

Decomposing the impact of increased educational attainment on demographic dividend in Singapore, 1970–2010

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Introduction

- 1 Introduction
 - Background
 - Objectives

Background

- Since 1970, higher educational attainment has increased greatly in Singapore, especially for tertiary education:
 - In 2016, 30% of the population aged 20+ not in full-time education had a university degree and above, up from 5% as recently as in 1990
- There is still a large group of primarily older persons with lower than secondary school education
- 10% of the population aged 65 years and older have some form of tertiary educational qualifications

Objectives

- Compute lifecycle deficit for Singapore residents by education level from 1970 to 2010
- Compute economic support ratio for Singapore residents by education level from 1970 to 2010

Data and Methods

2 Data and Methods

Data and Methods

Data

- The labor income and consumption for Singapore resident population is by single-year of age from age 0 to age 85+ and by education level in the year 2013
- The data on Singapore resident population by education level are from the 1970, 1980, 1990, 2000, and 2010 census reports

Methods

We use the NTA methodology to compute the lifecycle deficit and economic support ratio in Singapore by education level for the year 1970, 1980, 1990, 2000, and 2010

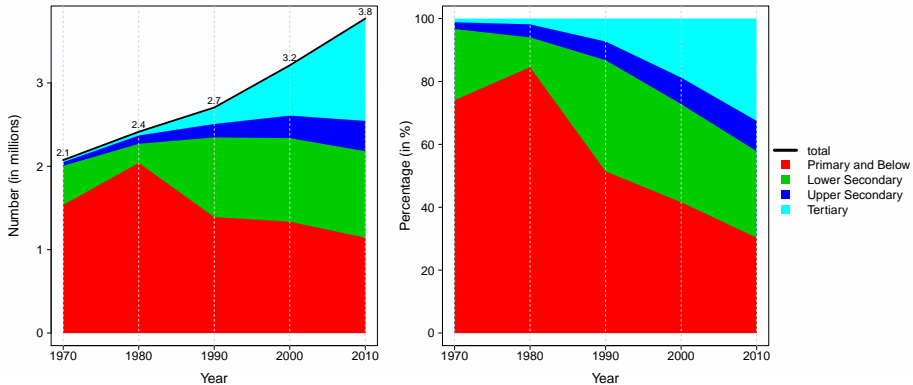
Results

3 Results

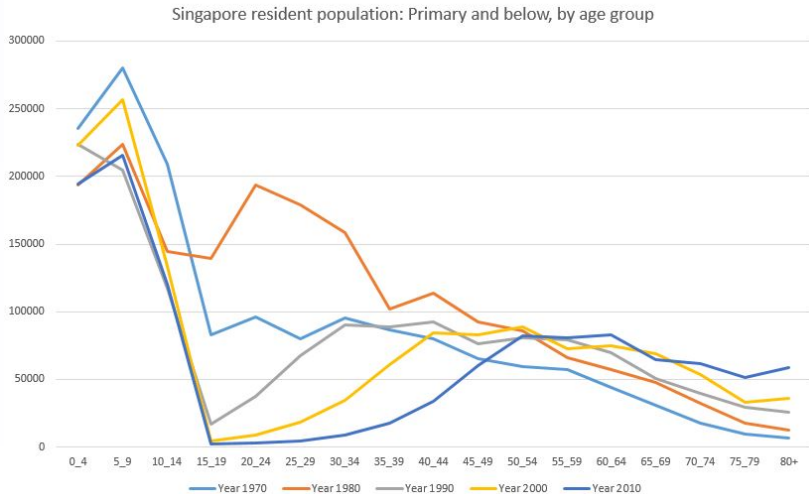
- Population structure by education level
- Singapore NTA profile in 2013
- Economic support ratio by education level
- Life cycle surplus and deficit

Population structure by education level

Resident Population (by Education Level)

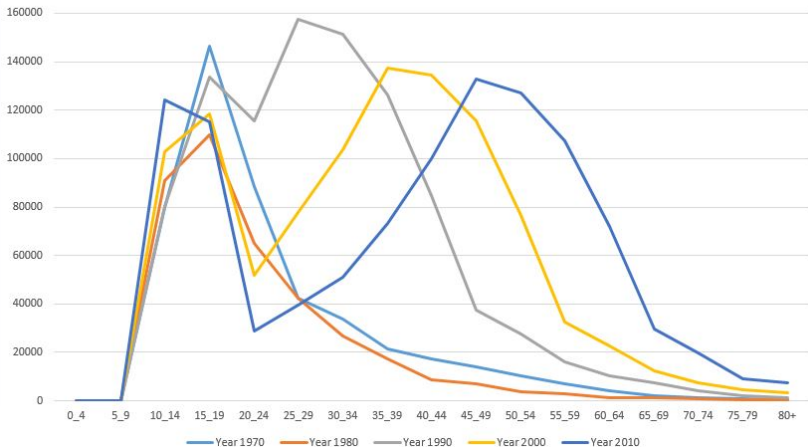


Population structure by education level

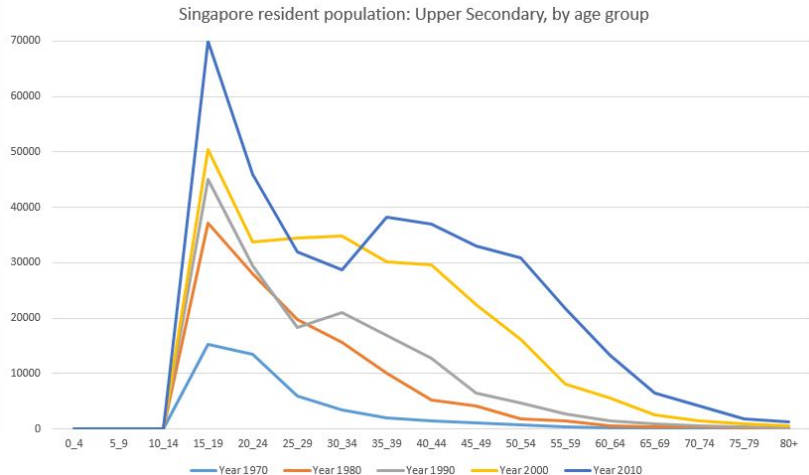


Population structure by education level

Singapore resident population: Lower Secondary, by age group

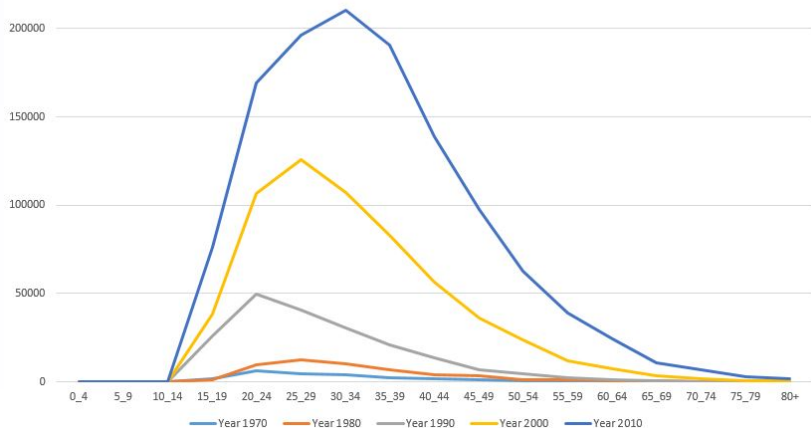


Population structure by education level



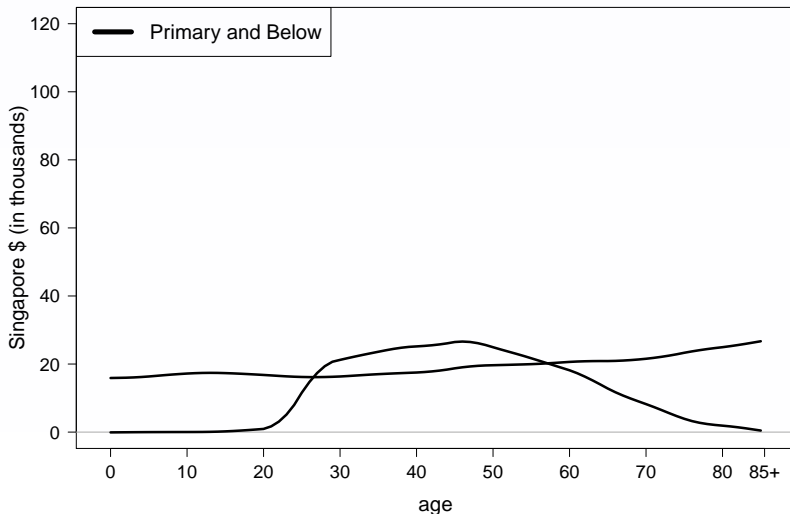
Population structure by education level

Singapore resident population: Tertiary and above, by age group



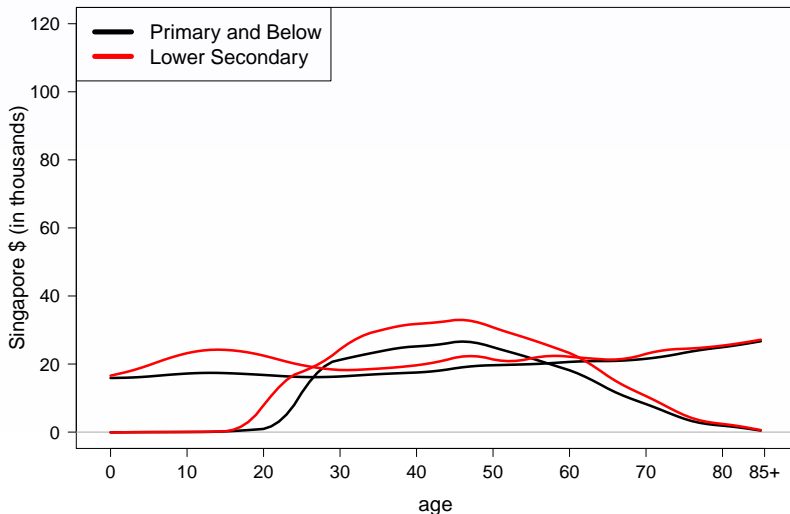
Singapore NTA profile in 2013

Average consumption and labor income by education level (Singapore 2013)



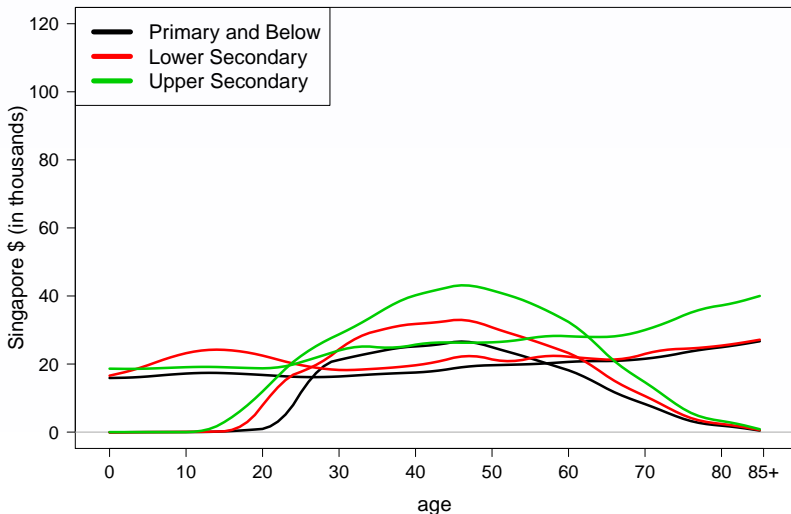
Singapore NTA profile in 2013

Average consumption and labor income by education level (Singapore 2013)



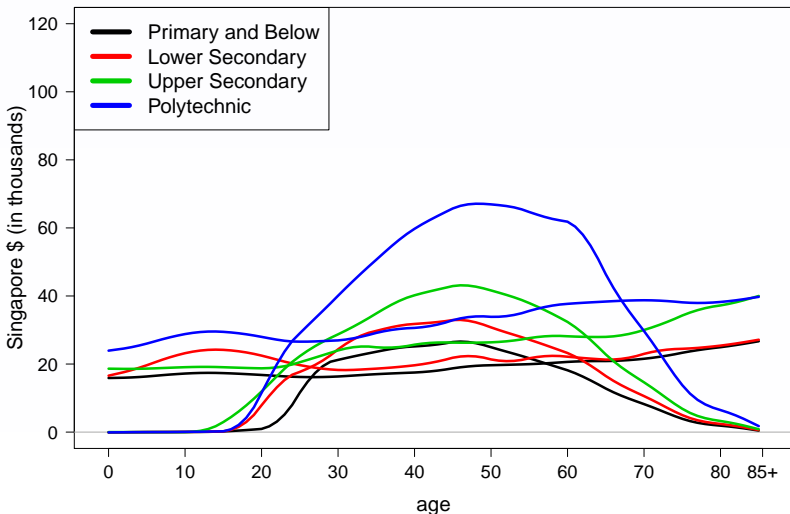
Singapore NTA profile in 2013

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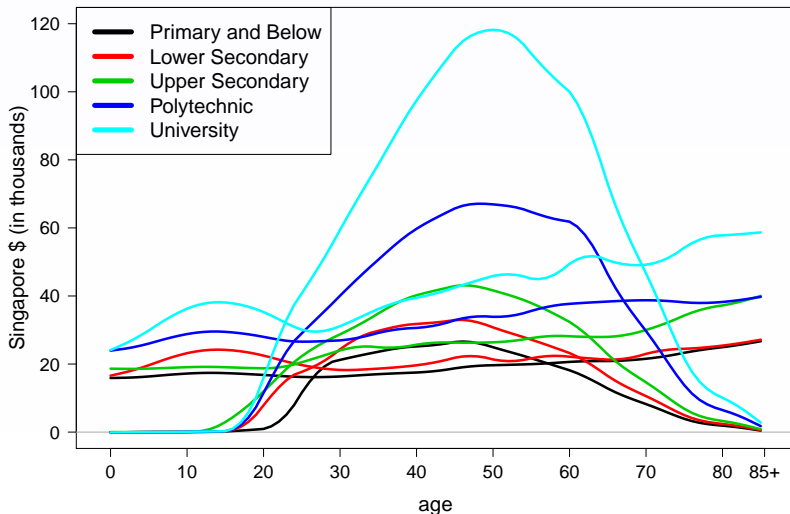
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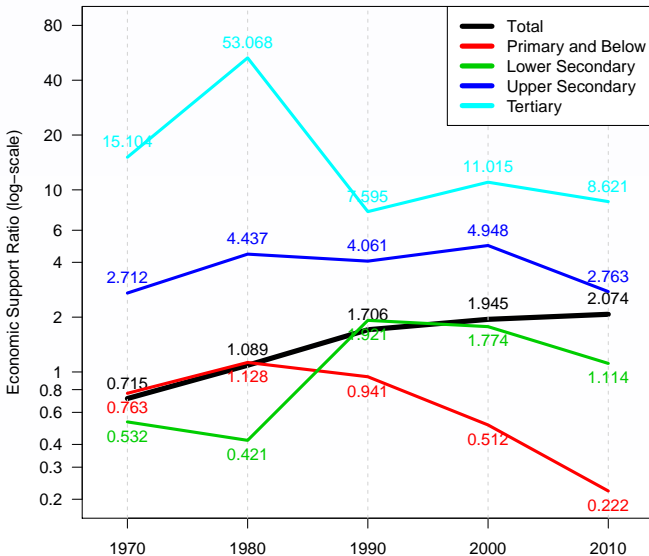
Singapore NTA profile in 2013

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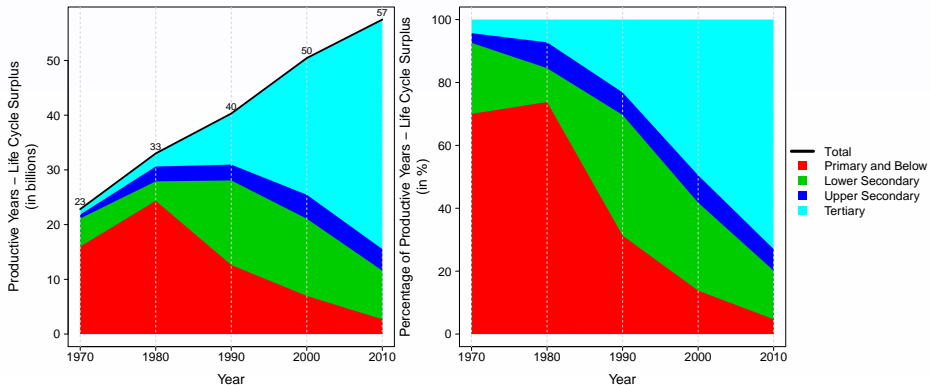
Economic support ratio by education level

Economic Support Ratio by Education Level



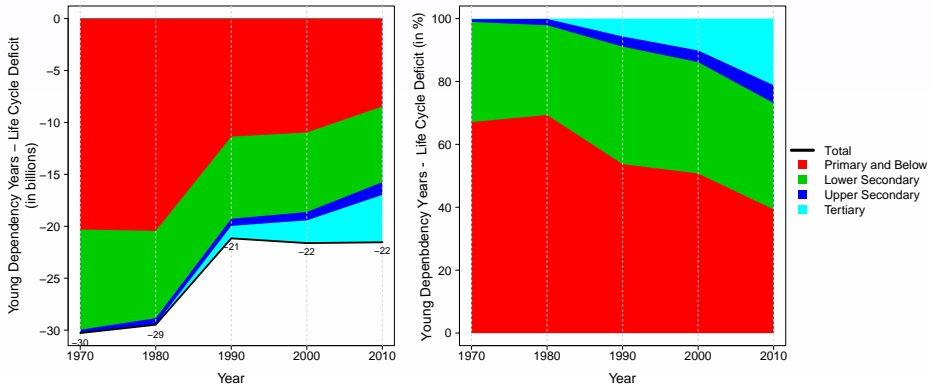
Life cycle surplus and deficit

Productive Years – Life Cycle Surplus (by Education Level)



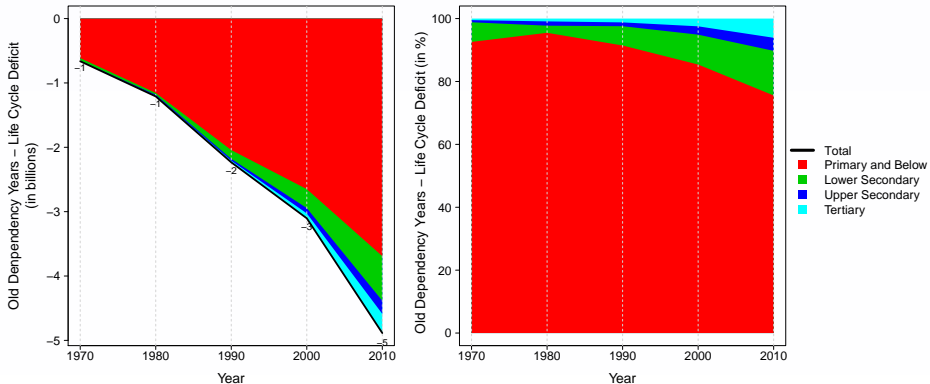
Life cycle surplus and deficit

Young Dependency Years – Life Cycle Deficit (by Education Level)



Life cycle surplus and deficit

Old Dependency Years – Life Cycle Deficit (by Education Level)



Discussion

- 4 Discussion
 - Conclusion
 - Next steps

Conclusion

Conclusion

- The increased proportion of the Singapore resident population with higher education status is one of main causes for the increase in the economic support ratio during 1970–2010
- Since 2000, the economic support ratios for every education level declined, which is largely due to population ageing
- The increased population with higher education compensated for the ageing effect
- Hence, economic support ratios for the total resident population remained on an upward trend throughout 1970–2010

Limitation

- Foreigners who are not permanent residents are not included in the study since data are not publicly available

Next steps

- Compute the age-standardised change in the economic support ratio during 1970–2010
- Compute the education-standardised change in the economic support ratio during 1970–2010
- Decompose the change in the economic support ratio for total resident population over time in two parts:
 - ① how much of the first demographic dividend is due to age structure
 - ② how much of the first demographic dividend is due to education attainment