characteristics not captured in the current data; (ii) ethnic differences in the non-pecuniary elements of jobs; (iii) discriminatory behaviour; (iv) unconscious bias, etc.

A recognised issue in the literature in implementing decompositions is whether the estimated β coefficients used to weight the explained part of the model should relate to Europeans or to the comparator ethnic group, or be estimated from a pooled regression of all workers (i.e. both ethnic groups). The choice of which weights to use can lead to substantive variations in results. We choose to use the estimated β coefficients from a pooled regression as weights, which requires less strict assumptions over the alternative choices regarding the counterfactual wage structure.

Another often acknowledged issue in the literature with the Oaxaca-Blinder approach is that it may suffer from sample selection bias (Heckman, 1979), as wages are only available for employed individuals. Since the decision to enter the labour market is systematically linked to the likely wages an individual could achieve, by omitting non-employed from the analysis, we

may bias our results. Therefore, to correct for sample selection bias we apply the Heckman procedure for both ethnic groups.

The following variables are used in the Heckman selection model; individual characteristics (age, born in NZ); educational attainment (6 dummy variables); regional council (12 dummy variables); and household characteristics (sole parent, partnered, number of dependent children and the income decile of the household). The variables included in the main model are all those illustrated in Table 1 except for household characteristics, whichare excluded to allow identification of the Heckman selection model.

Results

Tables 3 and 4 present the results with and without adjustment for sample selection bias, i.e. pre and post-application of the Heckman procedure. For each pay decomposition, the reference group are European. The contributing factors that are included in the analysis represent four domains as mentioned earlier – individual characteristics; educational attainment; region and job-related characteristics (encompassing occupation, industry, permanent and part-time status).

Table 3: Oaxaca decomposition without adjustment for sample selection bias

	Māori		**Pacific**		**Asian**	
	Male	Female	Male	Female	Male	Female
Hourly pay difference (%)	19.03	11.71	24.27	14.76	13.90	8.19
Explained (% of difference)	92.33***	84.67***	46.41***	47.33***	-27.58***	-36.48**
Explained						
Individual	27.81***	12.92***	16.02*	30.08***	-11.24	-68.71*
Education	18.93***	40.13***	33.77***	63.94***	104.53***	117.47***
Region	5.81*	7.03*	-27.15***	-55.77***	64.04***	104.46***
Job-related	42.05***	36.82***	79.17***	62.56***	-58.99***	-56.64***
Sample size	5,157	5,592	4,737	5,070	5,502	5,748

Note: Variable categories correspond to domains in Table 1. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

There are a few patterns evident from Table 3. First, for Māori, regardless of gender, much of their pay gap with Europeans can be explained by observable characteristics. In particular, individual and job-related characteristics for males, and educational attainment and job-related characteristics for females. The role of individual characteristics for pay differences between Māori males and European males is likely due to the younger age profile of the Māori population relative to their European counterparts. Age is also a proxy for employment experience. The important role of job-related characteristics emphasises the occupational segregation present in the labour market.

For Pacific, the difference in job-related characteristics with respect to the reference provides a substantial contribution in explaining the pay gap for both males and females. Given that occupational segregation is interrelated with a higher likelihood of experiencing poverty, understanding the drivers in this space is critical. They include, and are not limited to, discriminatory practices; barriers to upskilling; and the influence of neighbourhood networks and residential segregation.

In terms of the negative contributions for region for both Pacific males and females, this means that the overall wage difference would be even larger if Pacific and European had a similar regional distribution. Pacific are disproportionately located in Auckland, where wages are higher on average. If they were not more concentrated in this region, then they would be even worse off, and the ethnic pay gap would increase. Note that 72 per cent (71 per cent) of the male (female) Pacific population in our sample were living in the Auckland region (as show in Table 2); whereas the corresponding proportions for European and Māori were 27 per cent (28 per cent) and 19 per cent (22 per cent) respectively.

The key result for Pacific in Table 3 is that just under half of the pay gap with Europeans is explained. This is after controlling for a wide variety of contributing factors. Finally, for Asians, the standout result in Table 3 is that educational differences explain greater than 100 per cent of the pay gap with Europeans. This is signalling that, despite Asians having higher educational attainment levels on average, they are not receiving the return to that skill level at the same rate as their European comparators.

Next, Table 4 adjusts the results for sample selection bias. Importantly, the patterns described in Table 3 generally hold, particularly in terms of the relative importance of the contributing domains to the explained proportion of pay gaps. For example, it still stands that differences in individual and job-related characteristics are the main contributors to the pay gap for Māori males; while differences in education and job-related characteristics are the primary contributors to the pay gap for Māori females.

For both Māori and Pacific, after adjusting for sample selection bias, the proportion of the respective pay gaps that can be explained has fallen. For Māori, it ranges between 70 and 73 per cent, which can be explained, depending on gender. For Pacific, the explained proportion is now a meagre 27 per cent for males and 39 per cent for females. As was the case in Table 3, differences in job-related characteristics are an important contributor to the explained component; and for females in particular, differences in educational attainment with their European counterparts.

Table 4: Oaxaca decomposition with adjustment for sample selection bias

	Māori		**Pacific**		**Asian**	
	Male	Female	Male	Female	Male	Female
Hourly pay difference (%)	19.03	11.71	24.27	14.76	13.90	8.19
Explained (% of difference)	70.37***	72.77***	27.07***	38.55***	-22.12***	-21.36*
Explained						
Individual	27.77***	13.95***	15.99*	36.80***	-0.16	-86.93**
Education	14.98***	35.52***	27.01***	65.23***	74.57***	117.49***
Region	5.92*	6.42***	-50.95***	-87.42***	64.03***	142.31***
Job-related	51.33***	44.11***	107.95***	85.40***	-38.44**	-72.87***
Sample size	5,160	5,592	4,737	5,067	5,499	5,748

Note: Variable categories correspond to domains in Table 1. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

Conclusion

This research explores the factors contributing to ethnic pay gaps in New Zealand. With a particular focus on Pacific workers, we find that for Pacific men, their hourly pay is 76 per cent of the pay received by European men, with the equivalent statistics being 85 per cent for Pacific women relative to European women.

Using survey data and decomposition analysis, we are able to test for the role of a wide range of individual, household, region and job-related characteristics with respect to explaining the pay gap. We find that, regardless of gender, differences in job-related factors go some way to help explain the Pacific pay gap, and for women – educational differences also play a role. However, even after accounting for these observable differences, it was still found that only 27 per cent of the pay gap for Pacific males could be explained, and 39 per cent for Pacific females. The unexplained portion of the pay gap can be due to a few reasons, including differences not observed in the data, unconscious bias and discrimination in the labour market. It is unfortunately not possible to separate the unexplained along the lines of these drivers.

Income disparities for Pacific workers relative to Europeans in the labour market have real consequences for Pacific families and future generations. This research shows that more needs to be done to close the educational divide and improve pathways to higher occupations. Further, other research from the HRC highlighted that there is evidence of discrimination being prevalent in the labour market – a clear breach of human rights. Striving for fair opportunities for all, as well as inclusive and diverse workplaces, will help reduce pay gaps across ethnic groups.

References

Blinder, A. (1973). Wage discrimination: Reduced form and structural estimates. *Journal of Human Resources*, *8*(4), 436-455.

Ministry for Pacific Peoples (2021). *Pacific Aotearoa Status Report: A snapshot 2020*. https://www.mpp.govt.nz/assets/Reports/Pacific-Peoples-in-Aotearoa-Report.pdf

Oaxaca, R. (1973). Male-Female Wage Differentials in Urban Labor Markets. *International Economic Review*, *14*(3), 693-709.

Stats NZ. (2016). Household Labour Force Survey sources and methods. https://www.stats.govt.nz/methods/household-labour-force-survey-sources-and-methods-2016

Stats NZ. (2021). *NZ.Stat.* https://www.stats.govt.nz/tools/nz-dot-stat

Treasury. (2018). *Statistical Analysis of Ethnic Wage Gaps in New Zealand* (Analytical Paper 18/03). https://www.treasury.govt.nz/sites/default/files/2018-08/ap18-03.pdf