The contribution of in-migration to the first demogphic dividend in Singapore, 1970–2010

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Introduction

1. Introduction
   - Demographic dividend
   - Immigration in Singapore
   - Objectives

Demographic dividend

- Previous studies (Bloom & Williamsons 1998) estimated the population dynamics in Southeast Asia can explain about half of the growth in GDP per capita during mid 1960s to 1990

- We calculate the first demographic dividend contribution to Singapore GDP per capita growth to be 38% during mid 1960s–mid 2000s

Immigration in Singapore

- Immigration has historically been a major element in the Singapore population policies
- During 1970–2010, Singapore progressed rapidly from a situation of high unemployment to one of labour shortage
- The four decades can be divided into two broad phases of population policies:
    1. 1965–1986: anti-natalist population policies; maintain tight control over population growth; in favor of skilled foreign labour
    2. since 1987: pro-growth phase & more open immigration policies
- As of June 2017, permanent resident and non-permanent resident foreigners comprised 39% of Singapore's total population of 5.6 million, up from 14% in 1990

Objectives

- Compute lifecycle deficit for Singapore residents by place of birth from 1970 to 2010
- Compute economic support ratio for Singapore residents by place of birth from 1970 to 2010

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 above in the year 2013

- The data on Singapore resident population by age group and place of birth 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 place of birth for the year 1970, 1980, 1990, 2000, and 2010
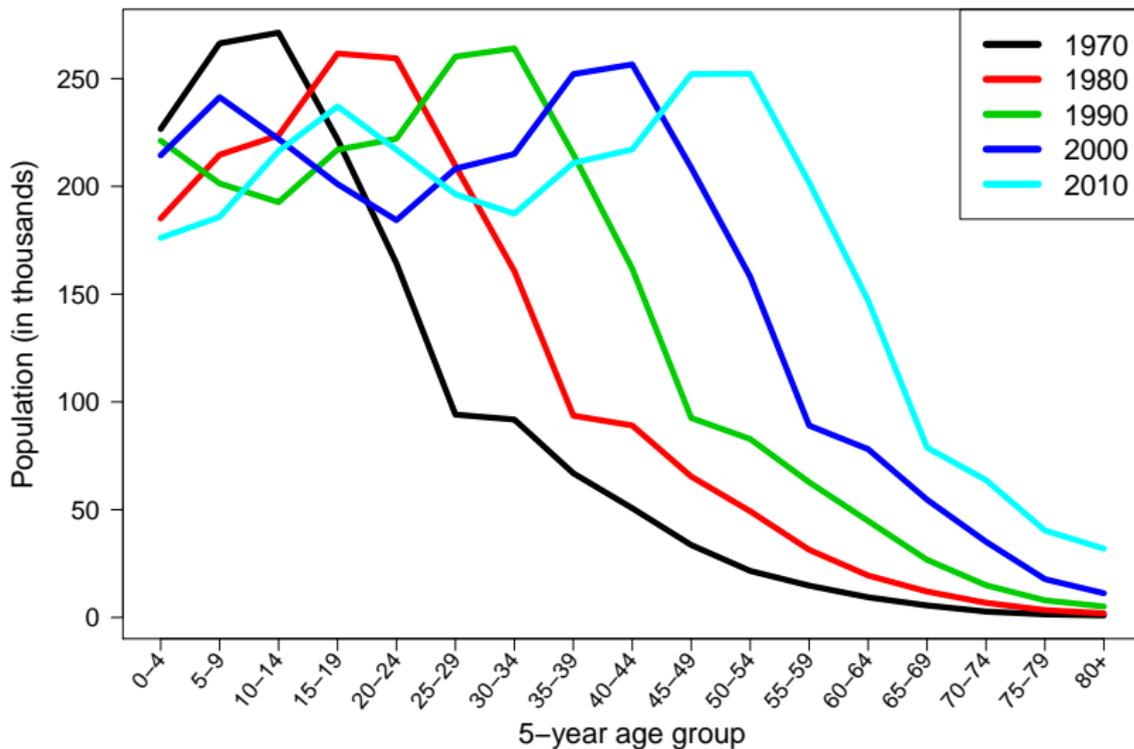
Results

3 Results
- Resident population age structure by place of birth
- Singapore NTA profile in 2013
- Economic support ratio by place of birth
- Life cycle surplus and deficit

Resident population age structure by place of birth

Year	1970	1980	1990	2000	2010
# resident pop. (Mill.)	2.1	2.4	2.7	3.2	3.8
% local-born	74%	78%	85%	82%	77%
% oversea-born	26%	22%	15%	18%	23%

Resident population age structure by place of birth
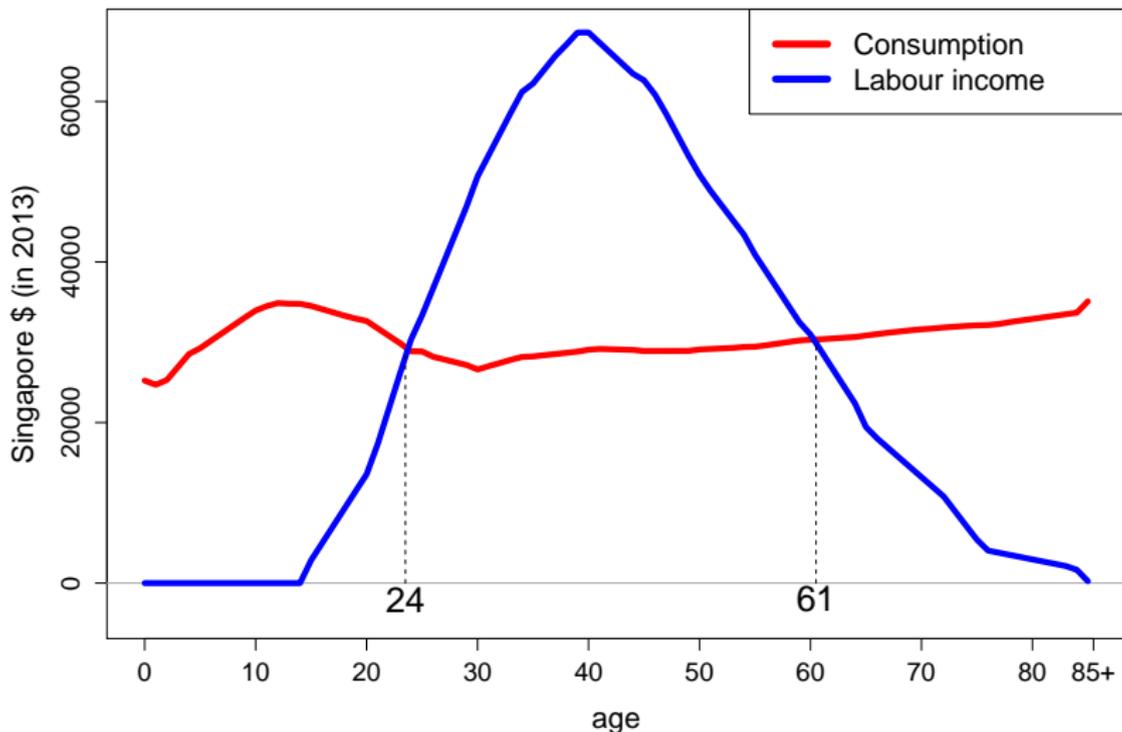

Singapore–born population distribution 1970–2010

Resident population age structure by place of birth
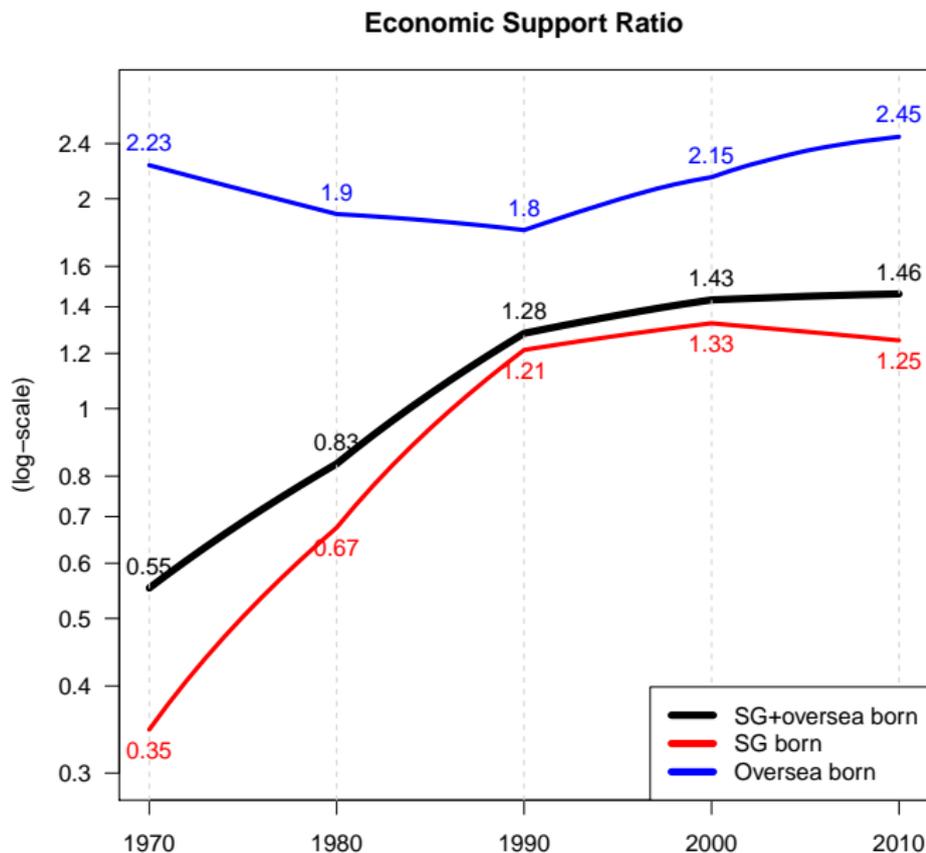

Foreign–born population distribution 1970–2010
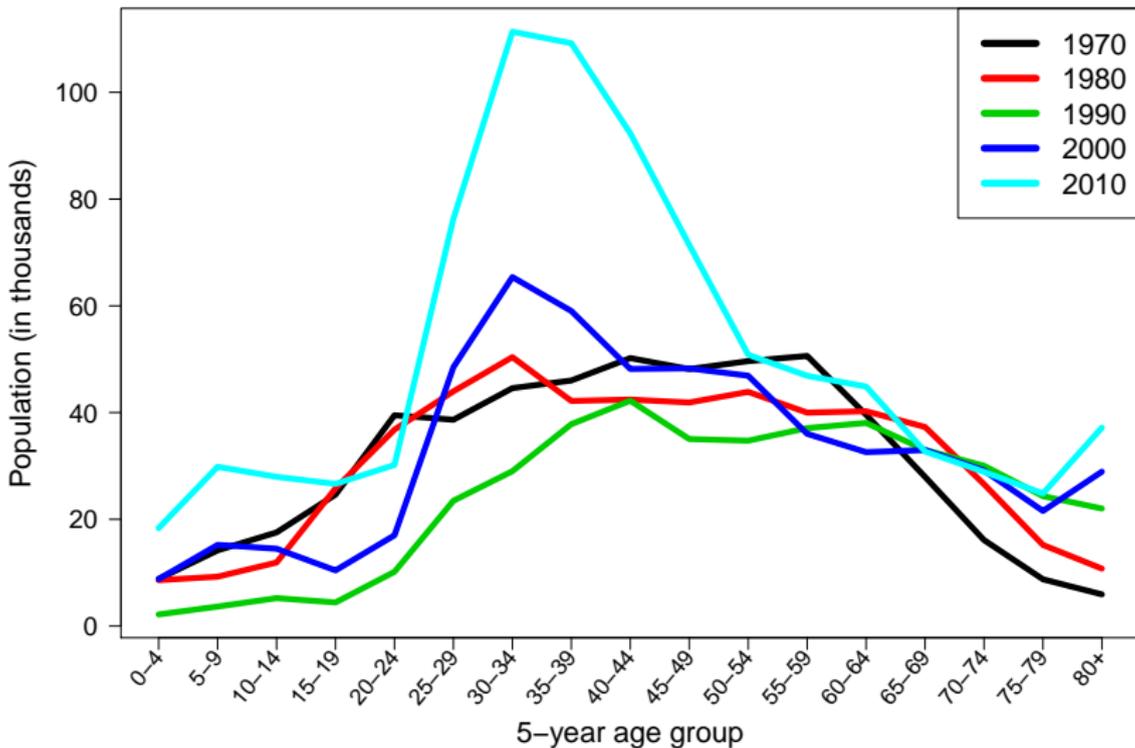
Singapore NTA profile in 2013
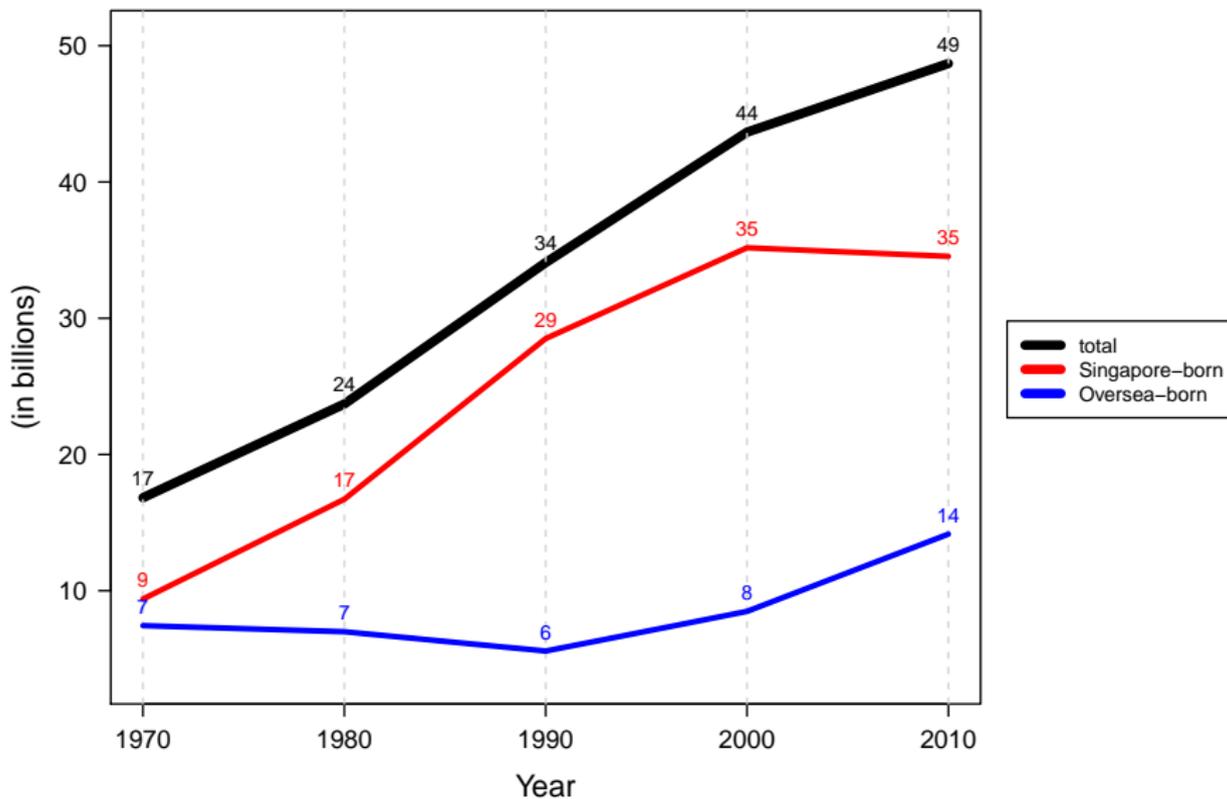

Average consumption and labor income (Singapore 2013)
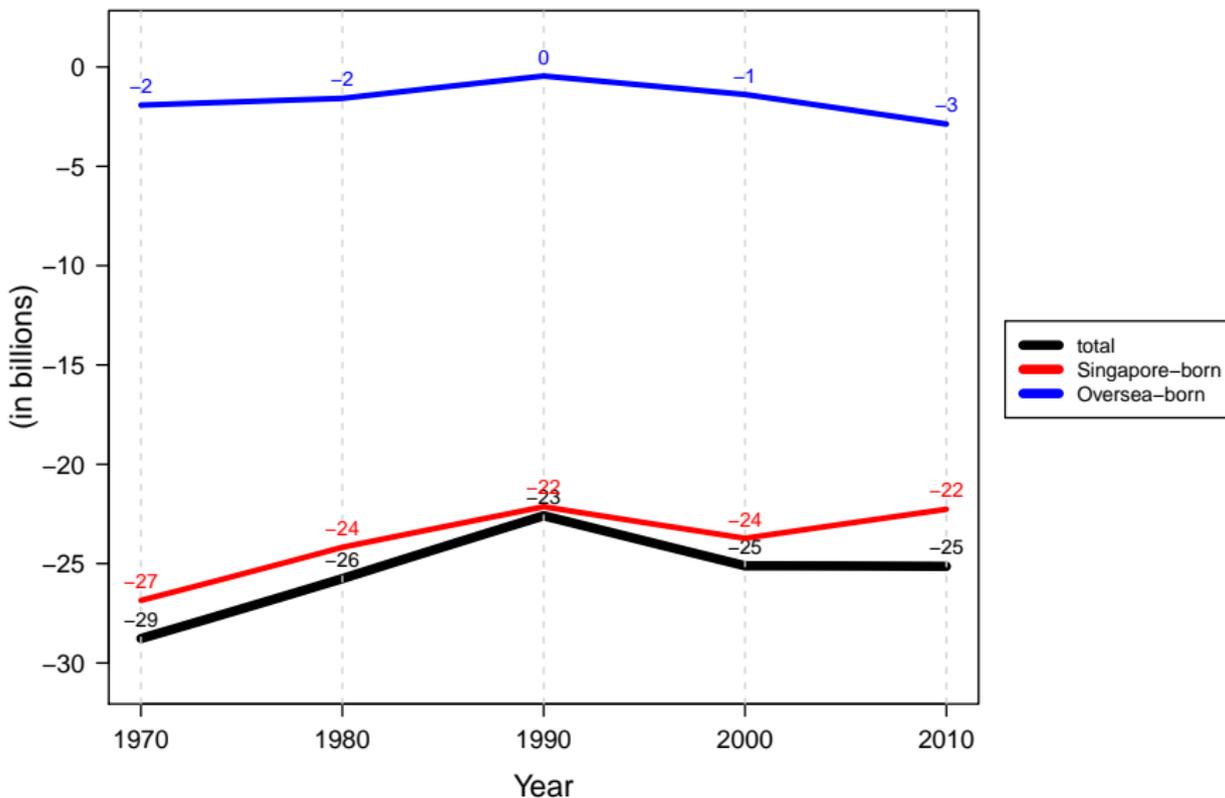
Economic support ratio by place of birth

Economic Support Ratio

Life cycle surplus and deficit
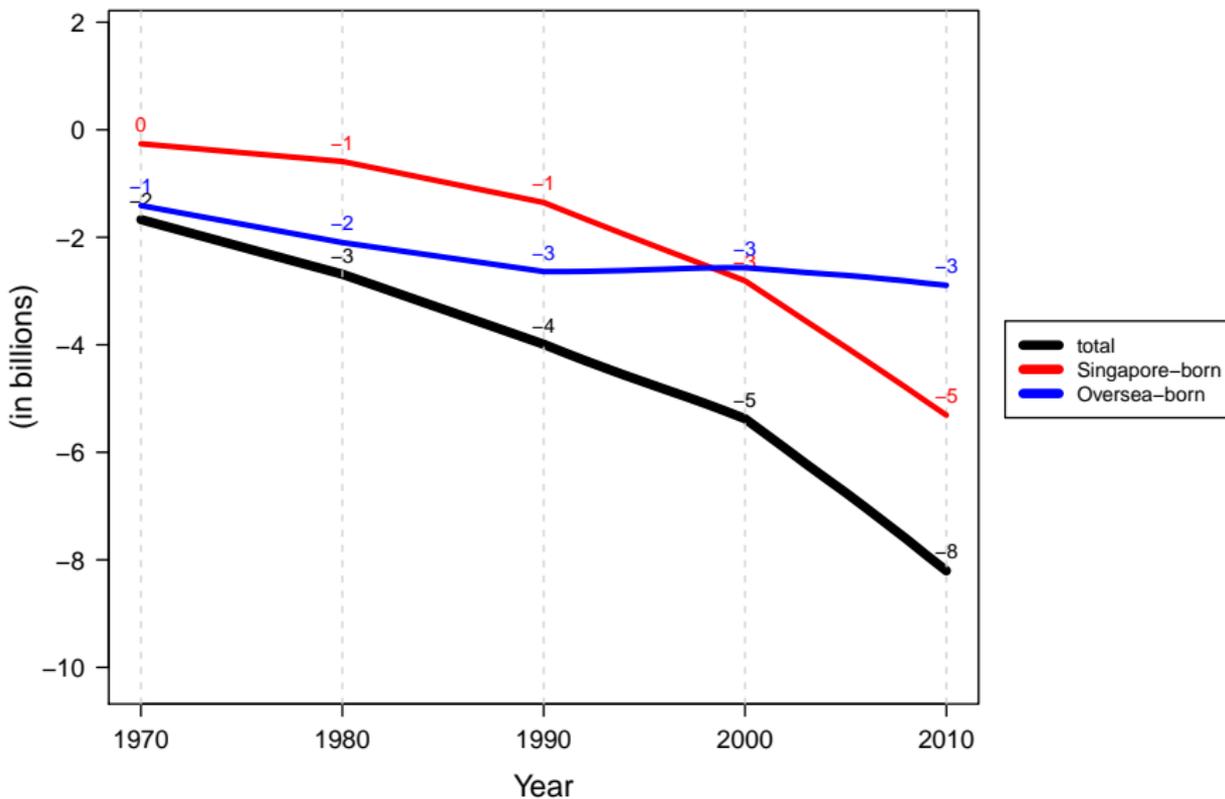

Productive Years (Life Cycle Surplus)

Life cycle surplus and deficit

Young Dependency Years (Life Cycle Deficit)

Life cycle surplus and deficit

Old Dependency Years (Life Cycle Deficit)

Discussion

Limitation

- Foreigners who are not permanent residents are not included in the study because data on this group are not publicly available

- It is likely that their contribution to per capita GDP growth is positive, as Singapore does not typically bear both the young and the old dependency burden of these non-PR foreigners

Conclusion

- Permanently resident foreigners (immigrants) have been more economically productive over the life cycle than the local-born Singaporeans as their source country typically supports their consumption when they are young
- Their economic contribution has slowed down the ageing process in Singapore and kept the economic support ratio increasing, especially after 2000
- However, there are limits to how much immigration can offset the reversal of the first demographic dividend due to population ageing
- An ever-increasing numbers of new migrants will be needed to offset the productivity loss from population ageing