

Factors explaining the low income return for education among Asian New Zealanders

COMPASS Colloquium,
Statistics New Zealand, Wellington

July 29th, 2015

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Outline

1. Introduction
2. Exploratory Analysis
3. Results
4. Conclusion

Disclaimer: Access to the data used in this study was provided by Statistics New Zealand 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 Statistics New Zealand.

Project Origins

While creating the New Zealand Socio-Economic Index (NZSEI), it was noticed that at the 2006 Census, Asian New Zealanders had more than double the prevalence of university degrees compared to any other large ethnic group, yet tended to be in poorly paid jobs.

Common Features in Literature

Australia, Canada, USA and NZ

Observations

- Asians had **double** the prevalence of **Bachelor's degrees** compared to the European population
- Migrants **earn less**
- The children of Asian migrants earn comparable incomes to the general population (2nd generation)

Techniques

- Basic regression techniques used to consider factors comparing incomes

Context

- New Zealand is similar to Australia, Canada and the US in its at times tense relationship with migration from Asia



THE YELLOW PERIL.

Source: Hocken Library, University of Otago

Asians dominate NZ immigration

5:30 AM Monday Apr 1, 2013

Asia New Zealand Foundation

Cultures

Economy

...



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China far ahead in visitor and student arrivals, and in approvals for family-sponsored and parent categories.



Dong Suk Jang (right), 34, with her mum, Ui Yeol Kim, and children, Sun Gyo Kwak, 4, and Suna Kwak, 2. Photo / APN

Source: The New Zealand Herald

Importance

- Skills shortages
- Asia is an important source of skills
- Our economy is at risk

The Big Picture

Our analysis focuses on New Zealanders:

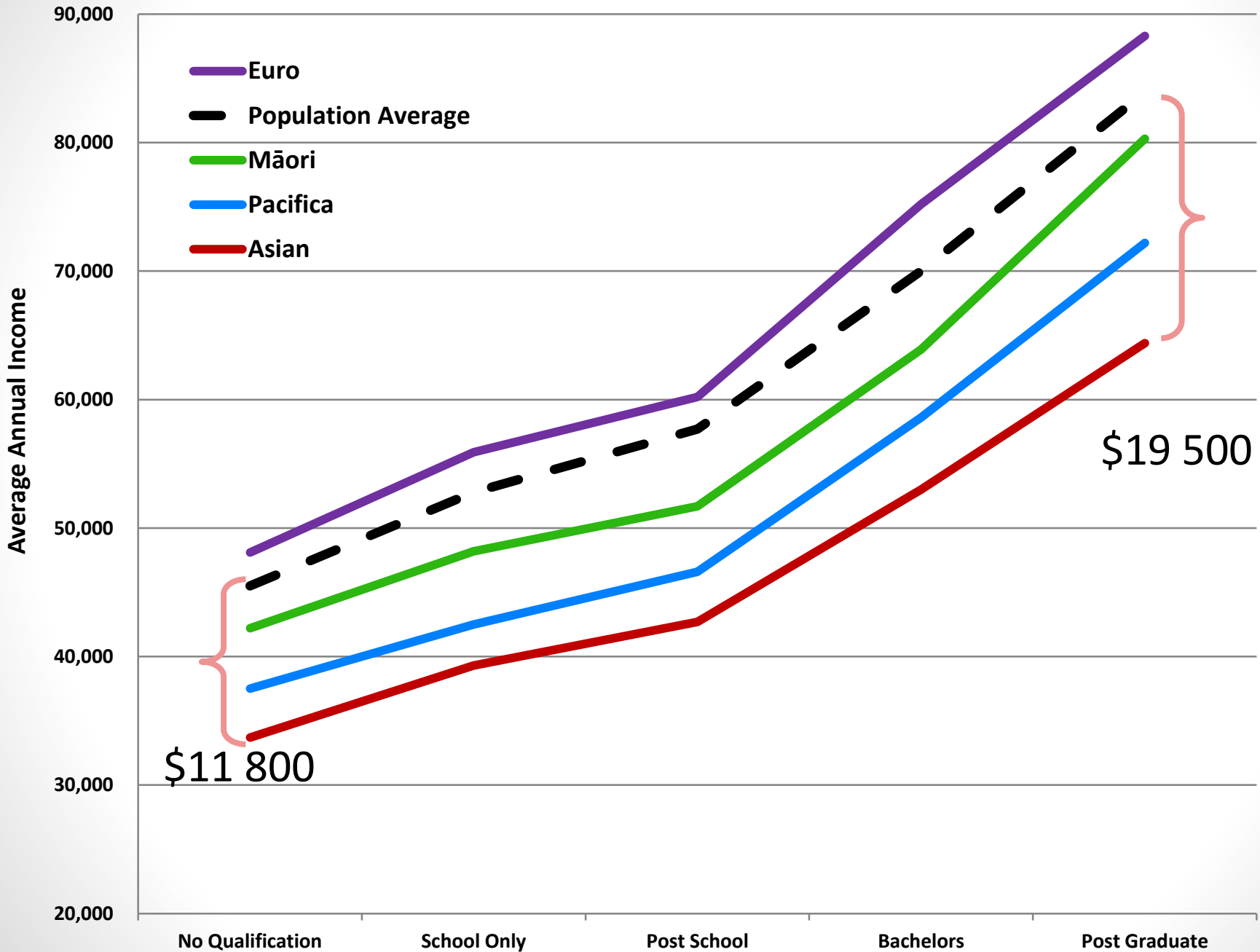
- 21 - 69 years of age,
- with an ANZSCO rating,
 - i.e. in the workforce
- who responded to all relevant 2013 census questions.

A group of just under **1.7 million** people were used in this analysis.

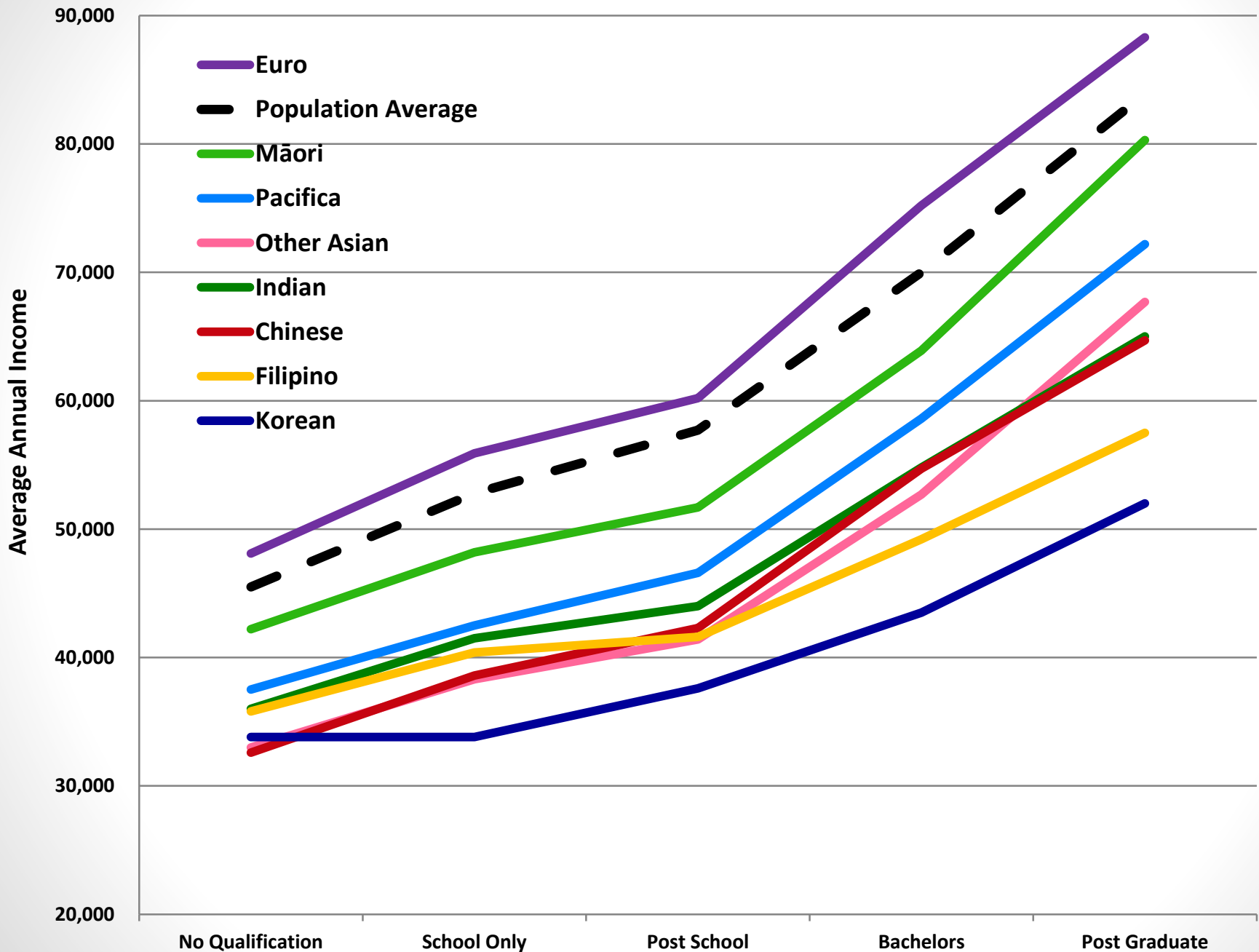
Of these, about **190,000** identify as Asian with **2/3 living in Auckland** and **90% born overseas**.

Exploratory Analysis

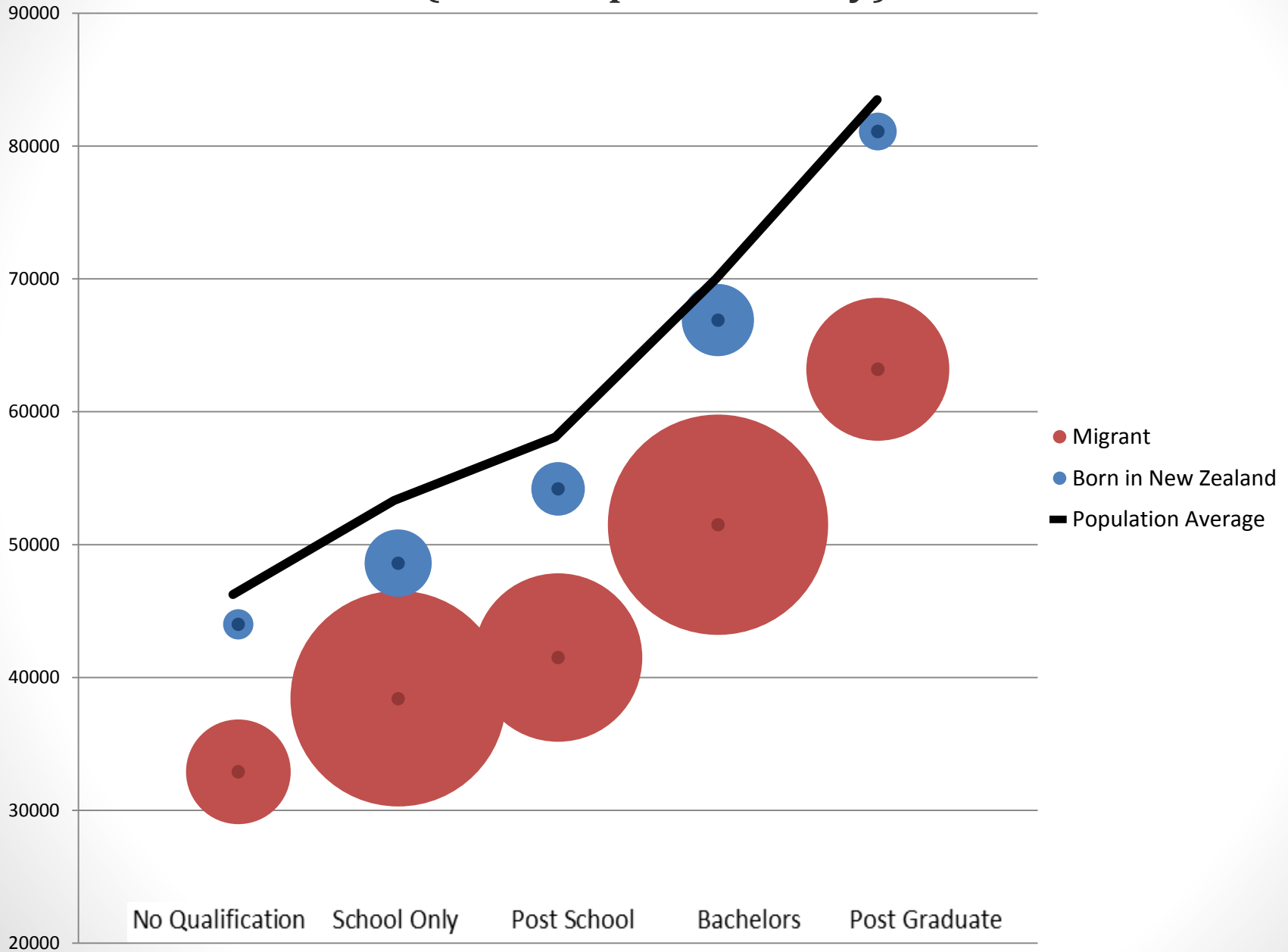
Income by Education (2013 Census)



Income by Education with Asian Subgroups



Born in NZ (Asian Population Only)

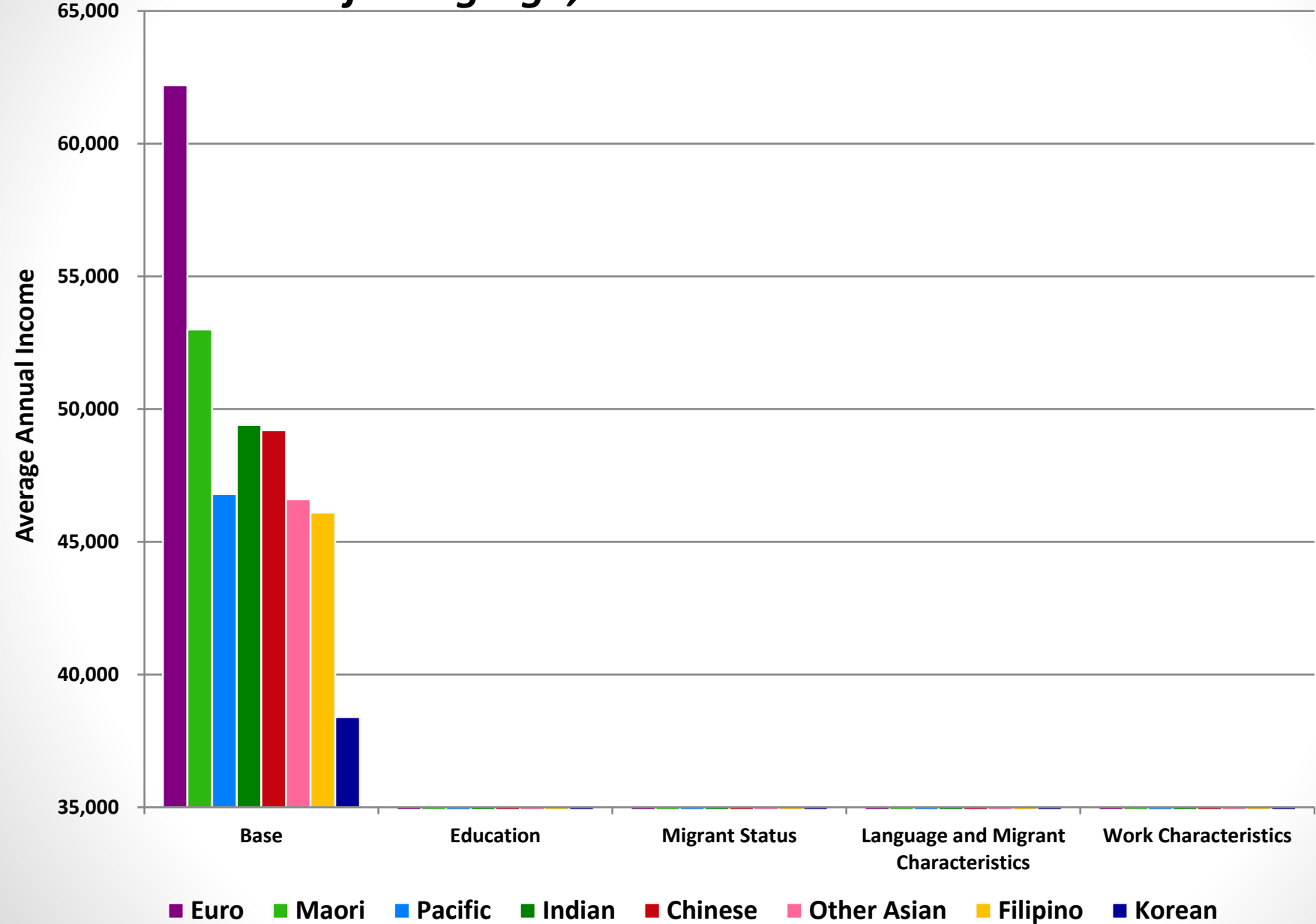


Counterfactual Models

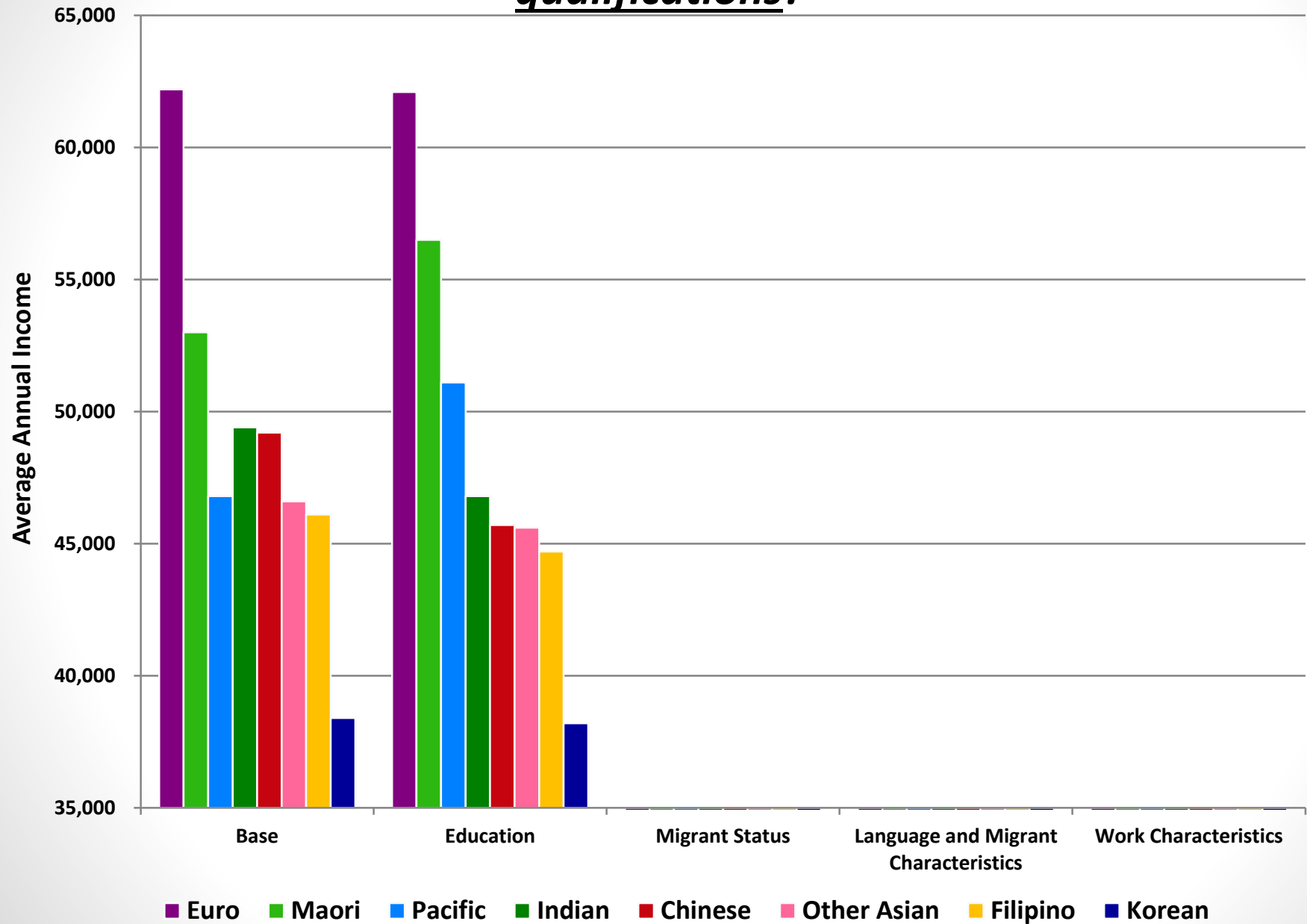
What if...?

- **Base:**
 - What if all ethnicities had the same age, sex and marital status distributions?
- **Education:**
 - What if all ethnicities had the same distribution of educational qualifications?
- **Migrant Status:**
 - What if all ethnicities had the same distribution of migrant status?
- **Language and Migrant Characteristics (3 variables):**
 - What if all ethnicities had the same distribution of language, age of arrival and length of residence?
- **Work Characteristics (2 variables):**
 - What if all ethnicities had the same distribution of occupation and workplace ethnic profile?

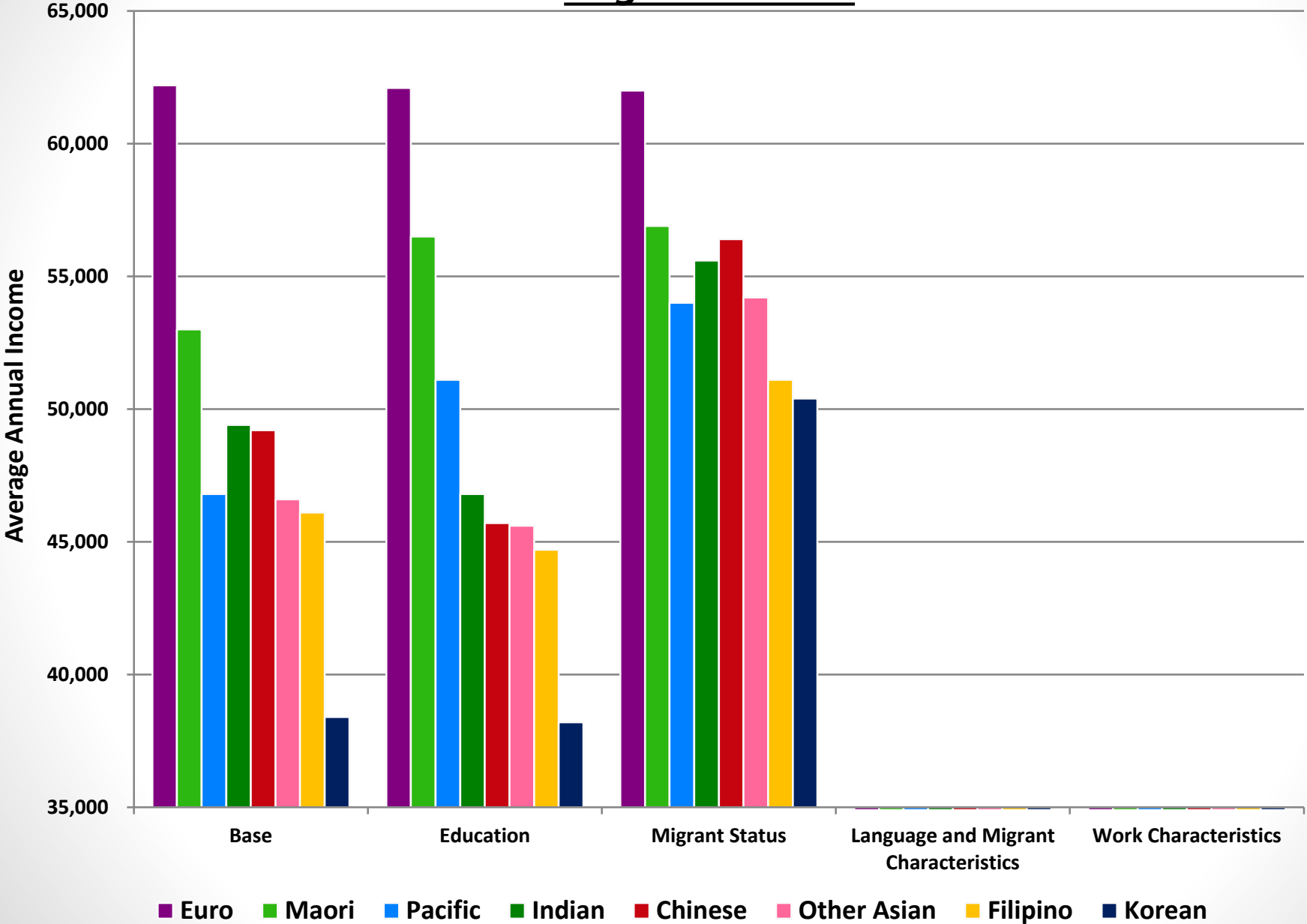
Base Model – Average Annual Income Adjusting Age, Sex and Marital Status



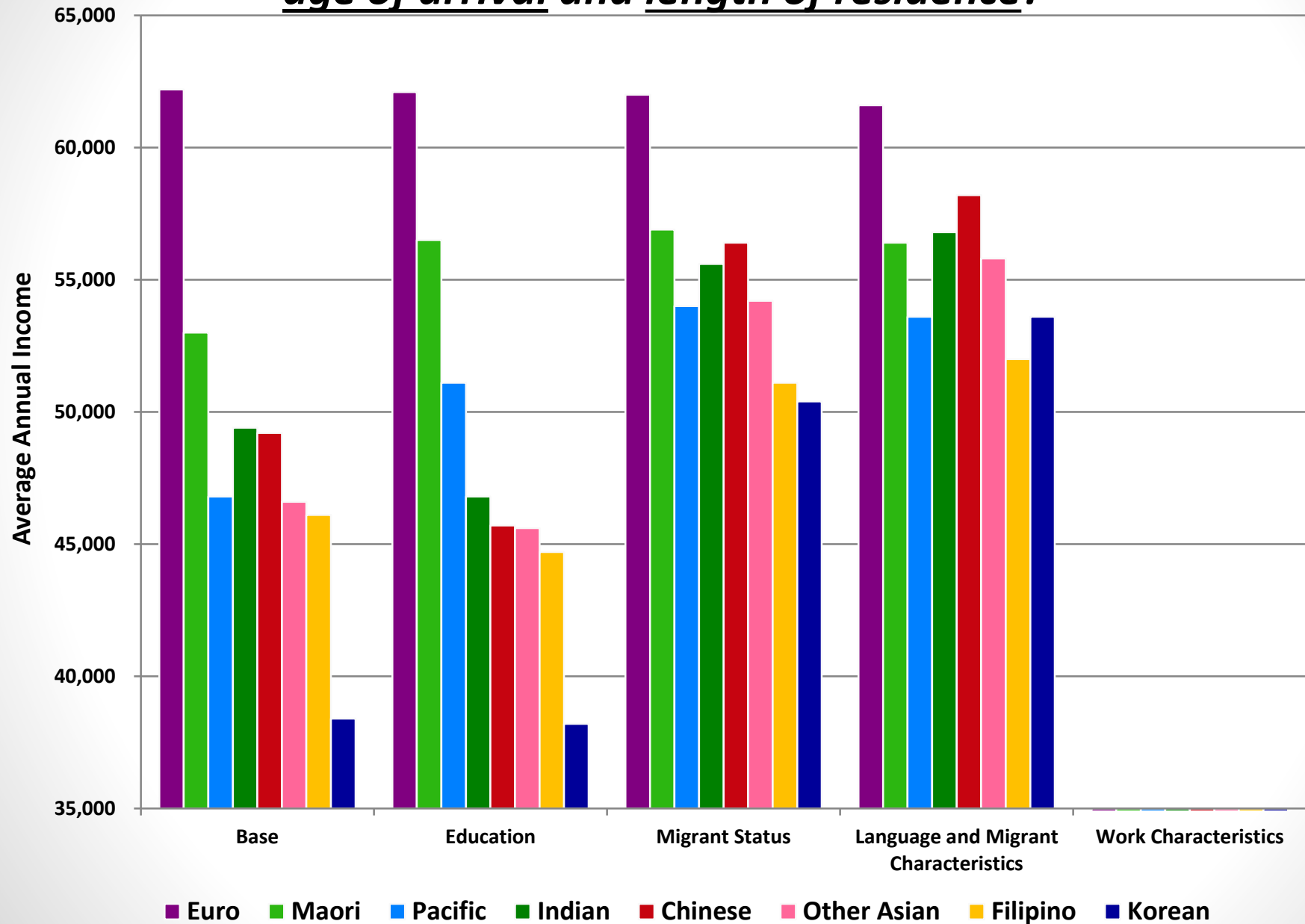
What if all ethnicities had the same distribution of educational qualifications?



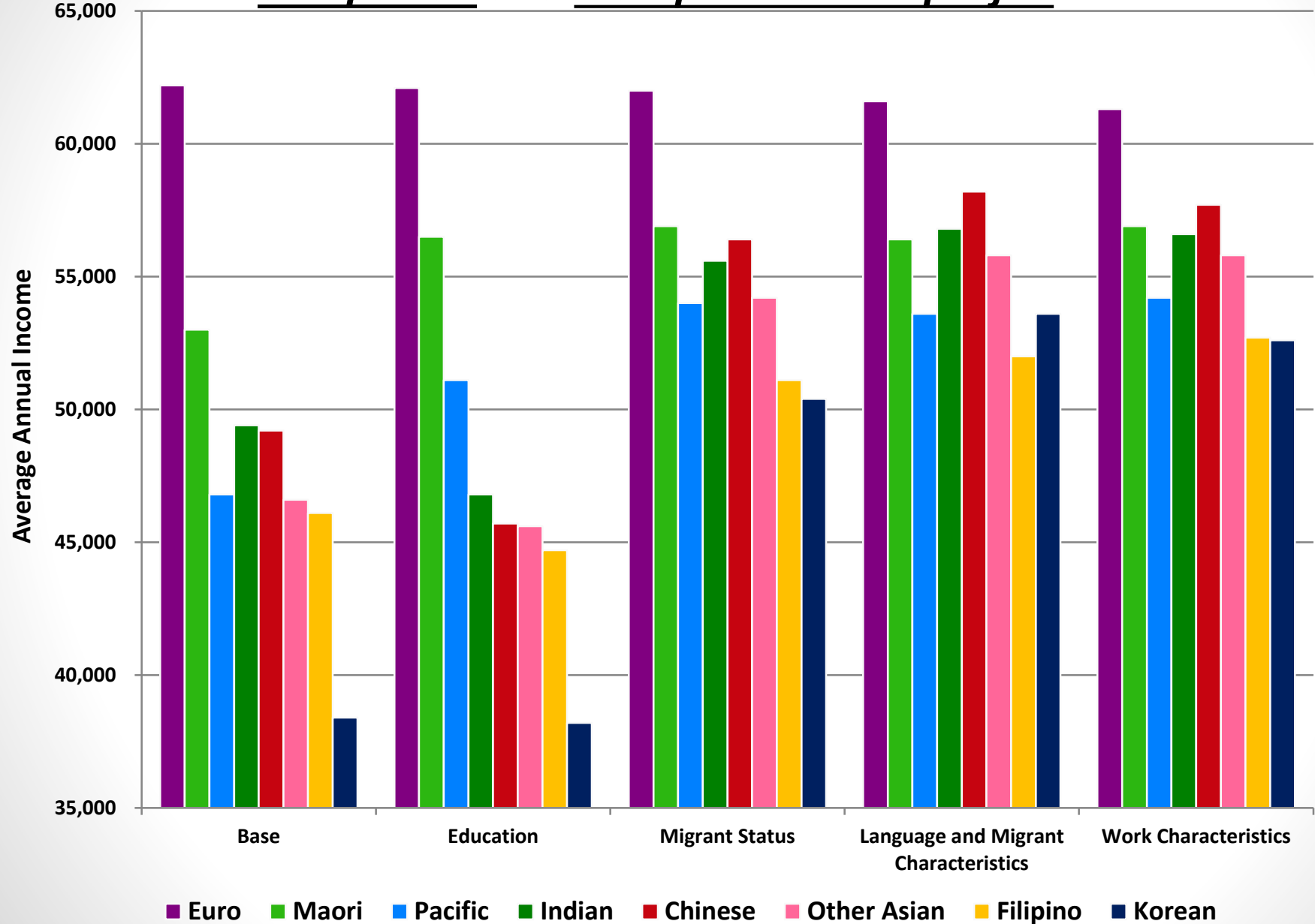
What if all ethnicities had the same distribution of migrant status?



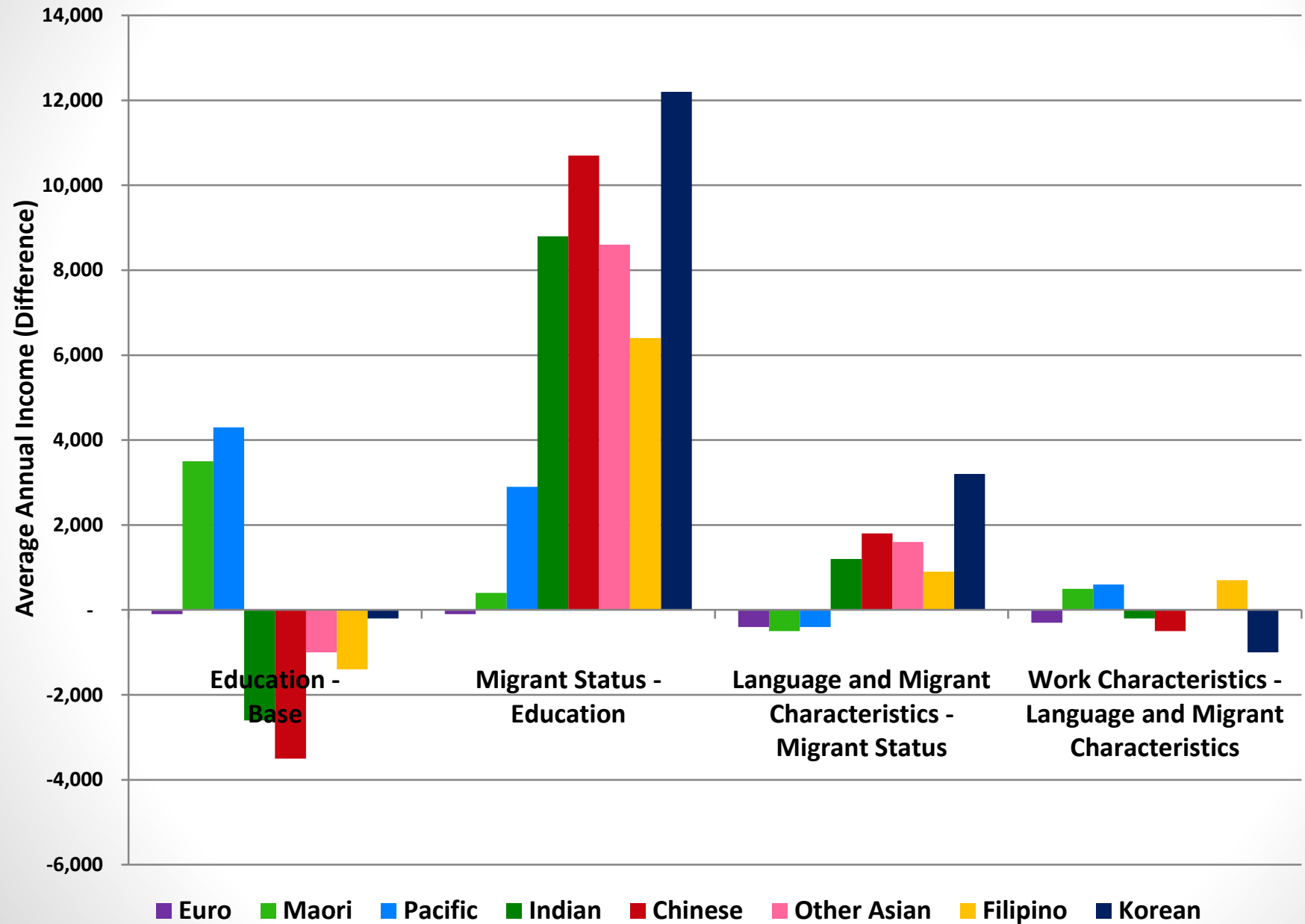
What if all ethnicities had the same distribution of language, age of arrival and length of residence?



What if all ethnicities had the same distribution of occupation and workplace ethnic profile?



Effect of each model compared to the previous model



Conclusions

- Migrant status
 - The biggest factor in the conversion of education into income for Asian New Zealanders
- Age at arrival, years of residence and language also important
- Occupation and workplace ethnic density were not as influential as expected
- Other factors of culture and background
 - Despite having access to some factors that once controlled for explain more of the ethnicity effects, we are still left with differences between our ethnicities.

Limitations

Of this data set

- Missing data
 - Where education or income data was missing, this may not be at random.
 - This was not found to be overly different between migrants and the overall population
- Accuracy of self-report
 - Especially for variables like language

Of the scope of this analysis

- Missing factors
 - What would we have liked to have but didn't?
 - Sensitivity of measures, like language fluency
 - Where educational qualifications are from
 - **Non census style data about cultural differences or racism might hold the key**

Questions and Comments?

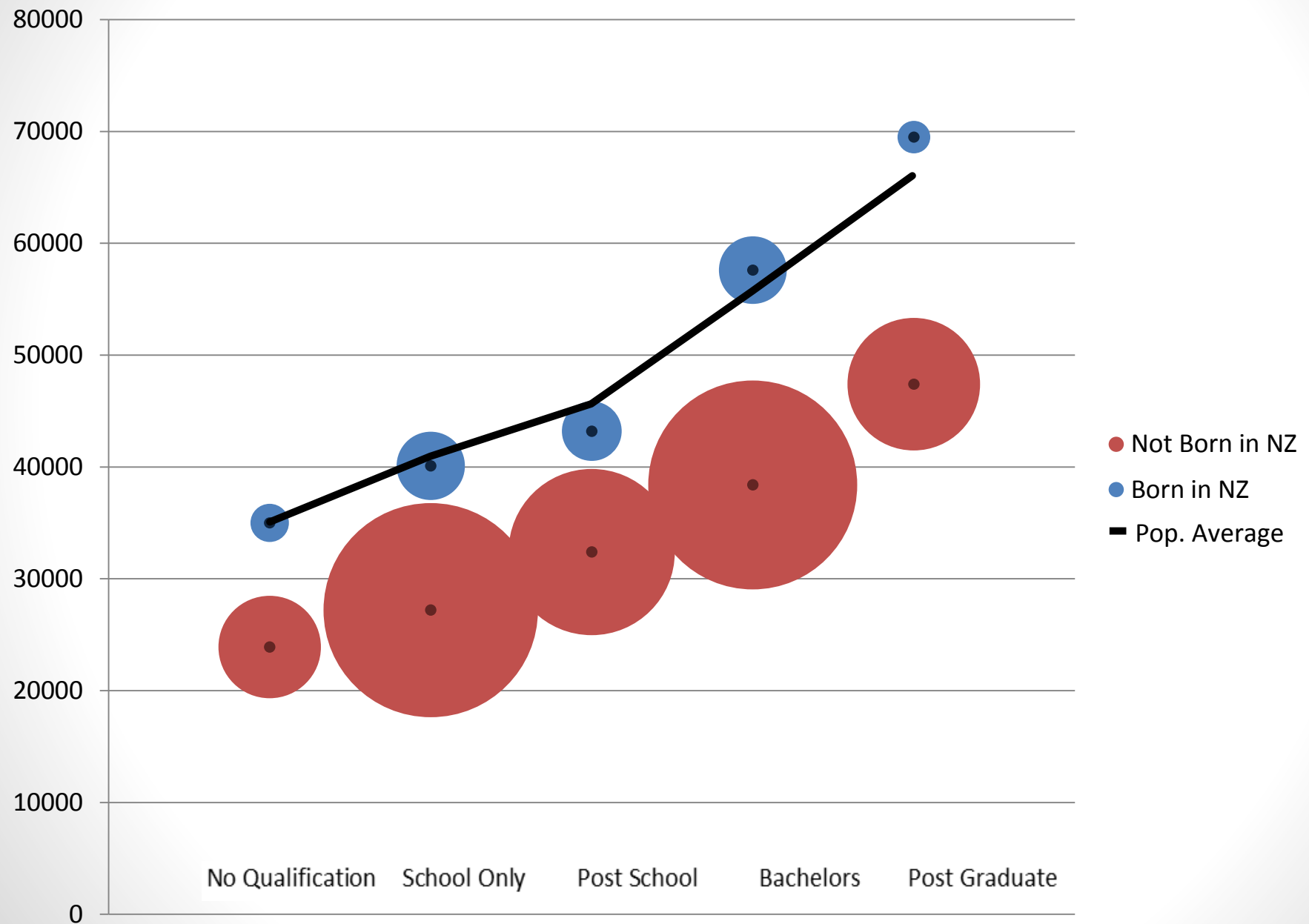
liza.bolton@auckland.ac.nz

- Milne, B., Byun, U., & Lee, A. (2013). New Zealand socio-economic index [NZSEI]. 2006. Wellington: Statistics New Zealand.
- Reitz, J., Zhang, H., & Hawkins, N. (2011). Comparisons of the success of racial minority immigrant offspring in the United States, Canada and Australia. *Social Science Research*, Volume 40(4), 1051-1066. <http://dx.doi.org/10.1016/j.ssresearch.2011.03.009>.
- Simon-Kumar, R. (2014). Neoliberalism and the New Race Politics of Migration Policy: Changing Profiles of the Desirable Migrant in New Zealand. *Journal of Ethnic and Migration Studies*, (June), 1–20. doi:10.1080/1369183X.2014.936838.

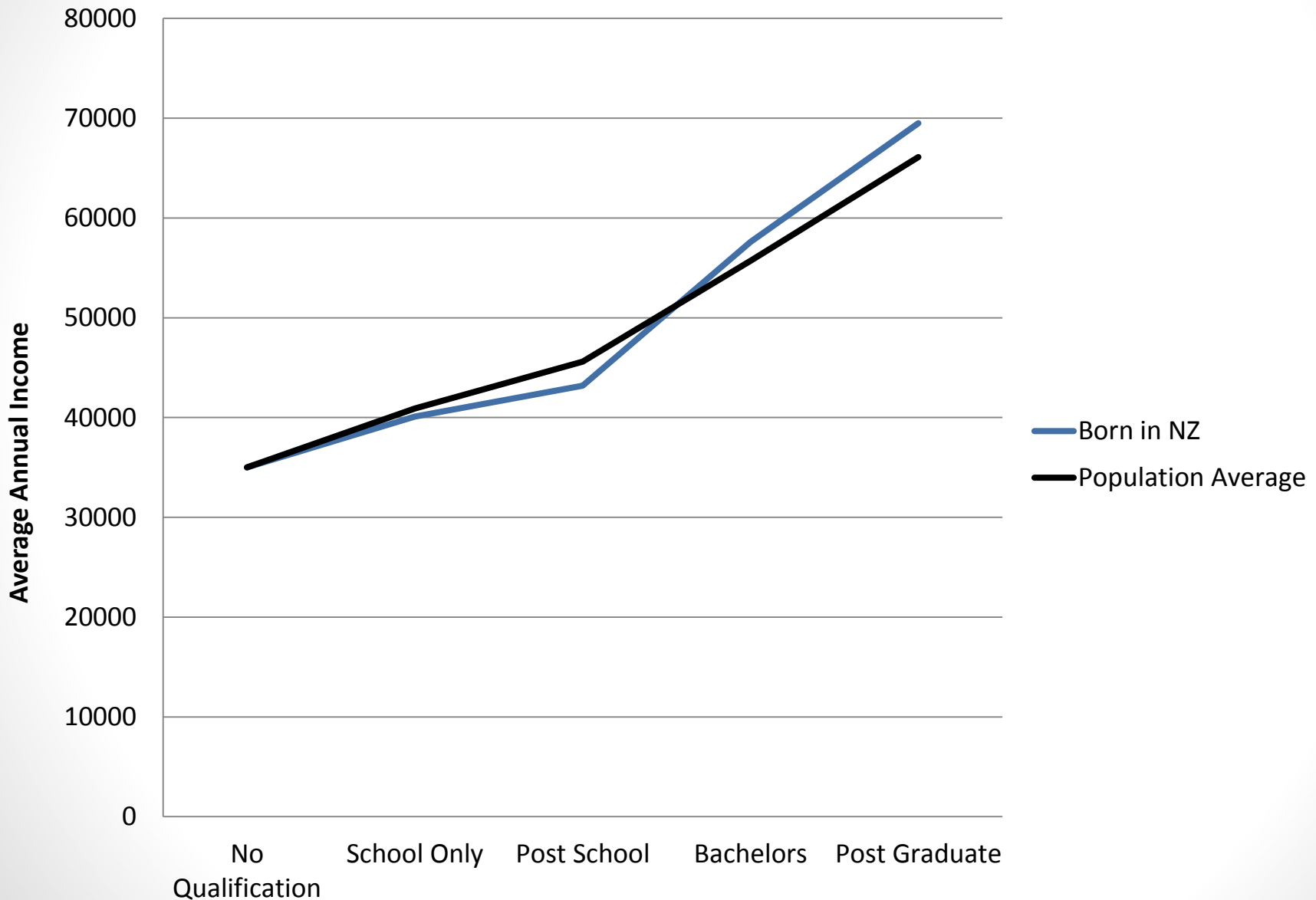
***Difference between population average and Asian averages
(Based on Slide 11)***

	No Qualification	School Only	Post School	Bachelors	Post Graduate
Other Asian	\$12,500	\$14,500	\$16,300	\$17,300	\$16,200
Indian	\$9,500	\$11,300	\$13,700	\$15,200	\$18,900
Chinese	\$12,900	\$14,200	\$15,400	\$15,300	\$19,200
Filipino	\$9,700	\$12,400	\$16,100	\$20,800	\$26,400
Korean	\$11,700	\$19,000	\$20,100	\$26,500	\$31,900

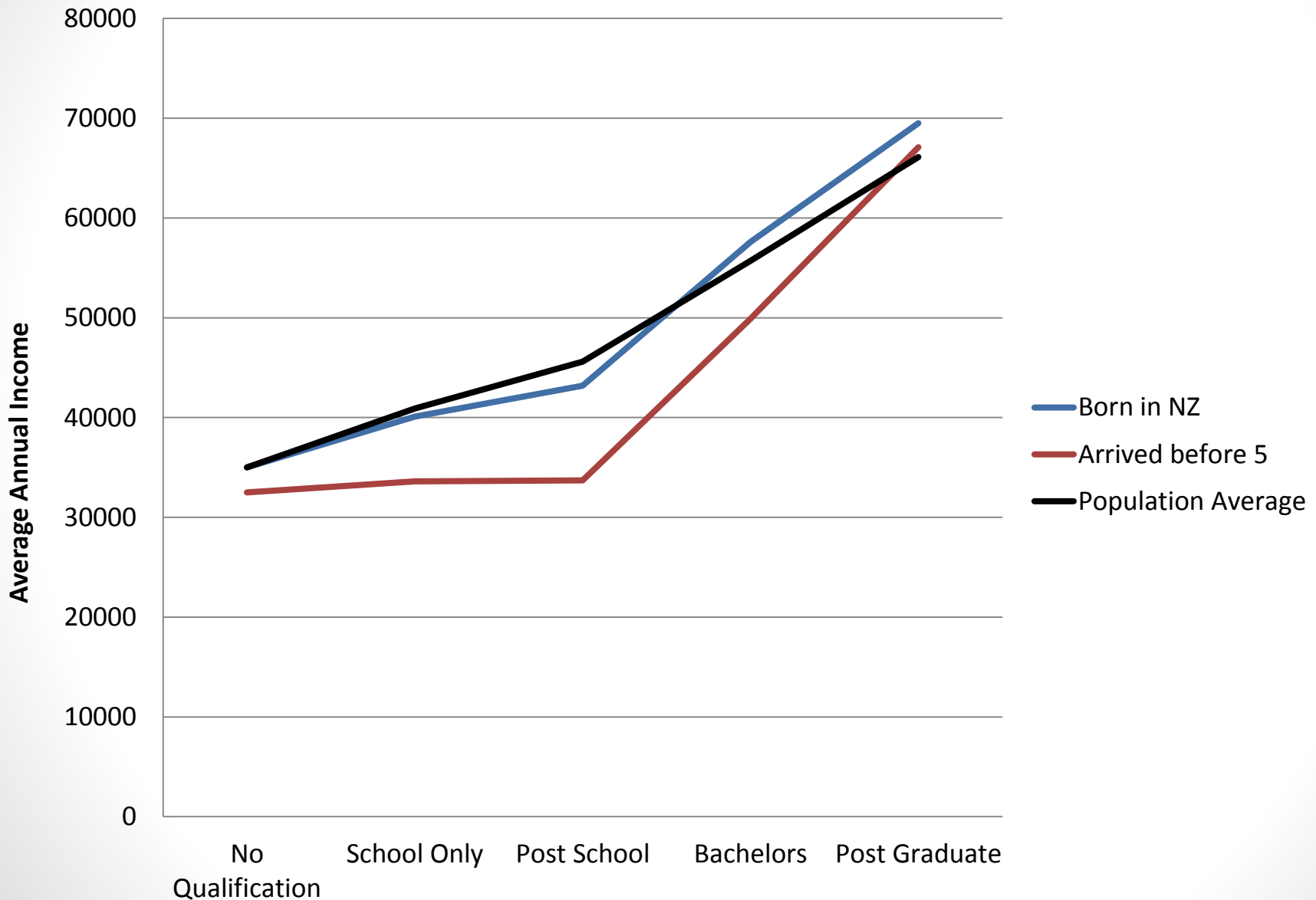
Born in NZ (Asian Population Only)



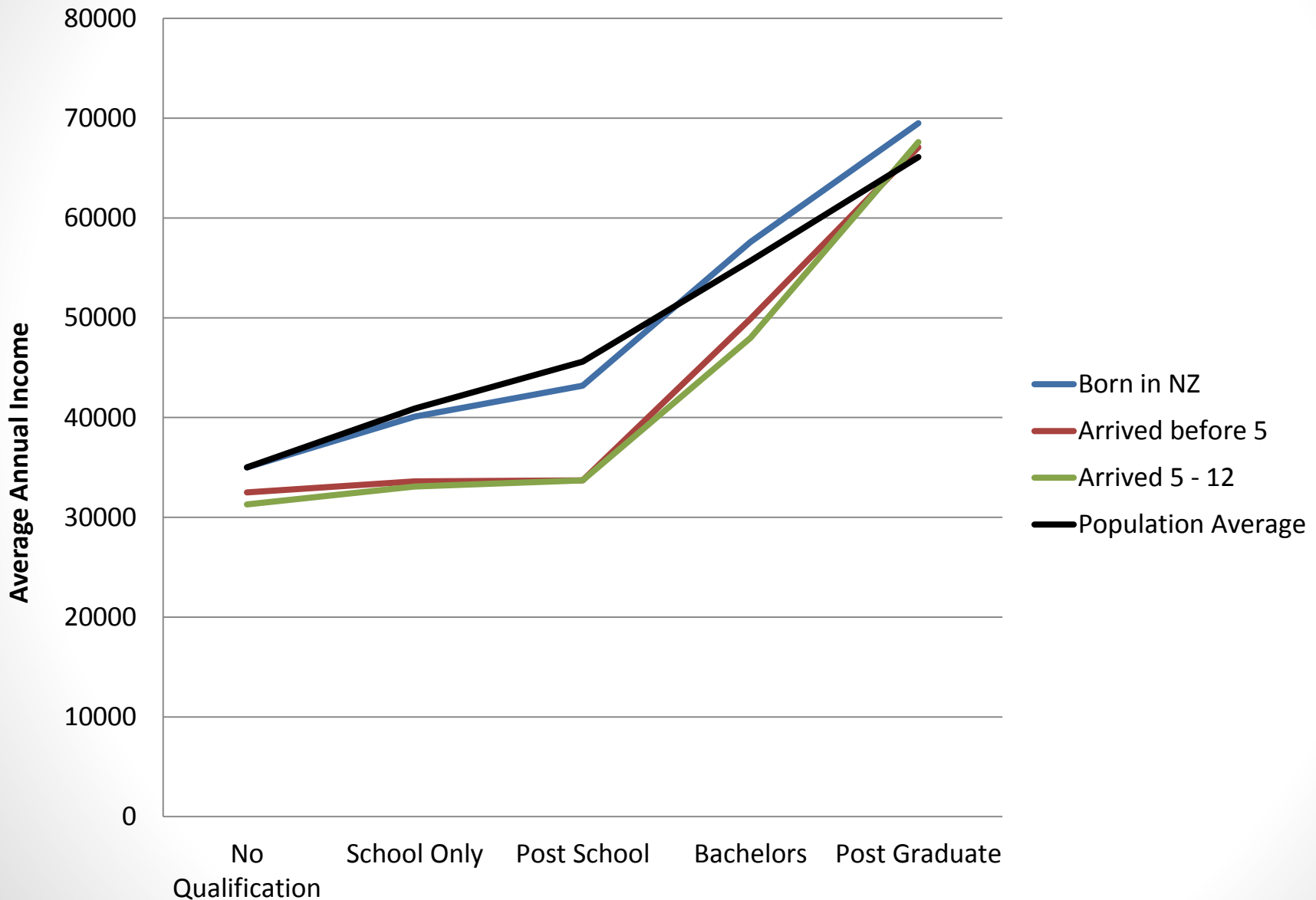
Age at Immigration (Asian Population Only)



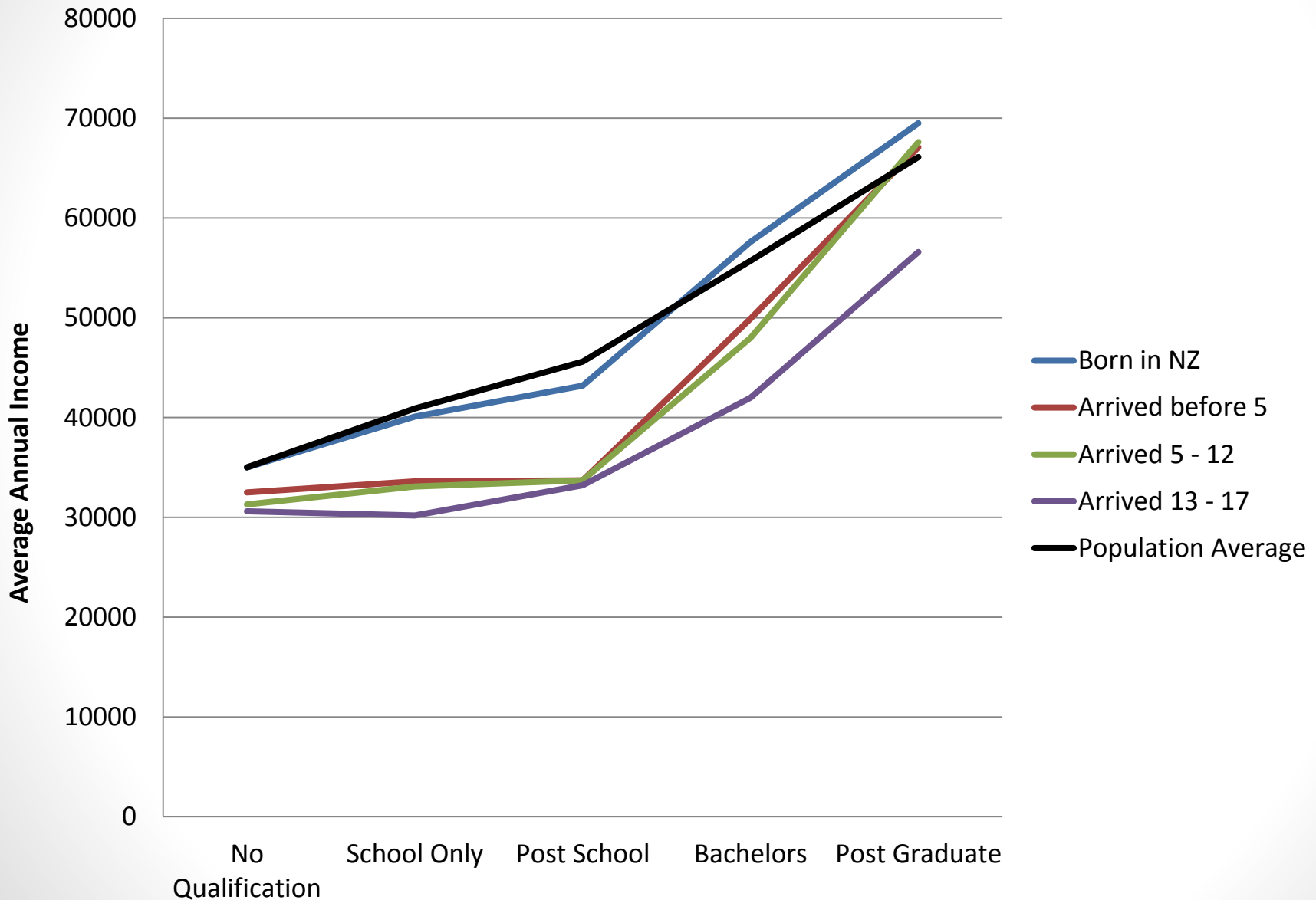
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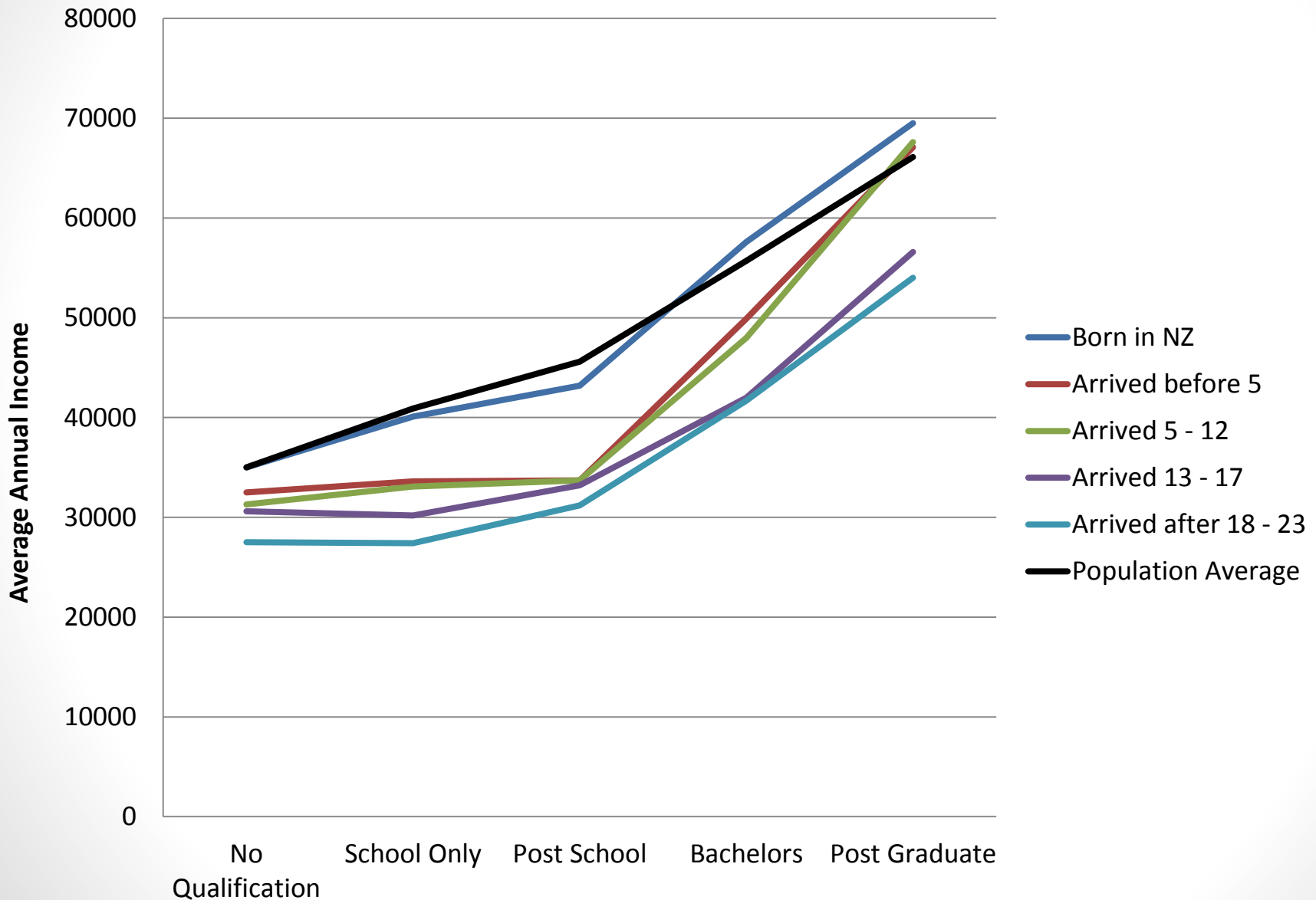
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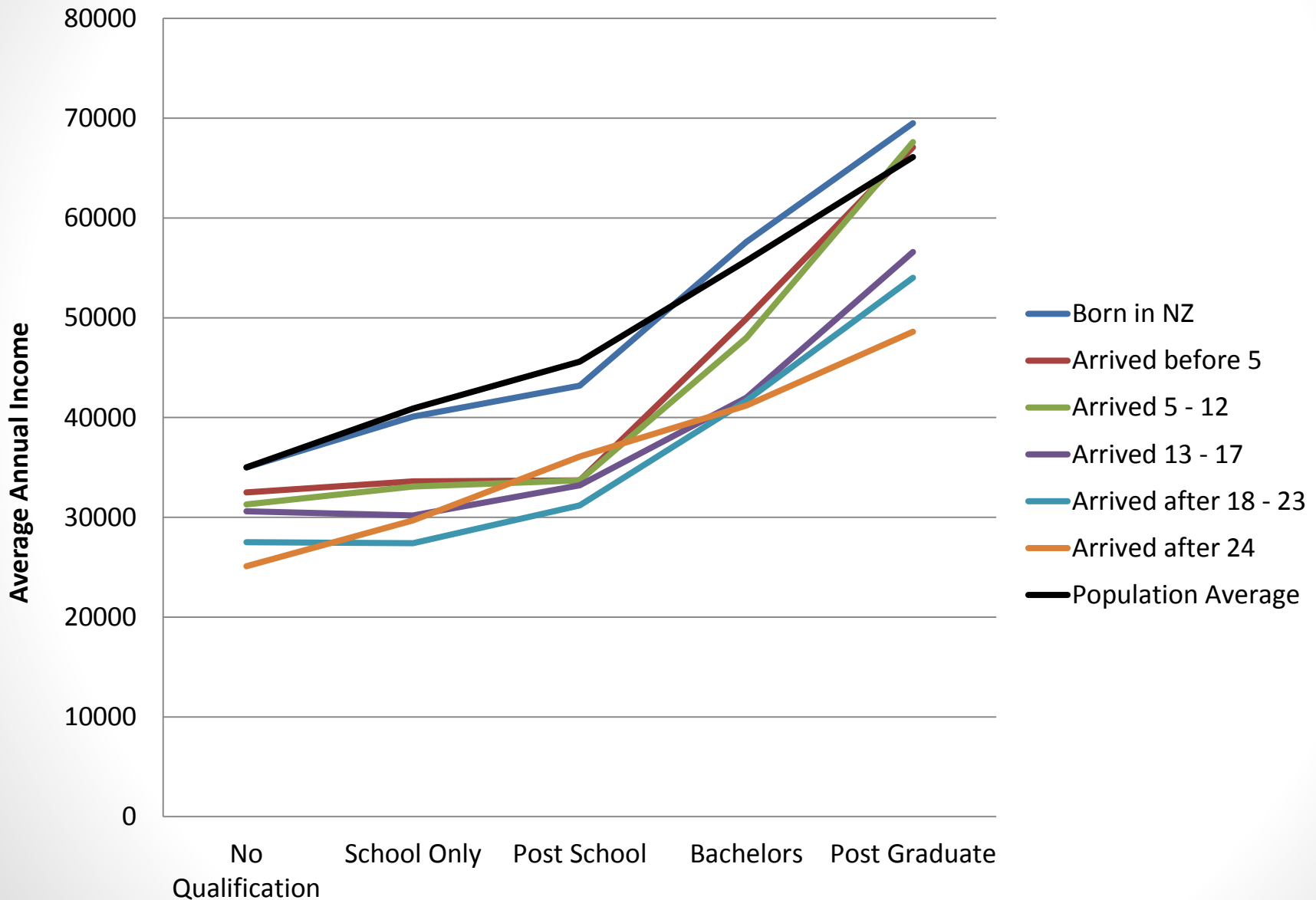
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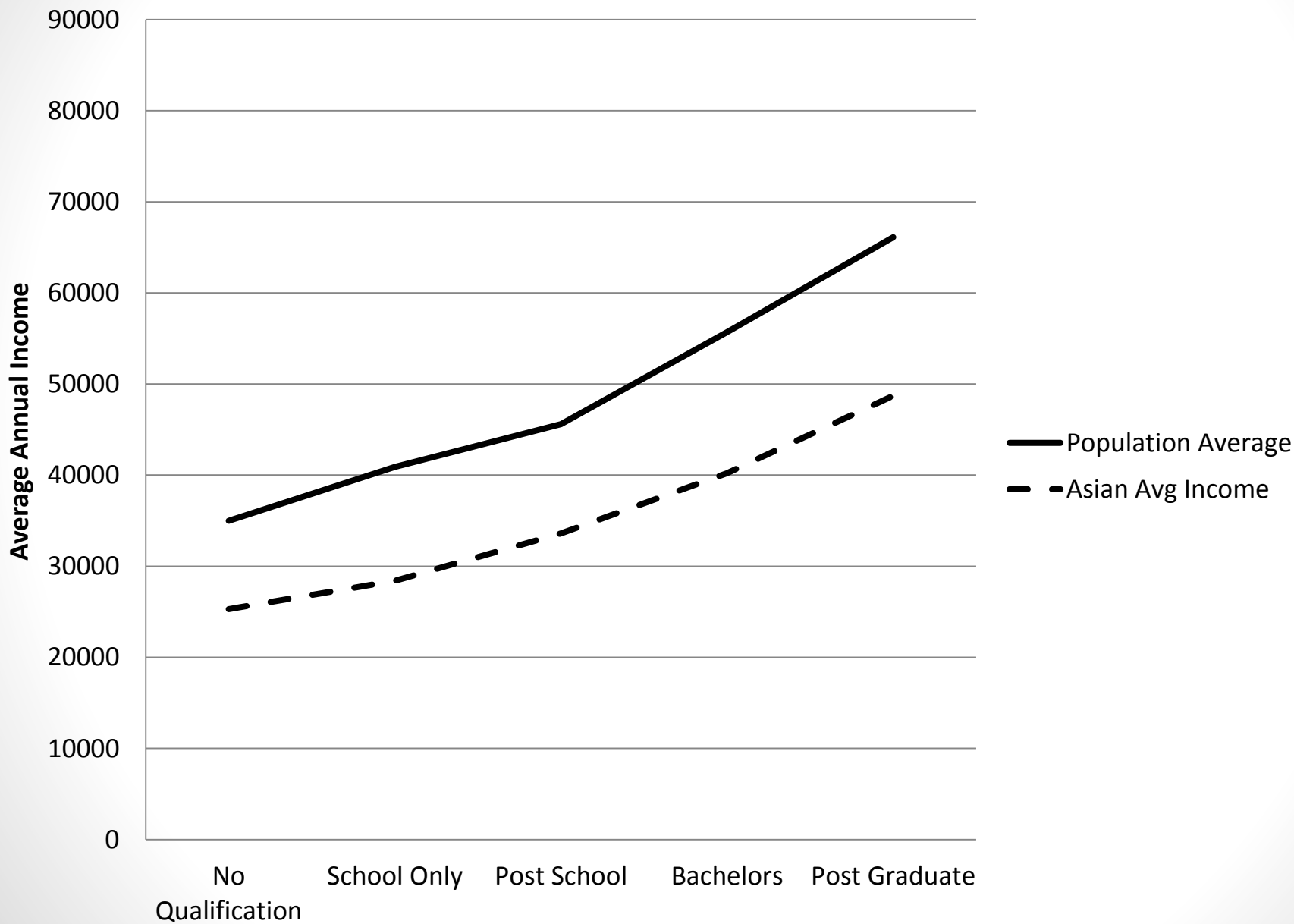
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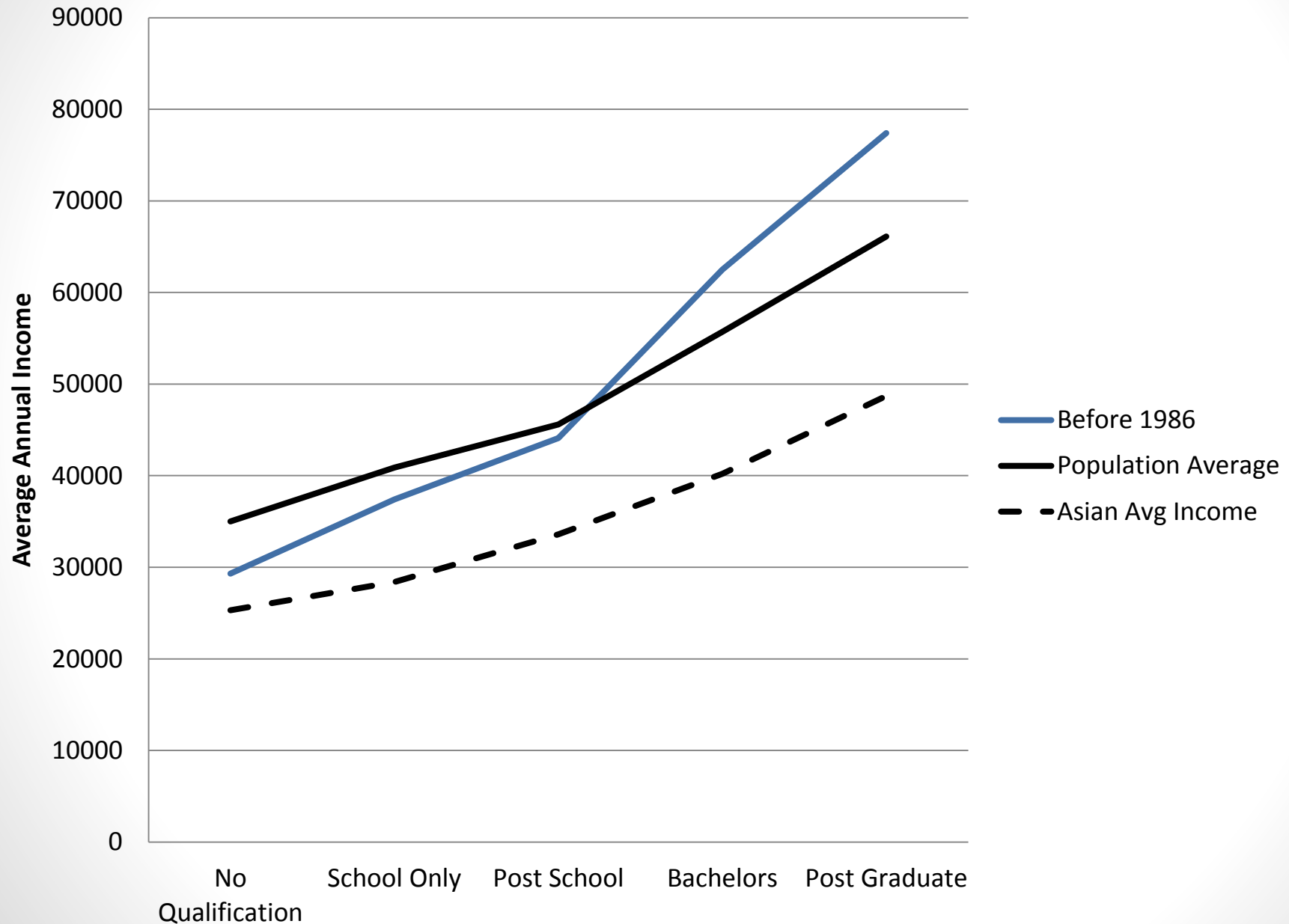
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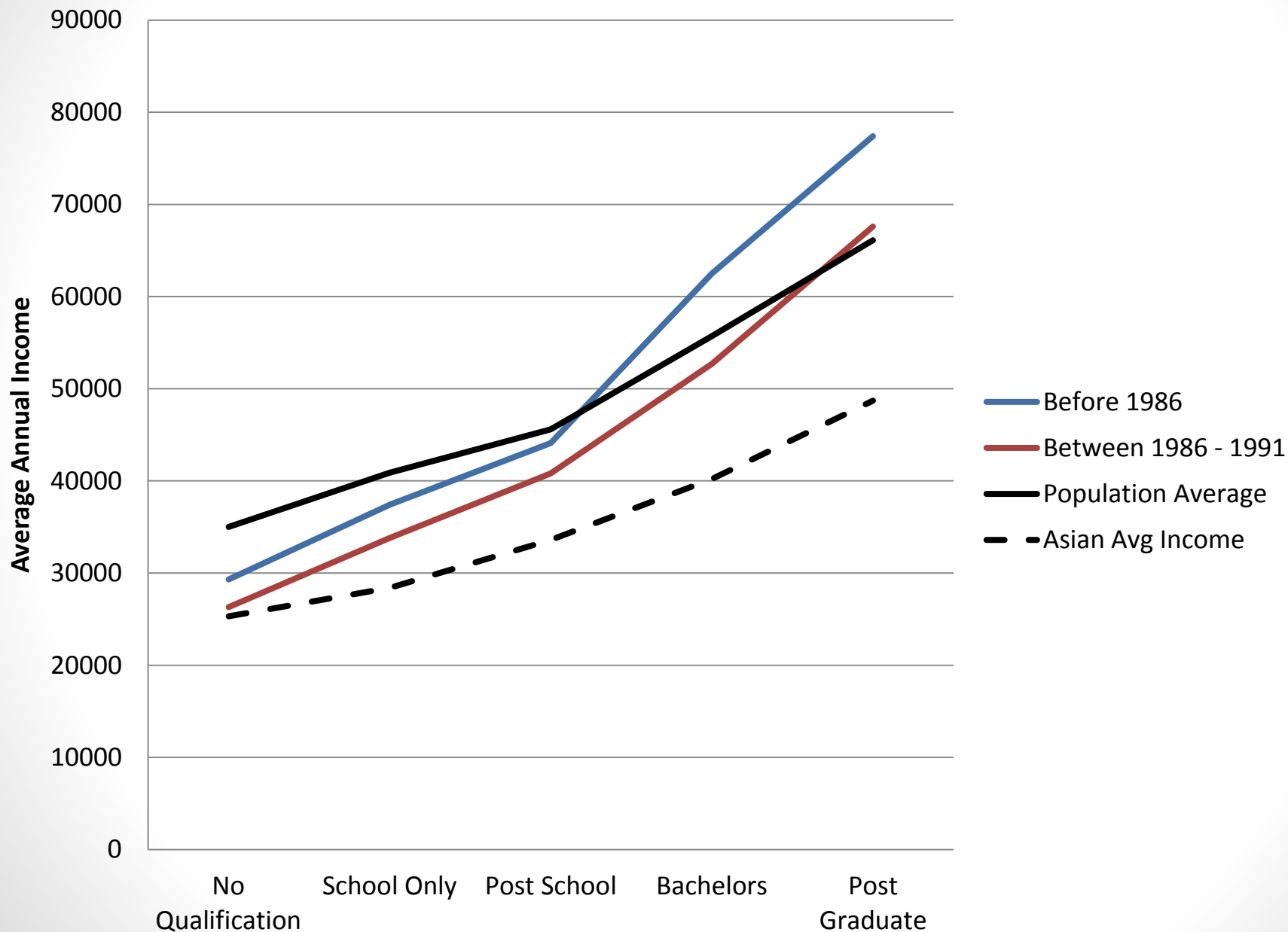
Years in NZ (Asian Population Only)



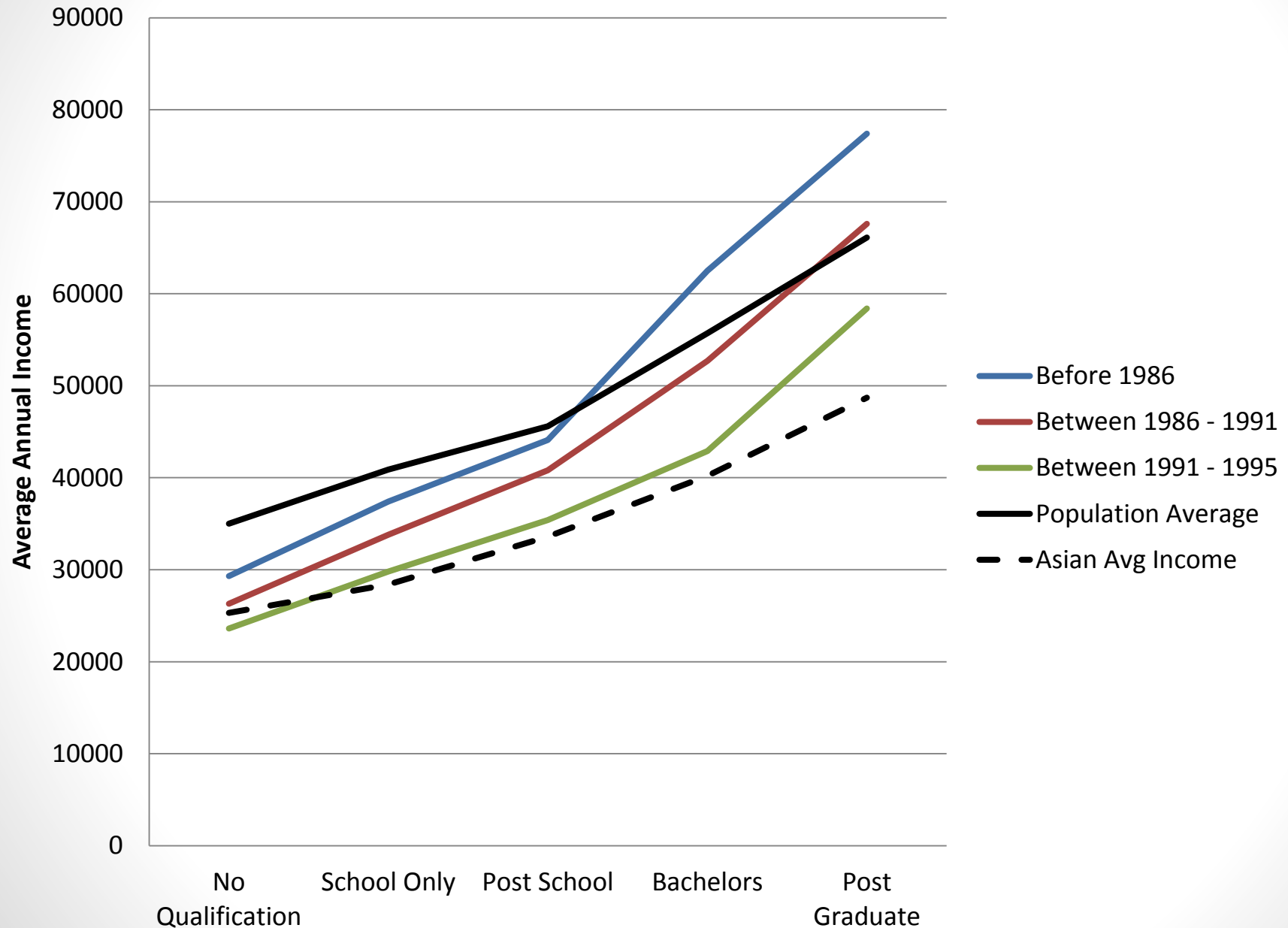
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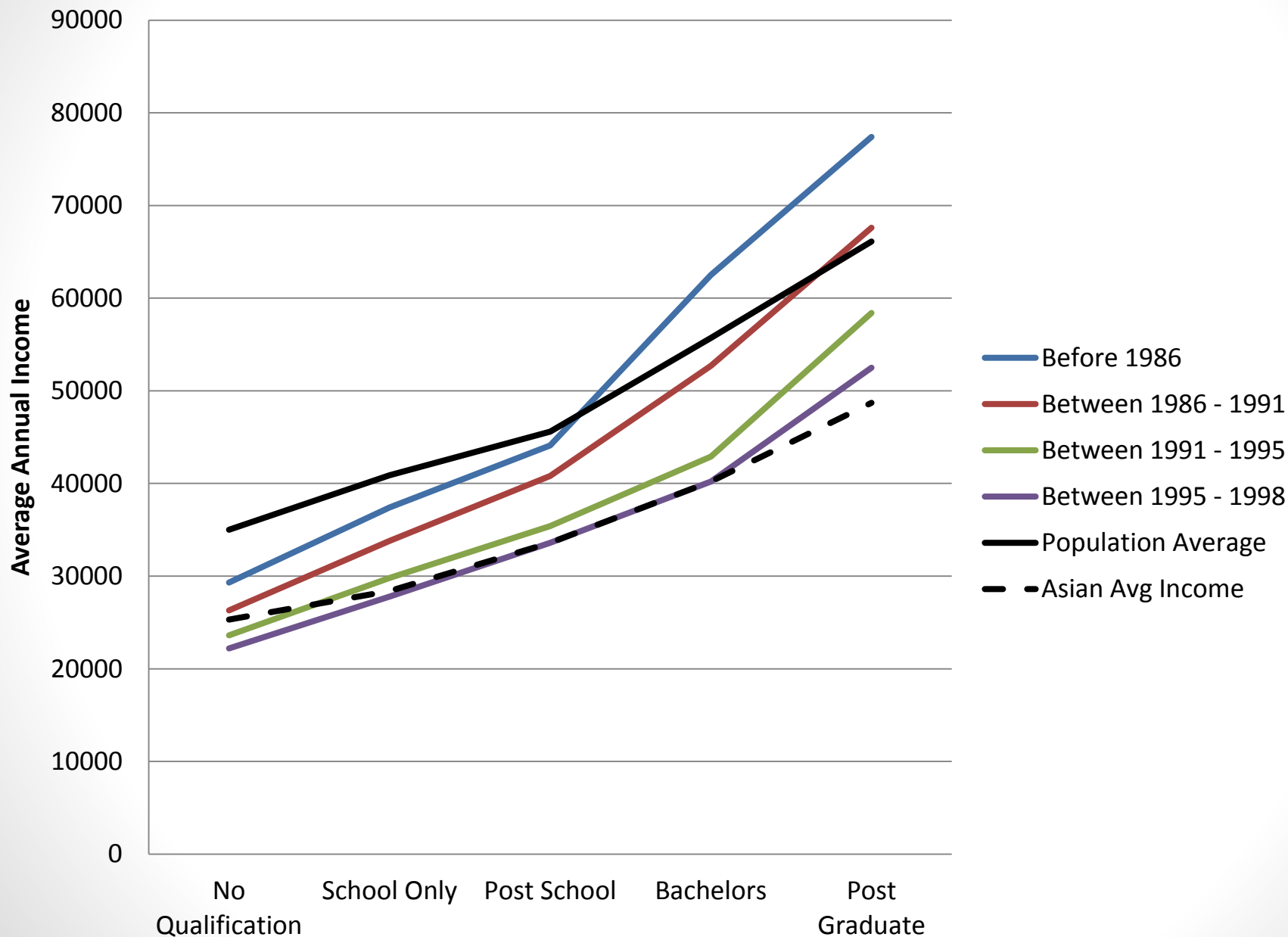
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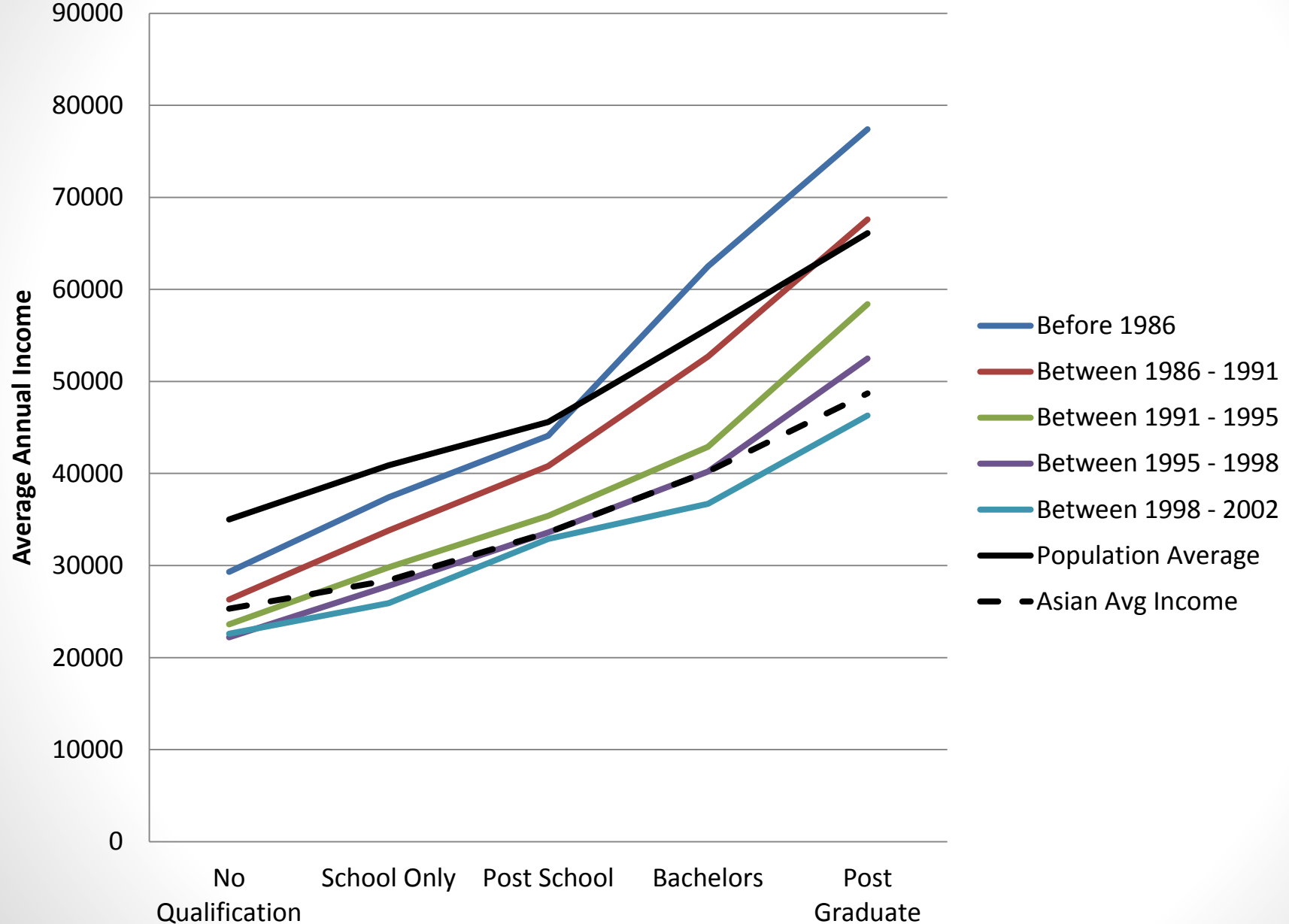
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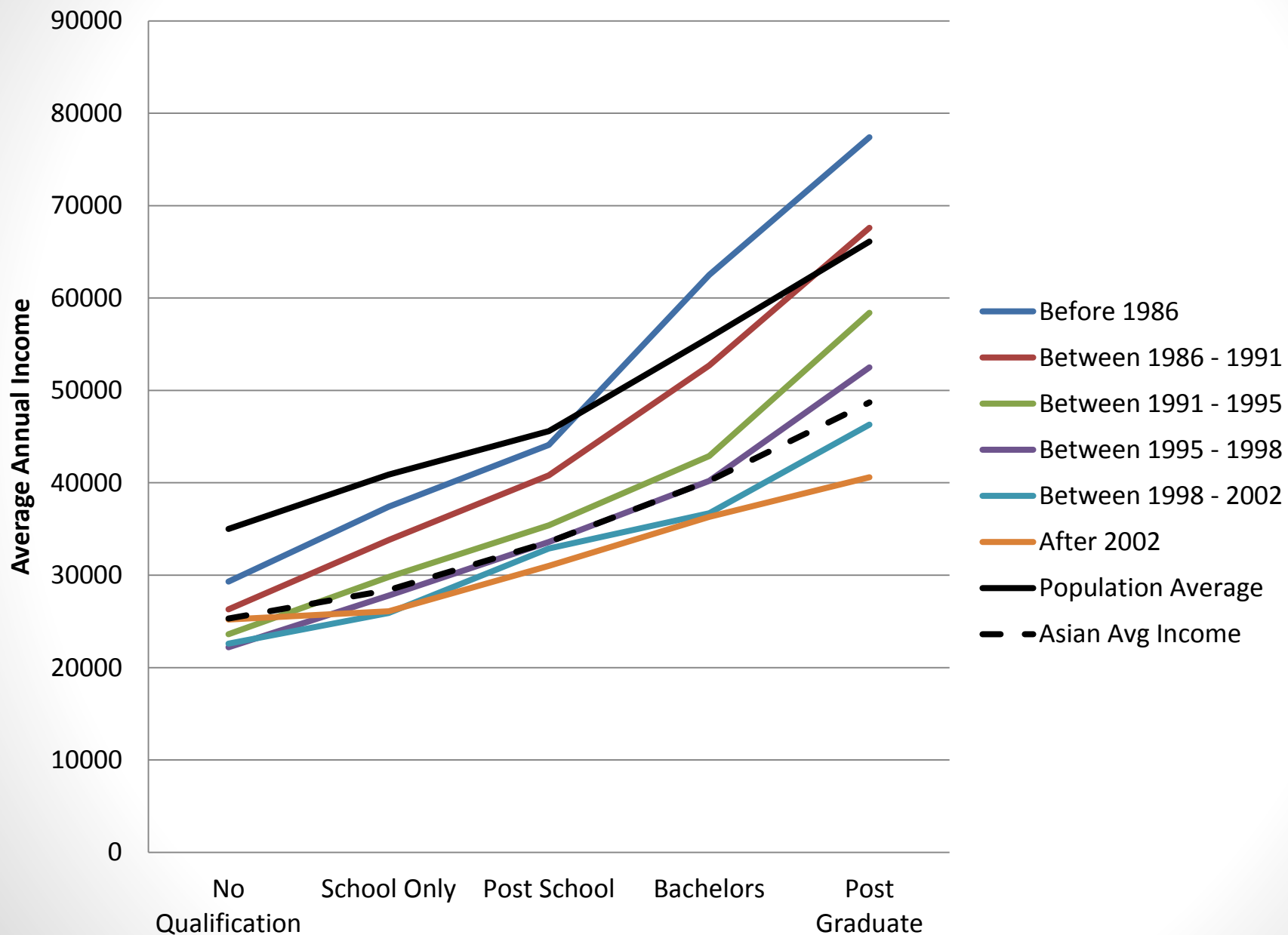
Years in NZ (Asian Population Only)



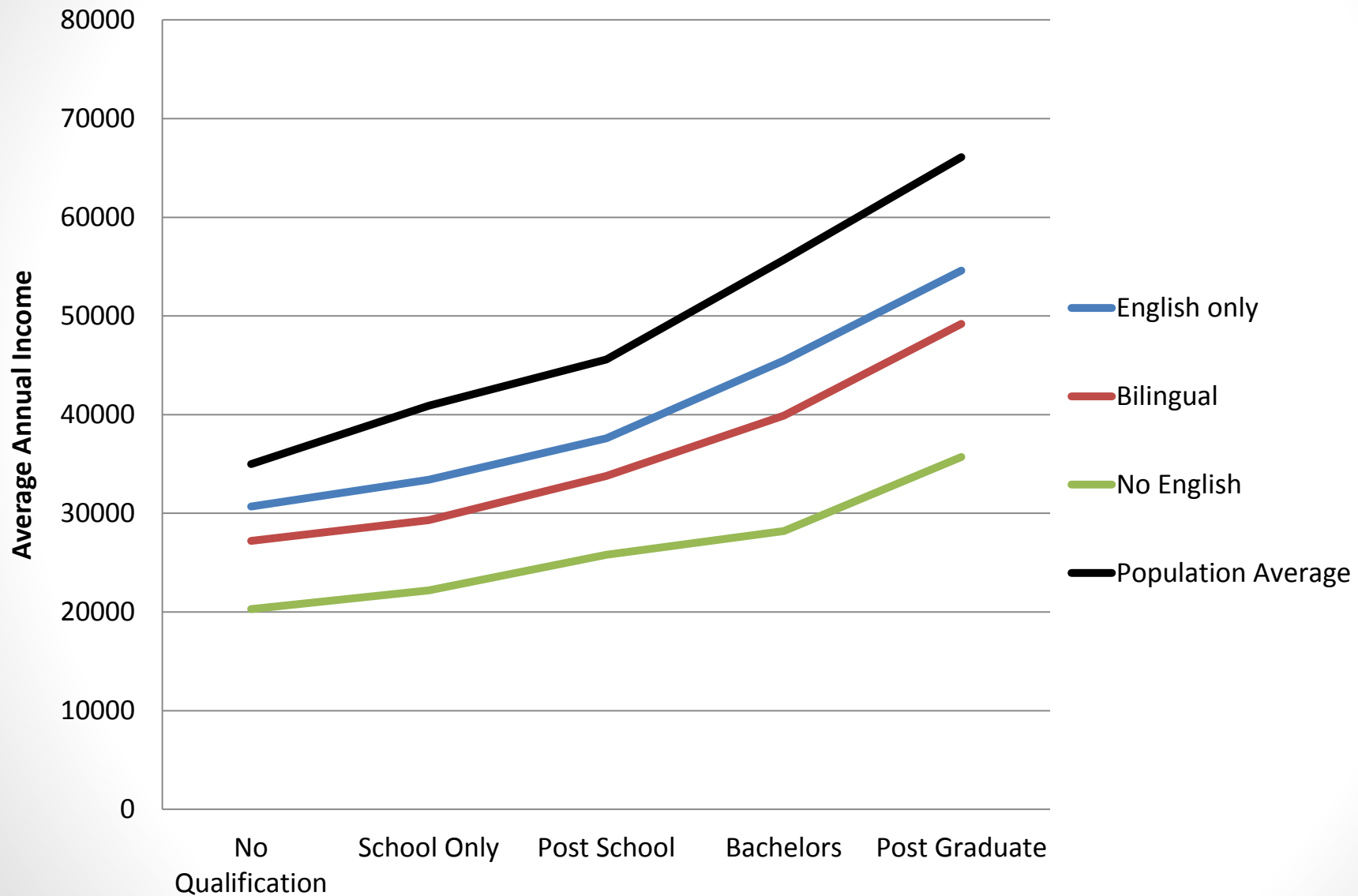
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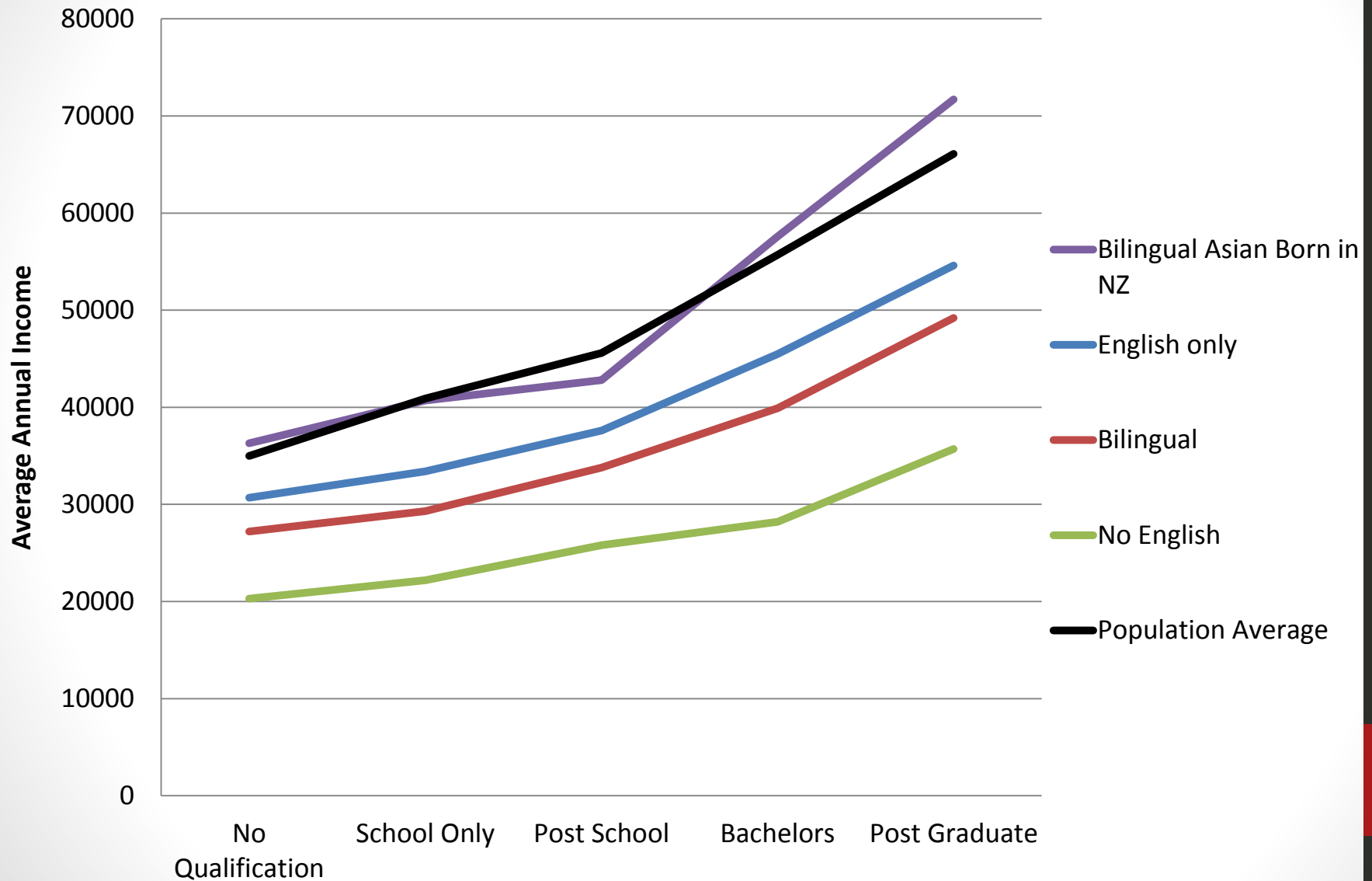
Years in NZ (Asian Population Only)



Languages Spoken (Asian Population Only)



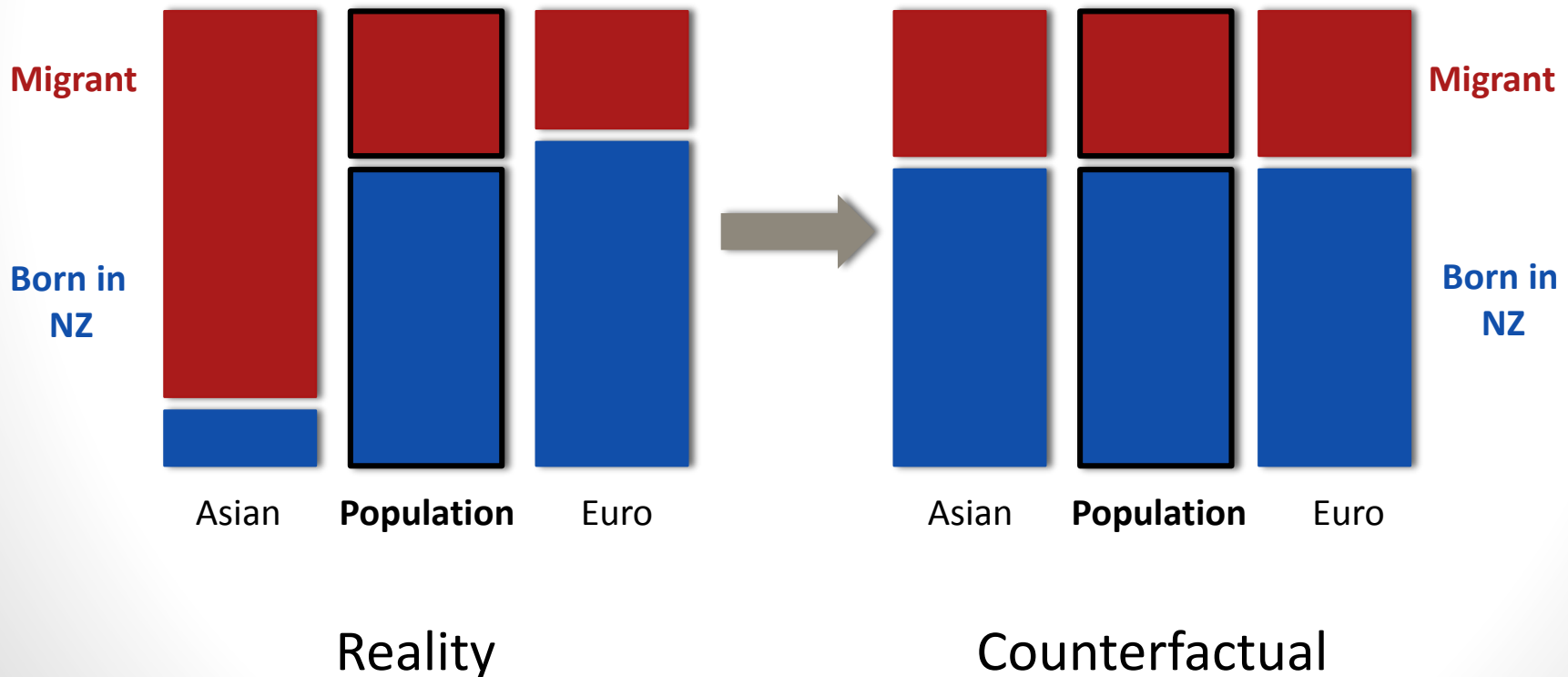
Languages Spoken (Asian Population Only)



Means Adjustment - Example

What if...

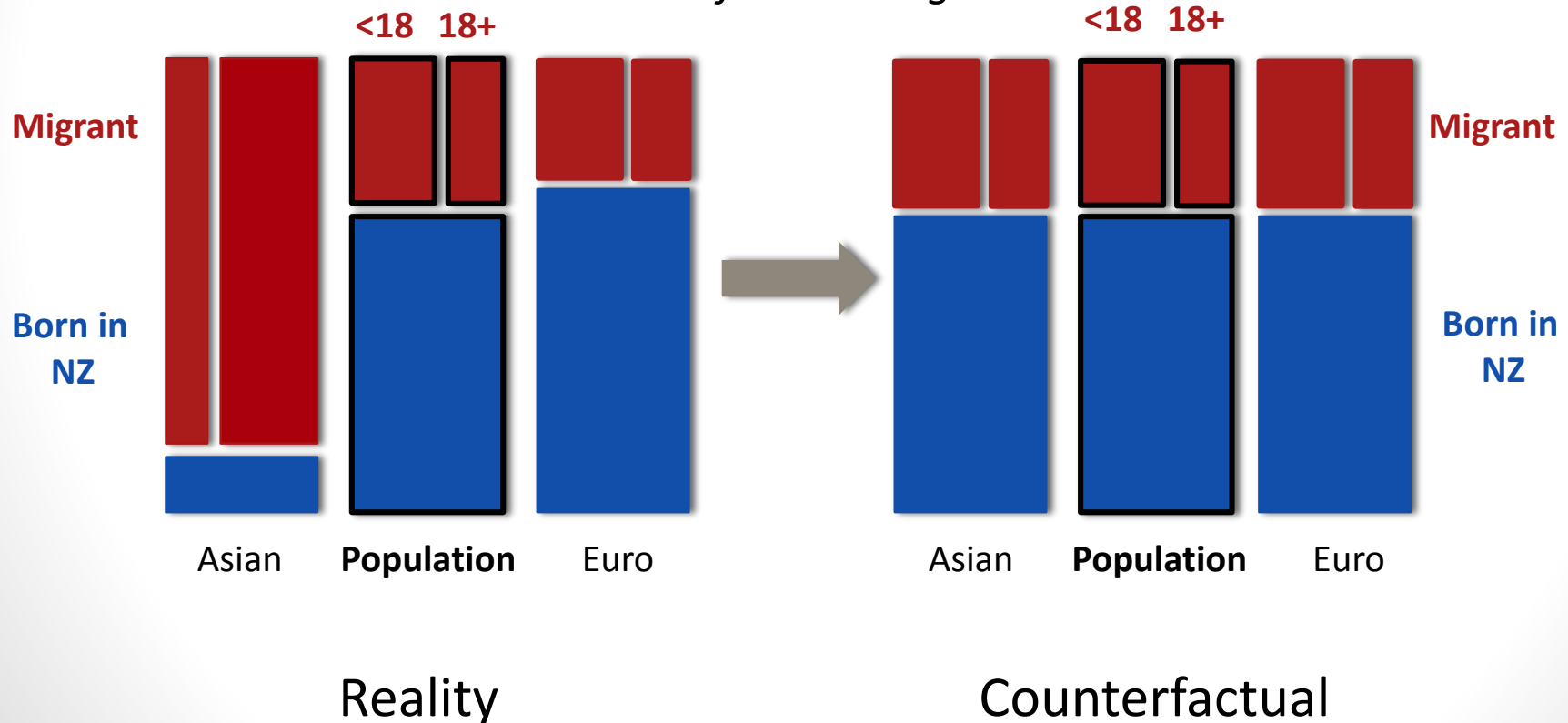
Each ethnicity had the same proportion of migrants as the overall population?



Means Adjustment - Example

What if...

Each ethnicity had the same proportion of migrants as the overall population, and each population had the same proportion of migrants who arrived before turning 18?



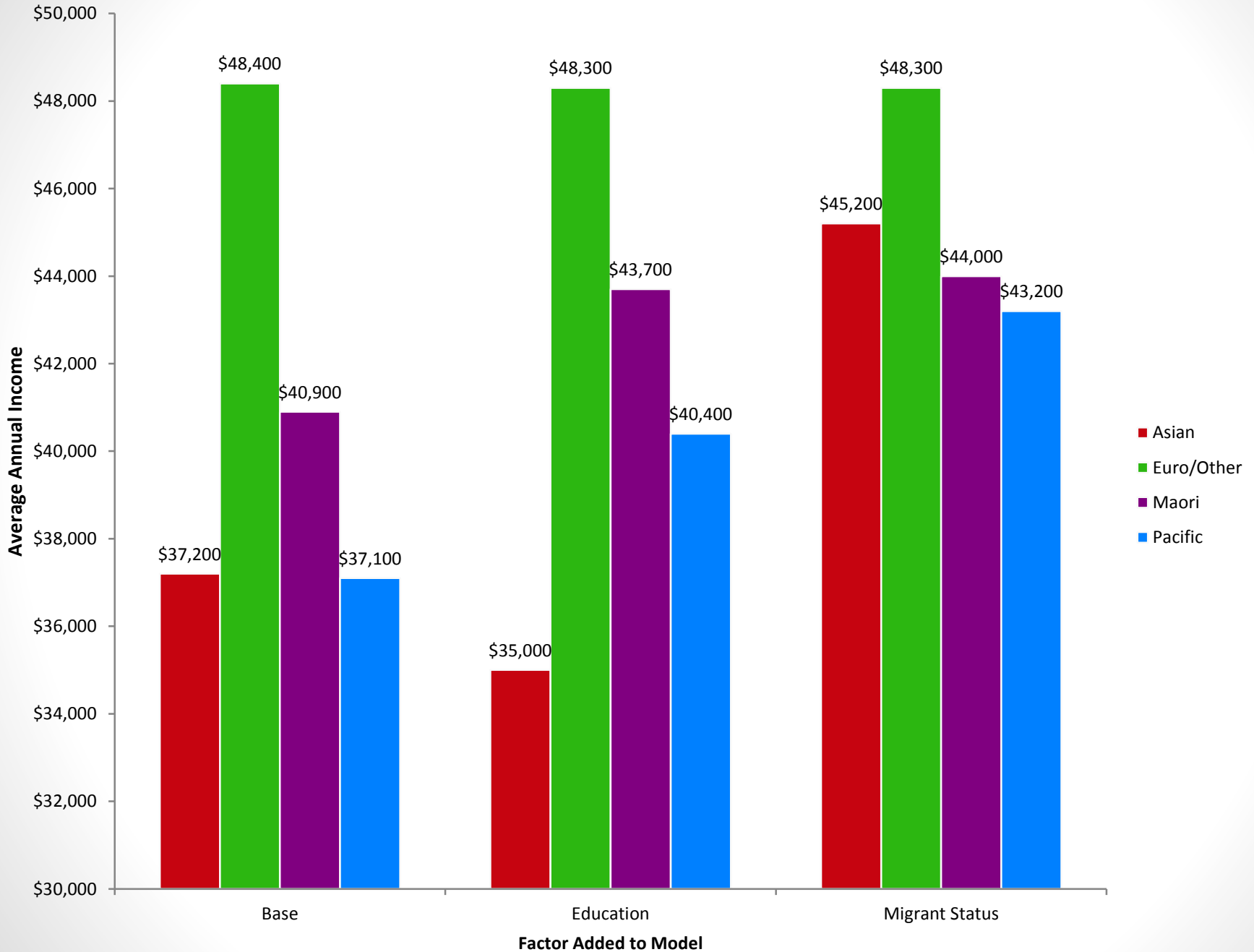
Steps

1. Perform multiple linear regression and extract estimates of effects.

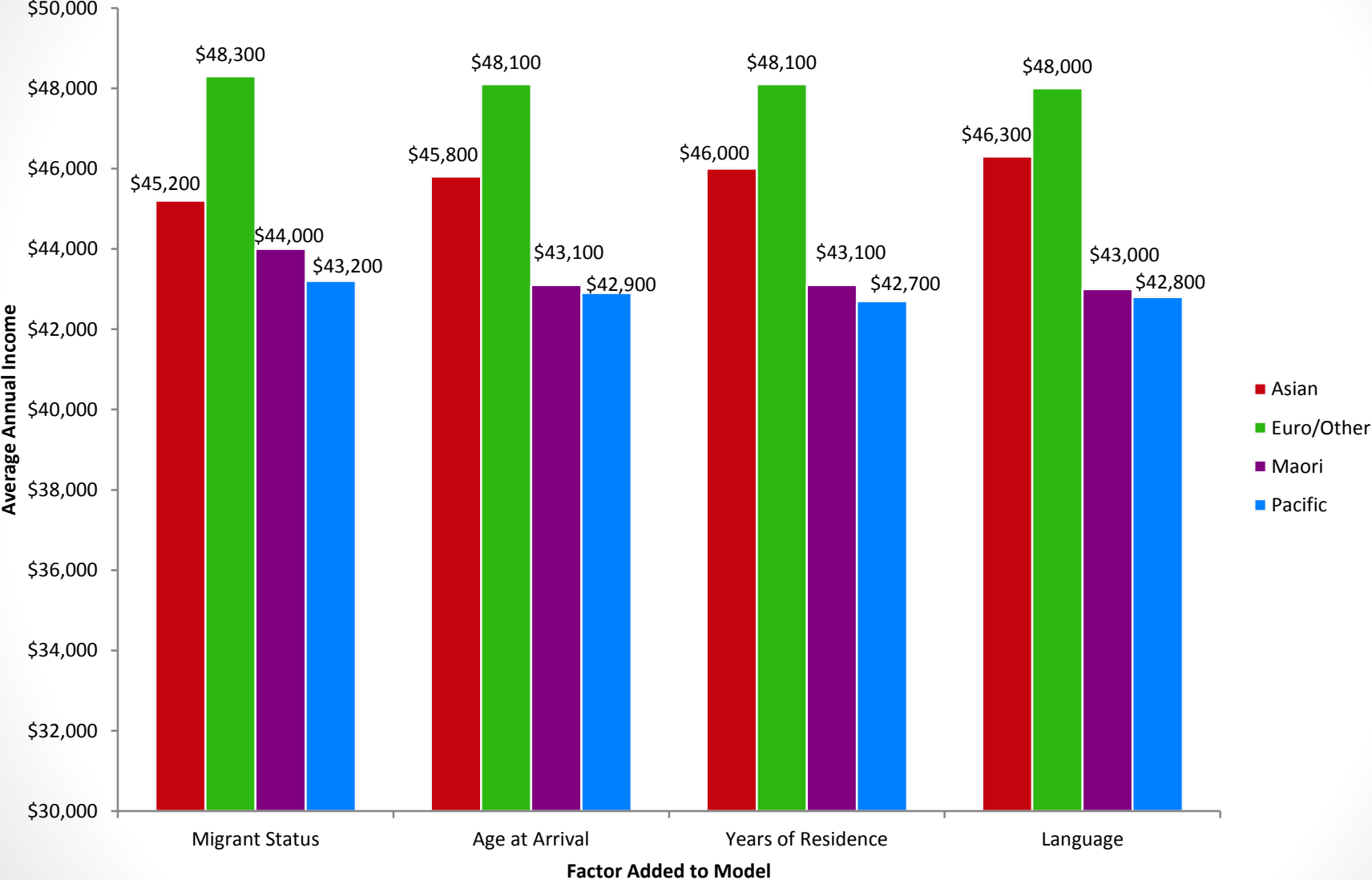
```
income_adj = asian euro age sex married bornNZ bornNZ*asian bornNZ*euro
```

2. Identify proportions for counterfactual population
3. Reweight using theoretical probabilities to get the ethnicity average incomes associated with the counterfactual.

Cumulative Model Ethnicity Stable Composition Adjusted Means

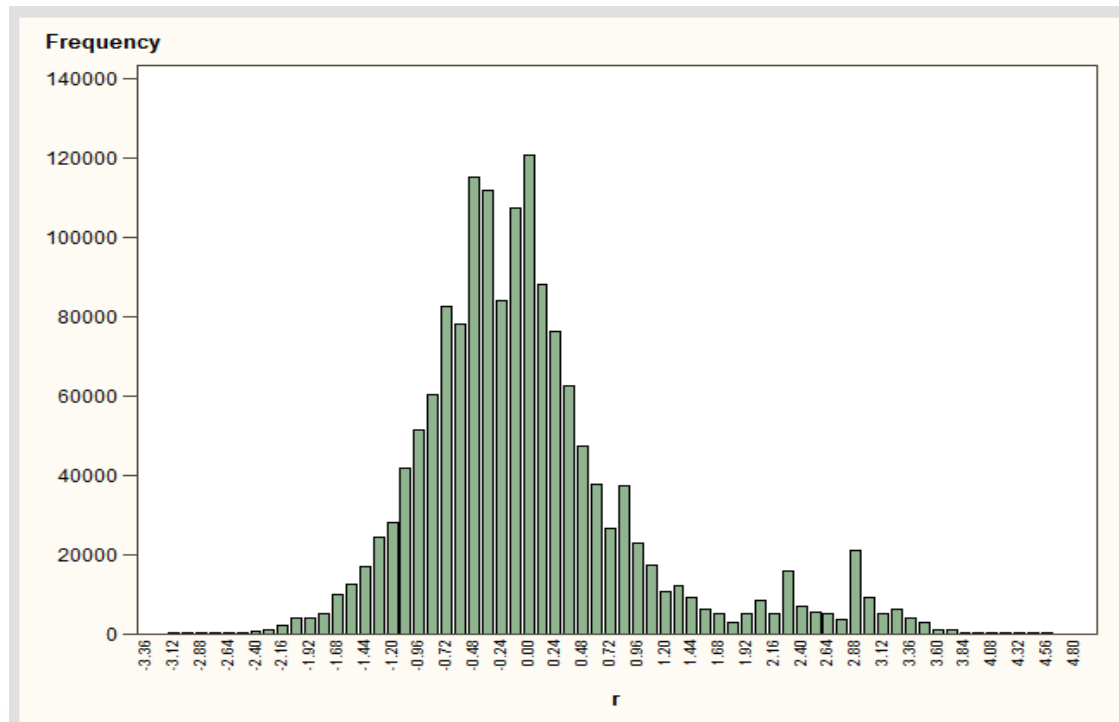


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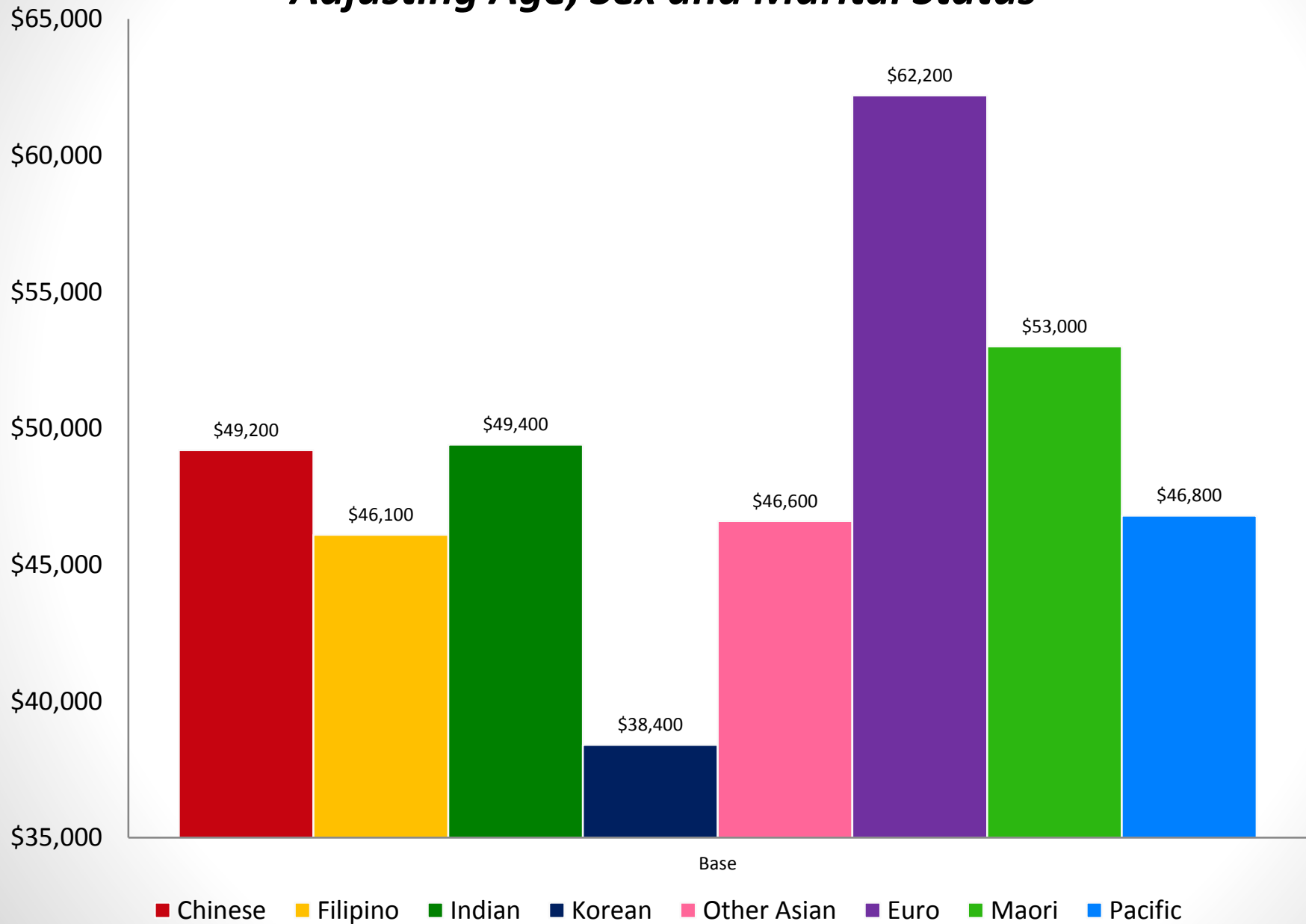


Validity of Models

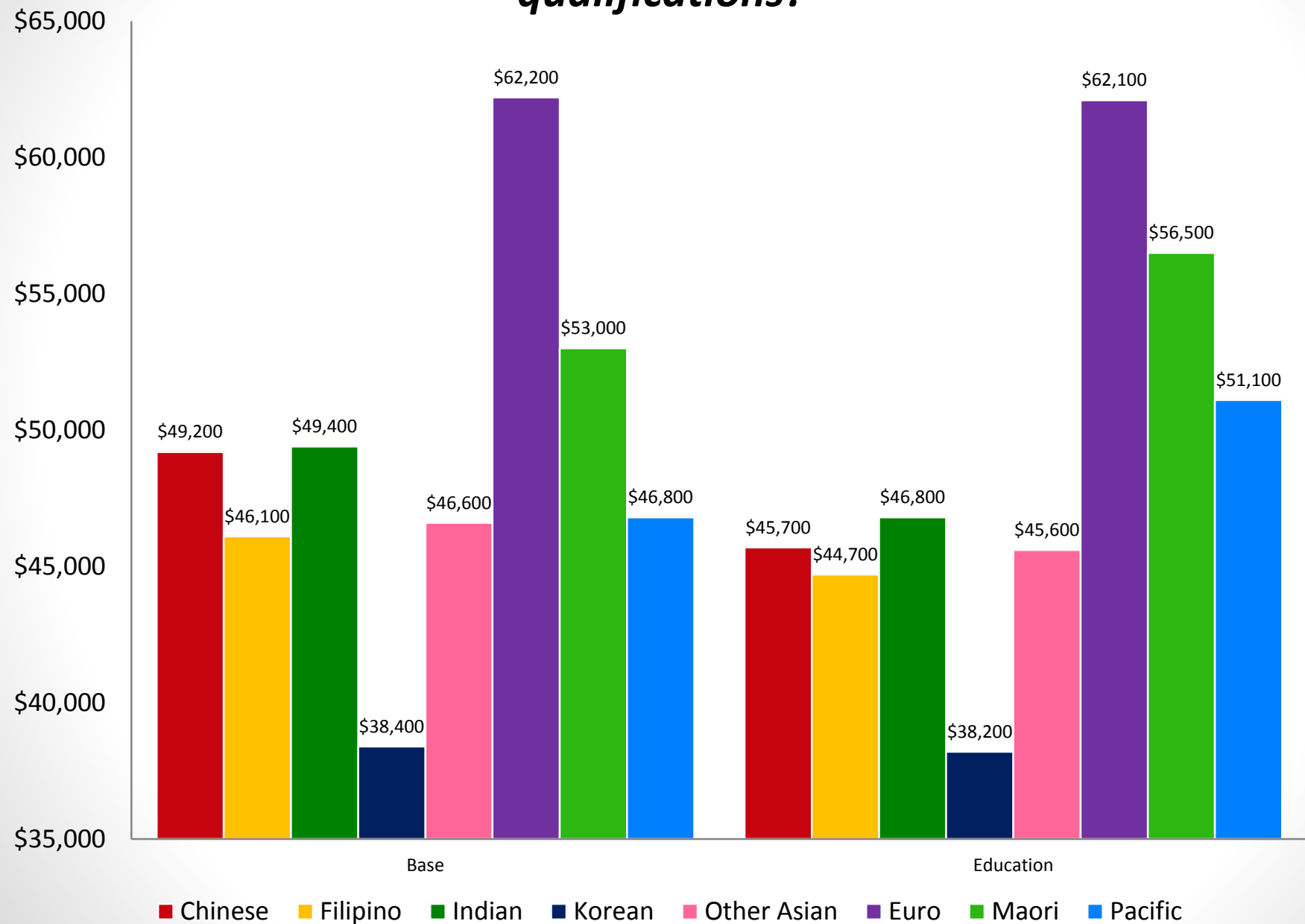
- Dealing with a whole population, not a sample
- All categorical explanatory variables
- Normal distribution of errors
 - Structure in the right tail – married, European, male, CEOs



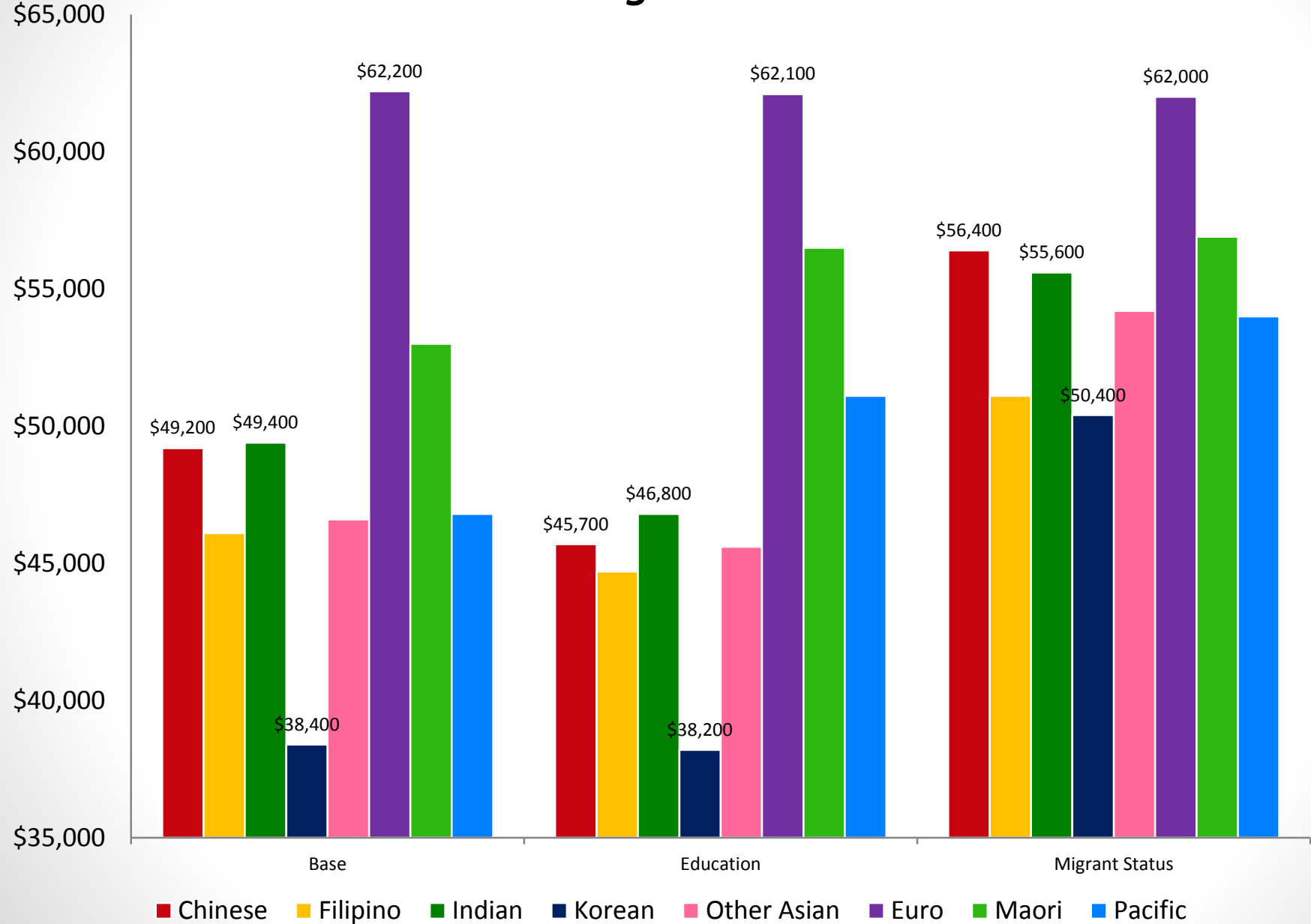
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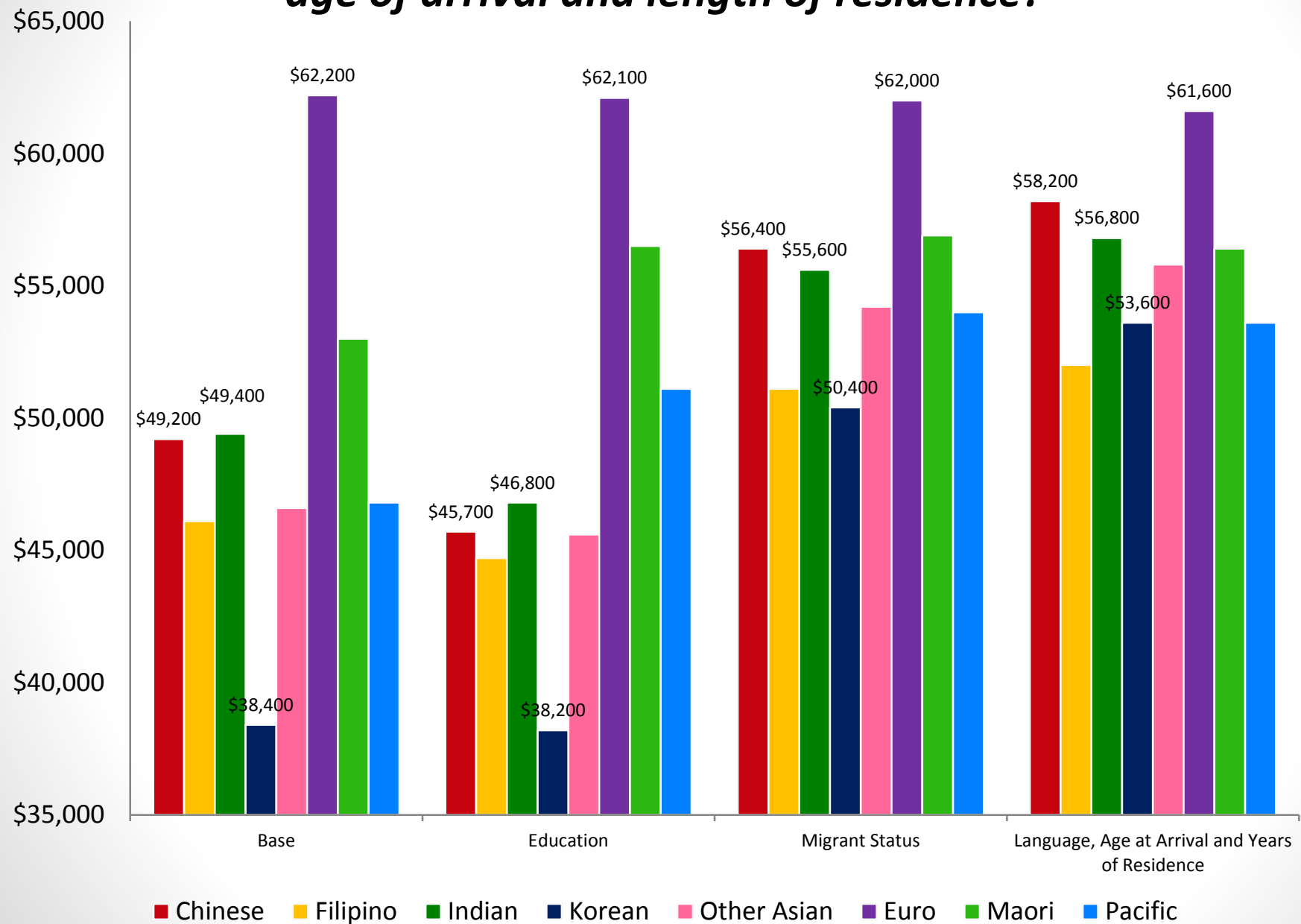
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