

Using social determinants health theory as a framework to understand the complex tapestry of geographic, social, and economic factors that perpetuate ethnic inequality in New Zealand.

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Author Biography

RuiLin (David) Lou is a high school student from Auckland, New Zealand. David is passionate about understanding complex societal issues through an interdisciplinary perspective. He loves economics and he likes to take a ‘hands-on’ approach to both research and learning in general. He is particularly enthusiastic about immersing himself within communities other than his own, as he believes that genuine understanding between different communities is a crucial foundation for initiating meaningful change.

Abstract

In recent years, there have been increasing attempts by both the government and private sector to address long-standing ethnic disparities that have characterised much of New Zealand’s post-colonial history. Despite this, historically marginalised groups such as Māori and Pasifika still face significant economic, social, and cultural obstacles. This paper utilises social determinants theory as a framework to understand the complex factors that perpetuate ethnic inequalities in New Zealand. Drawing on both primary and secondary data from New Zealand and research from comparable countries in the OECD, this paper finds that disparities in education and work commitments could be a significant driver of ethnic inequality, especially in an inter-generational context. The intra-regional structural dynamics of Auckland, New Zealand’s largest city, are also examined as a potential factor that synergises with other factors to perpetuate inequality. Based on these findings, this paper identifies several potential interventions that could provide a greater equality of opportunity to Māori and Pasifika. These interventions include the expansion of Vocational Education Training (VET) programs with an emphasis on the provision of full-track programs and the expansion of finance-based equity systems.

Keywords: Inequality, Indigenous Knowledge, Economics, Education Policy, New Zealand, Marginalised Communities, Spatial Inequality, Synergy.

Introduction

While New Zealand has cultivated an international reputation as a largely egalitarian and classless society, this perception obscures significant structural drivers of inequality. Historically, New Zealand has seen significant socioeconomic disparities between its dominant ancestrally European population (Pākehā) and other marginalised ethnicities, such as Māori (New Zealand's indigenous people) and Pasifika (New Zealanders of Pacific Island descent). Although, in recent years, there have been efforts to address these inequalities, Māori and Pasifika still face significant economic, social, and cultural obstacles. Existing literature on the matter has largely focused on the constitution of specific determinants of inequality. This paper seeks to expand on existing research by considering the determinants of inequality in a more holistic manner, within the context of differing knowledge frameworks. Social Determinants Theory (SDT) is the idea that several non-medical factors — such as geography and education — can combine to influence the health outcomes of a population. Although this paper's discussion is not centred around health outcomes, SDT provides a framework to understand the complex and often interconnected non-financial factors that lead to inequality. Within the broad framework for SDT, this paper examines the specific role of education disparities, work commitments and Intra-regional geography.

Methodology

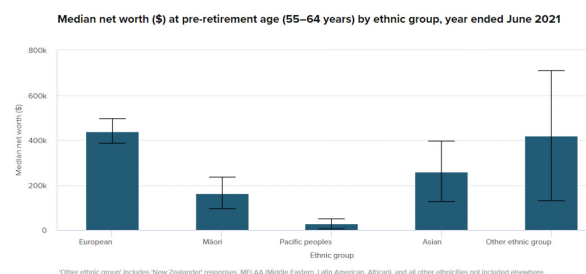
Research for this paper was done primarily by reviewing existing literature on the drivers of socioeconomic and spatial inequality in New Zealand. Research from comparable countries in the OECD was also used to assess the potential applicability of the findings to the New Zealand context. Additionally, interviews were conducted with program leaders from Ako Mātātupu (Teach First NZ), which is a non-profit dedicated to addressing education inequality. Informal interviews were also conducted with members of the Pasifika and Māori community in the Auckland suburbs of Ōtara and Papatoetoe to gain a better understanding of the contextual factors. However, it is important to note that meaningful generalisation cannot be made from this primary research because of the informal nature of the interviews and lack of sample size. Furthermore, although this paper does

to an extent examine the nuances facing Pasifika and Māori as two distinct social groups, there are some instances where findings can only be reflective of specific groups bounded by ethnicity and geography.

Understanding inequality in the New Zealand context

According to the most recent data provided by the OECD, New Zealand ranks 23rd out of the 38 countries in the OECD for income inequality (2024). With a Gini coefficient of 0.320, this means that income inequality in New Zealand, on a national level, is slightly worse than the OECD average of 0.318 (OECD, 2024). In terms of wealth inequality, a joint report between the Household Economic Survey and Statistics New Zealand indicated that the richest 1% have an average of \$3.6m held in trusts, \$1.6m in shares and \$470,000 in cash (Rashbrooke, 2020). This can be contrasted to the net worth of a typical New Zealander which “is only \$92,000 – 68 times less” (Rashbrooke, 2020). However, considering disparities in wealth and income alone overlooks the presence of other kinds of inequality in New Zealand. There is a major overlap between wealth inequality and ethnic inequality in New Zealand.

Figure 1
Median net worth at pre-retirement age (55-64 years old) by ethnic group, year ended June 2021.



Note. Retrieved from (Stats NZ, 2022)

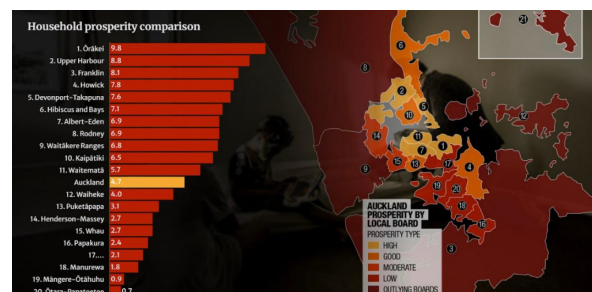
As observed in Figure 1, at pre-retirement age, Pasifika people have a median net worth of just NZD \$28,000 (Stats NZ, 2022). This is compared to NZD \$164,000 for Māori and NZD \$439,000 for Pākehā (Stats NZ, 2022). Moreover, Pasifika and Māori experience significant inequalities when it comes to healthcare, education, and the criminal justice system (Pearson, 2018).

Research by Martin and Morrison (2003) finds that spatial inequalities between different regions could contribute to the perpetuation of inequalities. This association between deprived geographic areas and poor socioeconomic outcomes for individuals living in those areas may be particularly applicable in the case of Auckland. Existing literature on the relationships between neighbourhood disadvantage and economic outcomes shows that there is a strong correlation between growing up in a disadvantaged neighbourhood and being prone to poor economic outcomes (Christie-Mizell, 2022).

However, it is unclear whether it is the disadvantaged neighbourhood itself or the particular circumstances of families in deprived neighbourhoods that cause the negative economic outcomes. Furthermore, research from the United States indicates that this relationship between geography and economic outcomes may have nuanced effects on different social and ethnic groups. For instance, Christie-Mizell (2022) found that white Americans who lived in a disadvantaged neighbourhood were more susceptible to having poor economic outcomes compared to their black counterparts.

Examining the intra-regional layout of Auckland, one can observe structural geographic divides that could potentially exacerbate inequality. Auckland is divided into 21 local boards that make decisions on local matters in a particular region. Within Auckland there is significant intra-regional inequality. The Auckland prosperity index is an index that was developed by Auckland Tourism, Events and Economic Development (ATEED) to make comparisons between these boards in terms of the relative prosperity of residents that reside in their geography. The index utilises “24 indicators grouped into six domains: skills and labour force, demography, connectedness, business activity, economic quality and household prosperity” (Shepherd & Parahi, 2018). According to the index, there is a strong overlap between regions that have low prosperity and regions that have high Pasifika and Māori populations.

Figure 2
Intra-regional household prosperity comparison using household prosperity index.



Note. Retrieved from (Dorday, 2018). Source: Newshub/Stuff joint report: a tale of two cities.

As illustrated in Figure 2, we observe significant intra-regional inequality in Auckland. Although the index includes a variety of measures, a reasonable inference can be made about the existence of socioeconomic and spatial inequality between the different regions. There is also a strong overlap between regions with low prosperity and regions with high concentrations of Maori and Pasifika peoples. For instance, the Ōtara-Papatoetoe board, which has the lowest property rating out of all of the boards, has a significant over-representation of Pasifika people, at 46% compared to the national average of 16% (Auckland Council, 2022).

Drawing on social determinants theory, which suggests that multiple interconnected factors can work together to impact the outcomes experienced by a community, the structural intra-regional disparities in Auckland could be a factor that synergises with other inequality-inducing factors to make matters worse. There is considerable evidence in support of this view. For instance, the Office of Policy Development and Research (PD&R) in the United States finds “spatial mismatch between increasingly suburban job opportunities and the primarily minority residents of poor urban neighbourhoods” to be a factor that magnifies and compounds other inequality-inducing factors such as involvement in crime (PD&R, 2011).

Whilst it is difficult to distinguish between the neighbourhood itself as a causal factor amongst other factors such as family dynamics, this finding suggests that there are inherent attributes of a disadvantaged neighbourhood itself that perpetuate the impact of other inequality-inducing factors. Here, a reasonable

inference can be made to the other two inequality-inducing factors discussed in this paper: the intra-regional structural inequality in Auckland could be a factor that magnifies the impacts of education and work commitments, which will be discussed further.

Education

Whilst it is important to note the factors that drive these geographic and ethnic inequalities witnessed in Auckland are complex, this paper will specifically examine the role of education in the potential perpetuations of these inequalities. Eden et al. (2023), Ansalone (2001), and Ingleby (2012) indicate education to be a key determinant of the perpetuation of such inequalities from one generation to another.

An extensive body of empirical research indicates that a child's educational attainment is a significant predictor of future earning potential. Whilst the general level of education achievement in New Zealand is above the OECD average, there is significant disparity when it comes to the distribution of educational attainment in the Auckland region (Mathias, 2024). According to data provided by Programme for International Student Assessment (PISA), "the gaps between New Zealand's most and least literate students are amongst the largest in the OECD" (Johnston, 2022). Furthermore, in the 2022 PISA assessment, socio-economically advantaged students in New Zealand outperformed disadvantaged students by a score of 102 points, which is above the OECD average of 93 points (OECD, 2022). In a 2018 UNICEF report, New Zealand was ranked 33rd out of 38 wealthy countries in terms of education equality (Walters, 2019).

These disparities in education achievement are also reflected among different ethnic groups. For instance, NZQA data from 2020 shows that just 34% of Māori and Pacific students attained the necessary qualification for university entrance in New Zealand (Johnston, 2022). This is compared to 59% for Pākehā and 64% for New Zealand students of Asian descent (Johnston, 2022). Although there may be differences in cultural attitudes towards education, this paper makes the assumption that education is generally considered beneficial across the relevant cultures. In accordance with this view, education may be a significant factor that perpetuates ethnic inequalities in New Zealand.

Disparities in education not only contribute to negative social outcomes, but may be in and of themselves a product of existing social disparities. For instance, a report by the Treasury indicated that there is a significant link between a parent's socio-economic status and their children's educational outcomes (Auckland Council, 2018). Because disparities in education are both products and contributors of socioeconomic inequality, education may be a key factor in the intergenerational perpetuation of ethnic inequality in New Zealand.

In the case of Auckland specifically, there are several structural factors that could contribute to the inequalities in education access. For instance, Auckland has a disproportionate number of low decile schools compared to the national average. The decile system measures the extent to which students at a particular school are disadvantaged socioeconomically. All schools in New Zealand are given a decile ranking from 1 (school with least socioeconomically-advantaged students) to 10 (schools with most socioeconomically-advantaged students). The southern part of Auckland, which has a significant Māori and Pasifika population, has a substantial concentration of decile 1,2,3 secondary schools (Auckland Council, 2018). Meanwhile, more prosperous regions such as the North Shore have substantial concentrations of high decile schools.

Again, we observe that the variation in school decile has significant links with ethnicity. For instance, 71% of the Pacific student population in Auckland attend decile 1, 2 or 3 schools (Auckland Council, 2018). This figure stands at 50% for Māori and only 6% for Europeans (Auckland Council, 2018). Accordingly, intra-regional disparities in the quality of schooling offered could be key contributors to the inter-generational ethnic inequalities we observe. In recognising the issue of education inequality, the government has made several interventions aimed at reducing educational inequality. As of 2023, the decile system that was introduced 30 years ago to provide equity funding to disadvantaged schools was replaced with a new equity index system (EQI) (Ministry of Education, 2024). The new EQI system enables a more nuanced and comprehensive evaluation of socioeconomic disadvantage in schools: it uses 26 indicators that correlate with socioeconomic disadvantage as opposed to 5 for the old decile system (Heyes, 2022). Additionally, in the 2022 budget, the government

increased the amount of funding provided to disadvantaged schools by \$75 million in an attempt to increase equity in education (Heyes, 2022). Moreover, there have also been several non-governmental interventions that aim to reduce education inequality in NZ (Teach First NZ, n.d.).

Since the reform of the New Zealand Qualifications Authority, the government has also invested significantly in Vocational Education Training programs (VETs). VETs provide learning that focuses on specific industry skills that is done while a student is in employment. Compared to traditional tertiary education, VETs could potentially provide greater social mobility for disadvantaged students because students can start earning immediately and the cost of VETs is often heavily subsidised by the government. Here, it is important to outline the New Zealand Qualifications framework:

Figure 3
New Zealand qualifications framework.

Level	Qualification types
10	Doctoral Degree
9	Master's Degree
8	Postgraduate Diplomas and Certificates
	Bachelor Honours Degree
7	Bachelor's Degree
	Graduate Diplomas and Certificates
5-7	Diplomas
1-6	Certificates

Source: New Zealand Qualifications Authority (NZQA). Retrieved from (Sin et al, 2022).

As illustrated in Figure 3, all qualifications in New Zealand fall into 10 levels with level 1 being the lowest (e.g. secondary school certificates) and level 10 being the highest (e.g. doctorate degree). Currently VETs are able to offer certificate and diploma level qualifications (level 2-7). Compared to traditional tertiary education, VETs are therefore able to provide a relatively high level of qualification at a lower opportunity cost. The implementation of VET programs could potentially be an effective intervention aimed at reducing ethnic inequalities between Māori and Pākehā because gaining a high level of qualification provides Māori with greater earnings premium than Pākehā.

Table 1
Median and quartile earnings after graduation based on level of qualification and ethnicity.

Level of study	Measure	Māori – years after study			Non-Māori – years after study		
		One	Two	Five	One	Two	Five
Diploma	Upper quartile	\$34,613	\$39,498	\$47,336	\$34,362	\$41,712	\$49,463
	Median	\$25,679	\$30,848	\$37,386	\$26,321	\$32,046	\$39,528
	Lower quartile	\$17,319	\$20,298	\$22,982	\$16,684	\$20,438	\$28,052
Certificate at level 4	Upper quartile	\$30,163	\$34,043	\$41,394	\$30,534	\$34,666	\$43,234
	Median	\$23,041	\$27,350	\$33,286	\$23,596	\$27,731	\$35,851
	Lower quartile	\$15,513	\$18,330	\$23,638	\$15,052	\$17,955	\$25,828
Certificate at levels 1–3	Upper quartile	\$30,804	\$33,622	\$40,789	\$31,081	\$33,520	\$43,369
	Median	\$21,959	\$25,516	\$31,256	\$22,752	\$26,081	\$34,458
	Lower quartile	\$13,543	\$16,393	\$20,113	\$13,635	\$16,167	\$24,242

Source: Mahoney (2014, 12).

Note. Retrieved from (Strathdee & Cooper, 2017)

As illustrated in Table 1, Mahoney (2014) indicates that Māori with low-level qualifications are more likely to earn less compared to their non-Māori counterparts when compared with Māori with higher level qualifications (i.e diploma level). For instance, looking at the median, Māori who receive a level 1-3 qualification earn on average 10.24% less than non-Māori per year, 5 years after graduation. Meanwhile, Māori who receive a Diploma-level qualification earn on average 4.49% less than their Pākehā counterparts, 5 years after graduation. Given that VETs are able to provide a Diploma-level qualification in a relatively short amount of time, and at a relatively lower opportunity cost, it could play a key role in increasing the earning potential of Māori students, thus reducing inequality between Maori and non-Māori. However, whilst VETs may be able to provide a short-term boost to social mobility, research has also indicated that they could perpetuate inequalities over the long-term. For instance, Choi et al (2019) finds that while VETs yield short-term benefits for employment, students who undertook VETs were economically disadvantaged over the long-term in comparison to students who took standard tertiary education.

Work commitments

During my interviews with students attending low decile (decile 1 and 2) schools in the Ōtara-Papatoetoe region, a recurring theme that was apparent was the fact that many secondary students had to work long shifts to support their family. This observation is supported by influential student voices that have raised the issue in local media. According to Aigagalefilī Fepulea'i-Tapua'i - a powerful voice for underprivileged South Auckland Students:

“A lot of our students, especially year 13s who are the eldest in the family, have felt like they have a responsibility to make sure they’re easing the load for their parents when it comes to the financial struggle - that’s what forces a student to drop out.” (Radio New Zealand, 2020)

Drawing on research from the United States, Belgium, and other OECD countries, there is evidence that intense part-time work during secondary school could lead to a significant decrease in future economic prospects (Neyt et al, 2018; Baert et al, 2018; Steinberg et al 1993). Moreover, Hanushek, (2017) argues that while intense work during secondary school can improve financial prospects in the short term, it can hamper prospects in the long term as students are unable to reap the long-term economic benefits of education. In this sense, intense work commitments could be seen as a factor that perpetuates intergenerational inequality.

Here it is important to consider the cultural and situational context of underprivileged Auckland students who often feel a conflict between the responsibility of contributing to household finances and attaining necessary qualifications at school. Taking this into account, vocational education programs, in principle, could be an effective way to address this issue. This is because VETs potentially align the long-term economic benefits of formal qualifications with the immediate incentive of gaining income and supporting family through work. Instead of having to choose between immediate financial gain through work and the long-term financial benefits of education, disadvantaged students can do both. However, over the long-term, a general increase in the economic security of those disadvantaged families is still needed in order to mitigate the need for secondary students to commit to intense part-time work.

Differing Knowledge Frameworks

Education outcomes in New Zealand, especially in a secondary school and higher-education context, are primarily assessed in the form of written work. During my interviews with Teach First NZ, this Western-centric method of assessment was discussed as a potential factor that could inhibit achievement amongst Māori and Pasifika. Based on discussion with community members, Māori and Pasifika ‘ways of

knowing’ and ‘ways of passing down tradition’ heavily centre around oral communication and storytelling. Thus, written assessment could be a culturally insensitive way of assessing educational achievement. This perhaps reflects a broader conflict between the Western-centric nature of education institutions and the traditional knowledge systems of the Māori and Pasifika peoples.

Recommendations

Based on factors examined, the expansion of vocational education programs could be an effective intervention that addresses the aforementioned factors that perpetuate intergenerational inequality. However, this paper identifies some specific measures within the broad categorisation of VETs that could potentially further the effectiveness of VET programs in addressing ethnic inequalities. Strathdee & Cooper, (2017) Indicates that the representation of Māori and Pasifika in VET programs decrease as the complexity (and therefore earning potential) of the program increases. Furthermore, within the highest paying classifications of Engineering, Architecture, and Building, Māori are significantly underrepresented at the higher diploma level of qualifications (level 5-7). This is in spite of strong uptake in lower certificate level qualifications (level 1-3).

A contextual interpretation of these findings suggests that Māori and Pasifika are disadvantaged when it comes to transitioning from certificate to diploma-level qualifications in higher paying classifications. In recognising this, a potential policy recommendation could be the introduction of targeted VET programs that focus on addressing the underrepresentation of Māori and Pasifika in the most complex and highest paying classifications such as Engineering.

This would be akin to the “Women in STEM” campaign that has shown some success in addressing the under-representation of women in STEM-related classifications (Callender, 2023).

Moreover, another policy consideration could be the expansion of full track programs that enable the highest level of attainment that can be granted under provider-based training. This is because Māori and Pasifika receive a comparatively higher

earnings premium upon completion of higher-level qualifications. Given that vocational programs provide qualifications of levels ranging from 3-7, the expansion of full track programs that enable the attainment of a level 6/7 qualification may decrease the subsequent earning gap that Māori and Pasifika experience.

This paper takes the normative stance that Māori and Pasifika should be given a degree of assistance on a systematic level for the historic colonialism and discrimination that have inhibited these groups from attaining equality of opportunity. However, this paper also recognises the controversy that may arise from giving certain educational advantages to specific groups. One can take the recent affirmative action ruling in the United States, *Students for Fair Admissions v. President & Fellows of Harvard College*, 600 US_ (2023), as an example of how systems designed to achieve equity could lead to much controversy and political polarisation. Thus, given the overlap between ethnic and economic inequality in New Zealand, this paper proposes the expansion of a finance-based equity system as opposed to one based on ethnicity. Providing assistance to families who are disadvantaged based on financial metrics such as income and wealth should, in principle, address socioeconomic gap between Māori, Pasifika, and Pākehā without inciting as much political controversy and this could make such an intervention more sustainable in the long-run.

However, the expansion of finance-based equity systems must not undermine the inclusion of culturally appropriate learning and assessment. This paper supports the right of Māori to Tino Rangatiratanga (loosely translated to self-determination) through the inclusion of culturally relevant curriculum and assessment. However, Rata (2012) does argue that the economic outcomes for Māori may have been harmed by Tino Rangatiratanga because it limits access to knowledge that has a greater promise of providing social mobility.

Fundamentally, this may come down to the fact that the education system in New Zealand, and the social order in general, is Western-dominated and thus favours Euro-centric qualifications and Western domains of knowledge - at least on an economic level. The argument provided by Rata (2012) highlights that while the Western-centric interventions discussed

in this paper may bring economic mobility to Māori and Pasifika, this economic mobility may come at a cultural opportunity cost. This is because, to some extent, Māori and Pasifika may be forced to conform to Western-centric social order and educational qualifications to achieve that increased social mobility. In recognising this, this paper also supports the broader authentic integration of multiculturalism into the New Zealand society to mitigate this potential trade-off between tradition/culture and economic mobility that the indigenous population may face.

Conclusion

Overall, this paper has examined inter-regional geographical dynamics, education, and student work commitments as potential factors that perpetuate ethnic inequality in New Zealand. Whilst no single intervention is likely to yield a solution to the underlying structural factors that perpetuate socioeconomic inequality, targeted vocational training programs were identified as a specific intervention that could be effective in mitigating educational disparities between Māori, Pasifika and Pākehā.

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