

15<sup>th</sup> National Transfer Accounts Global Meeting

# The implications of rapid population ageing on fiscal sustainability in Singapore

March 2025



# OUTLINE

- 1 Motivation: Fiscal Impact and Impulse of Ageing**
- 2 Singapore's public transfer flows by age**
- 3 Effects of rapid population ageing on the fiscal balance**
- 4 Policy implications and imperatives**



# Policy research questions

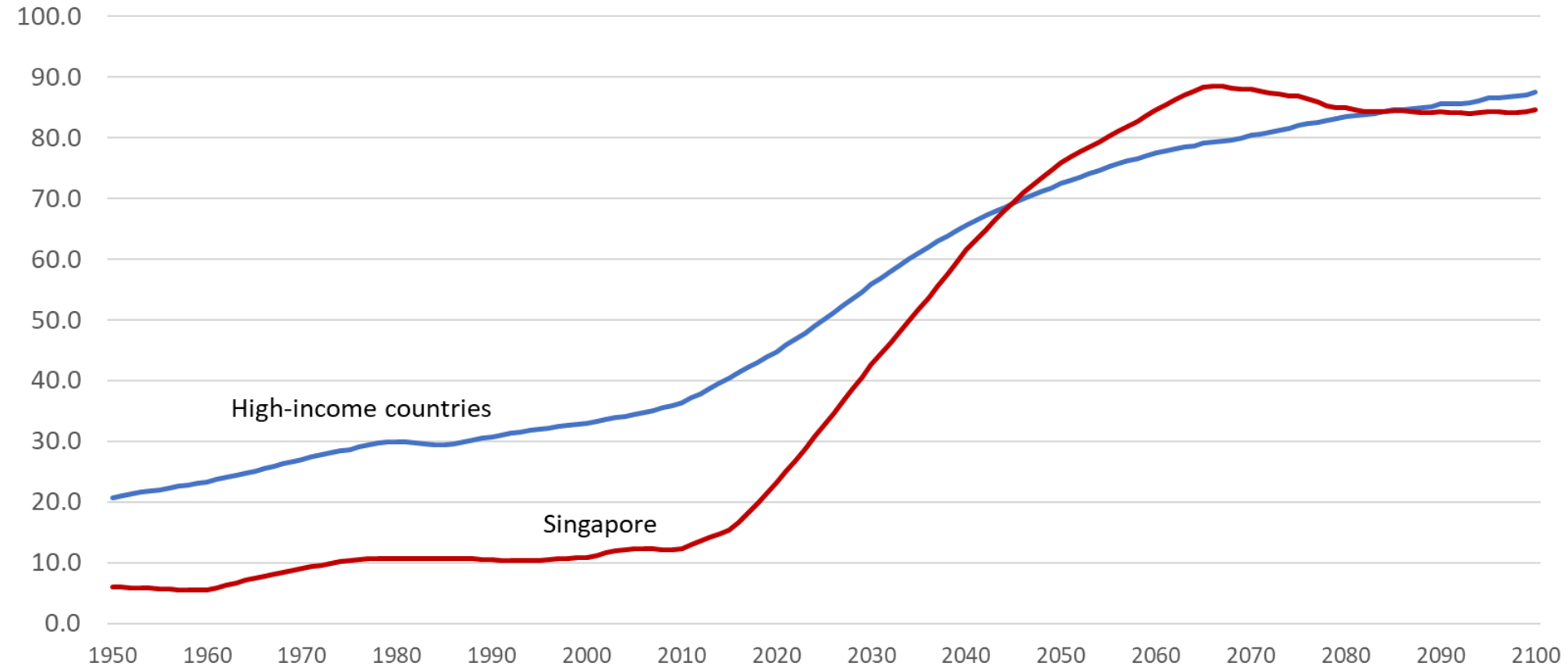
- What is the fiscal policy impact of Singapore's rapid population ageing?
- What are the policy levers that will mitigate the fiscal impact of population ageing?

# CONTEXT OF SINGAPORE

- Considering the fiscal sustainability of a rapidly ageing high-income society
  - Old-age gap ratio to rise sharply: old-age effective economic dependency as share of labour income increasing
  - Fiscal impulse from ageing: 2.1% points rise projected in effective tax rates from 2020 to 2030
- Ratio of effective tax payers to effective tax beneficiaries (the fiscal support ratio, FSR) projected to peak in 2029 and decline steadily thereafter
- Understanding the broad implications on public expenditure and revenues, and helping to uncover the policy levers to best mitigate the fiscal impulse of population ageing

# FISCAL IMPACT OF AGEING

## Old-Age Gap Ratio



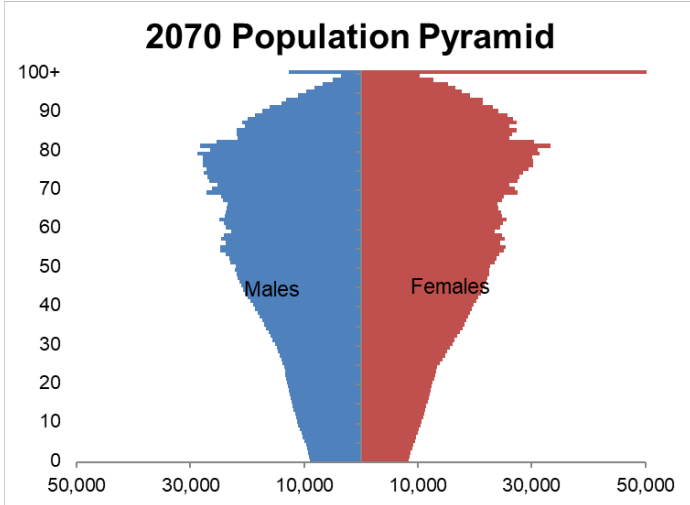
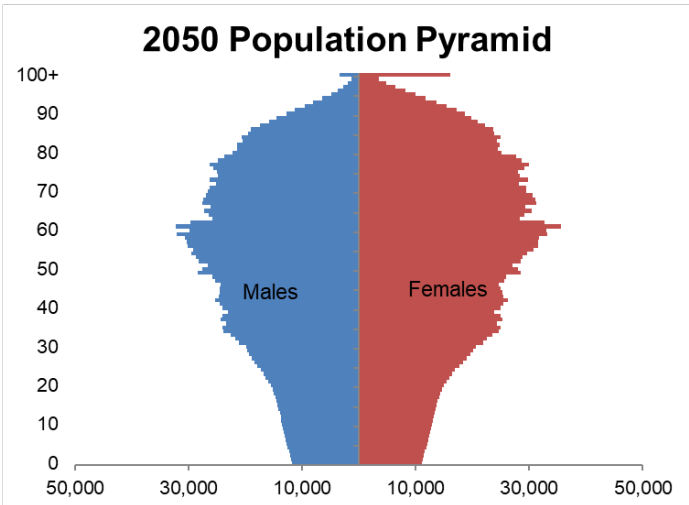
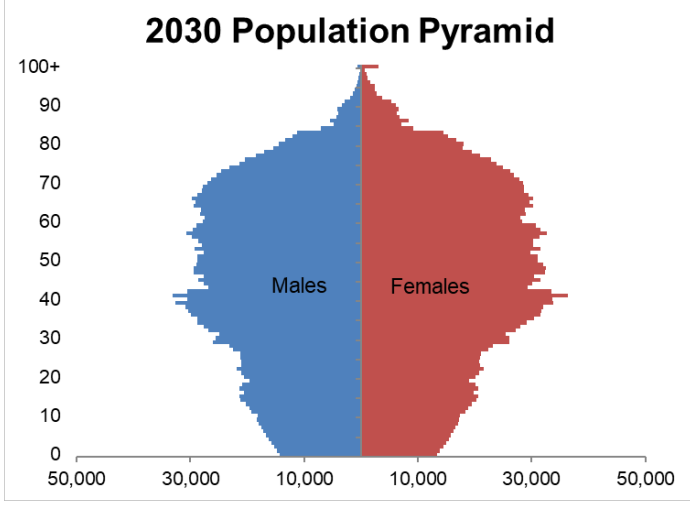
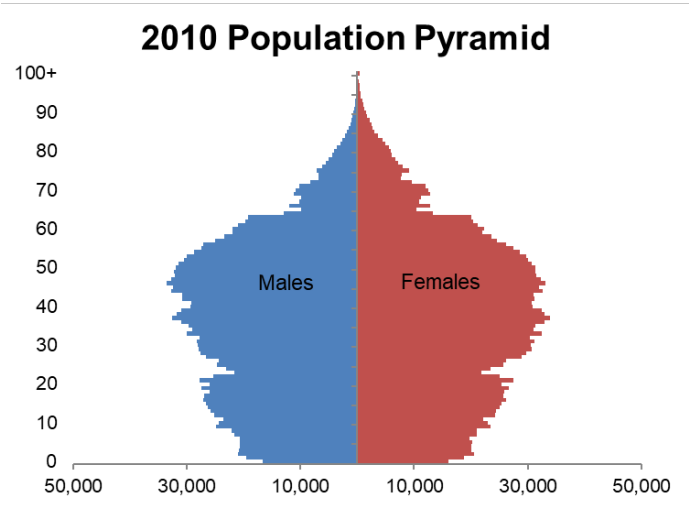
Source: Mason, A., Lee, R. and members of the NTA network (2022), Six Ways Population Change Will Affect the Global Economy. Population and Development Review, 48: 51-73. <https://doi.org/10.1111/padr.12469>

# Singapore's Fiscal Support Ratio set within rapid population ageing

## A Rapidly Ageing Population

- Singapore is ageing rapidly.
  - Low TFR – 2.1 in 1976
  - TFR at 1.12 in 2021, 0.97 in 2023
  - Singapore's life expectancy at birth had increased from about 64.5 in 1965 to 83.9 in 2020
  - Super-aged society (20% of population aged 65+) by 2026, and 25% by 2030.

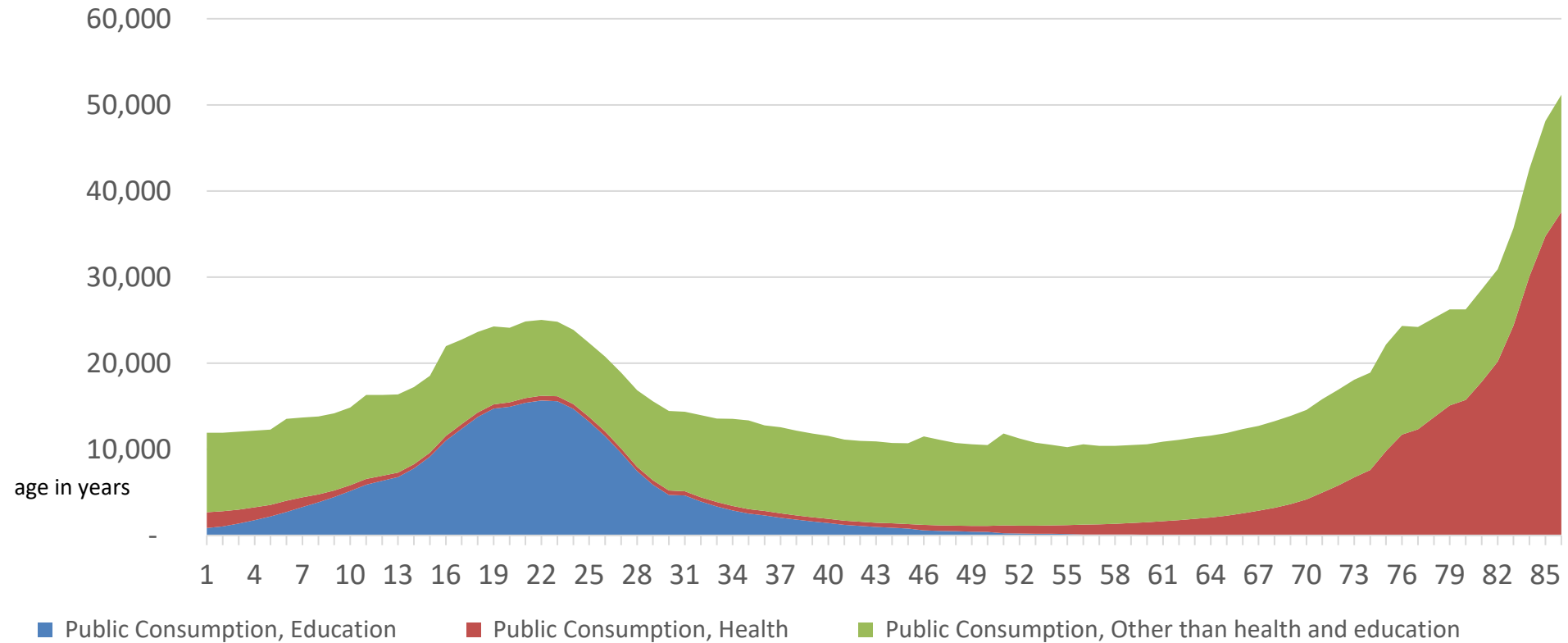
# Rapid population ageing in Singapore



Source: Author's estimates

# Public consumption per capita

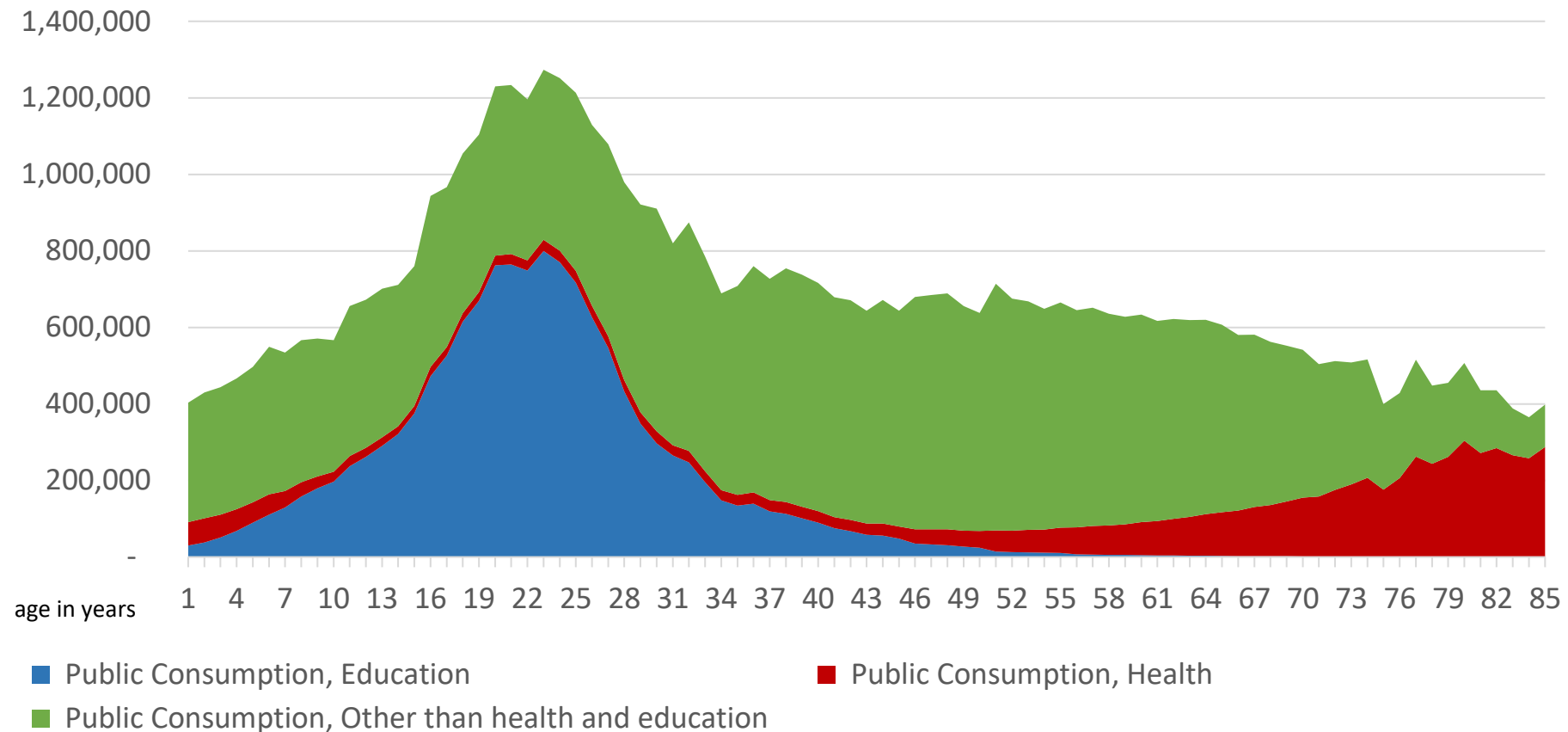
Public consumption age-profiles 2018: per capita values S\$ (Singapore resident population)





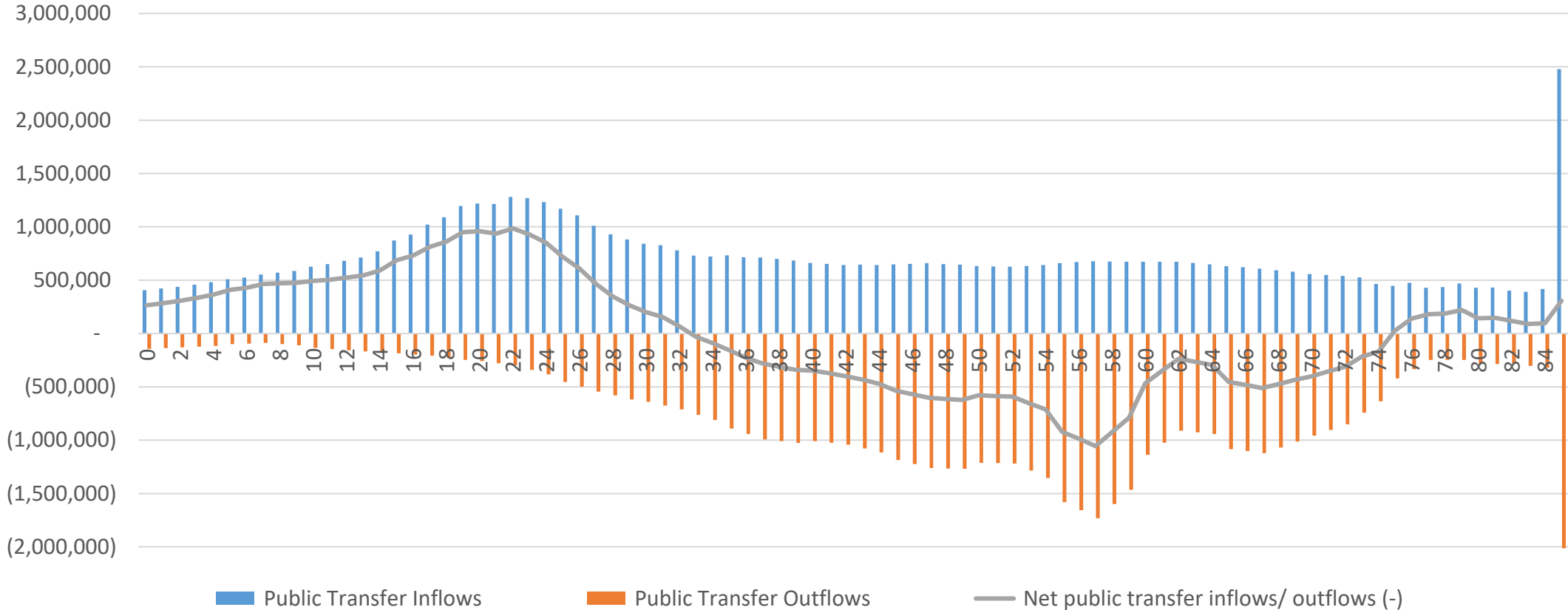
# Public consumption: aggregate age profiles

Public consumption age-profiles 2018: aggregate values S\$000s: Singapore resident population



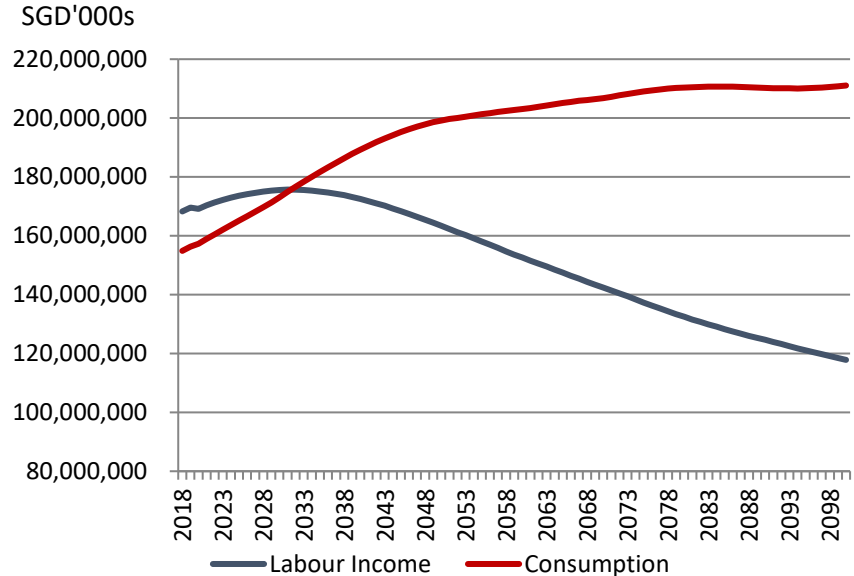
# Public transfer flows by age

Aggregate public transfer inflows (subsidies, grants, rebates) and outflows (taxes paid), \$'000s:  
Singapore resident population

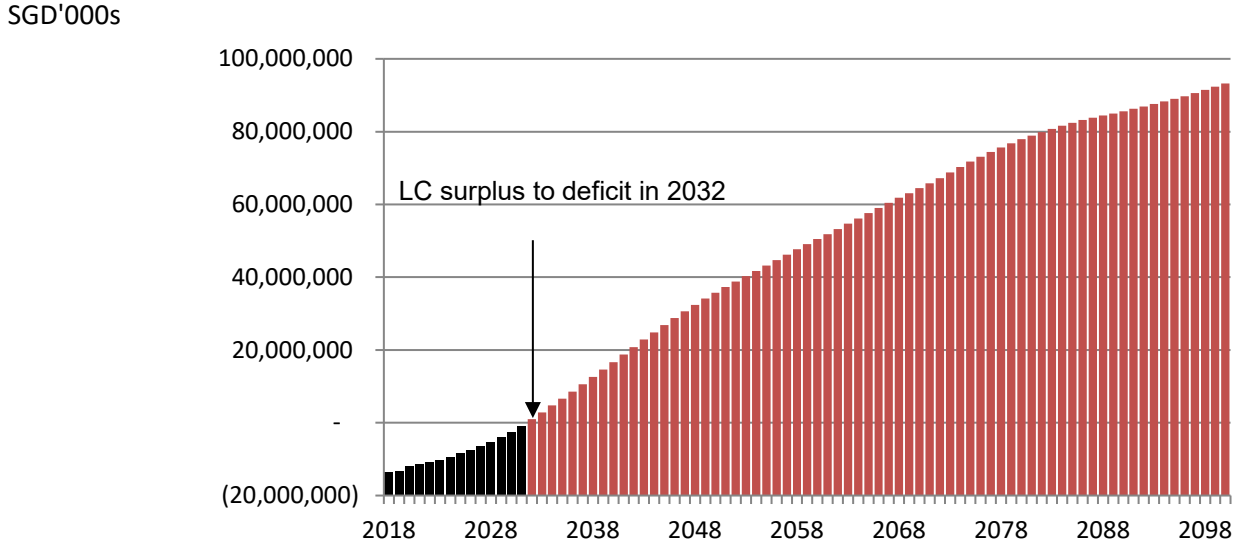


# Projections of the economic life-cycle

**Projected labour income and consumption 2018-2100: Singapore residents, \$'000s**

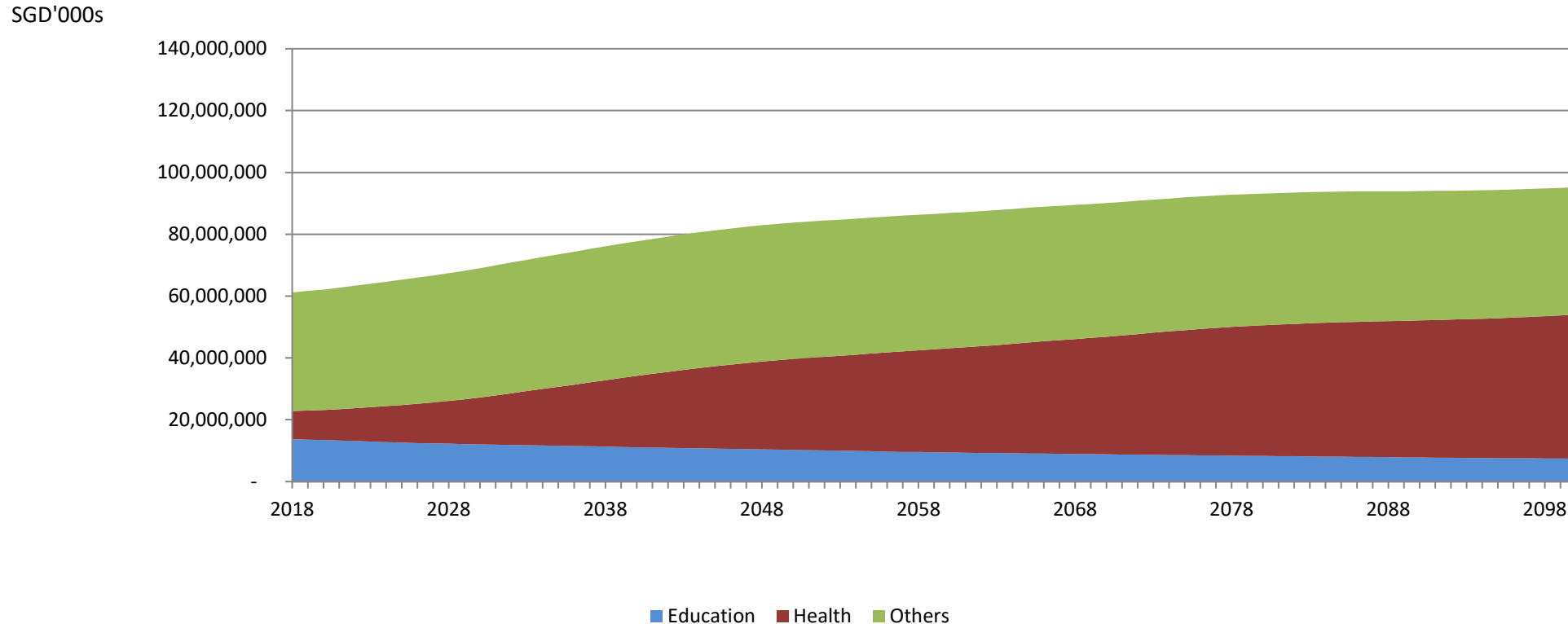


**Projected life-cycle deficits / surpluses (-) 2018-2100: Singapore residents, \$'000s**



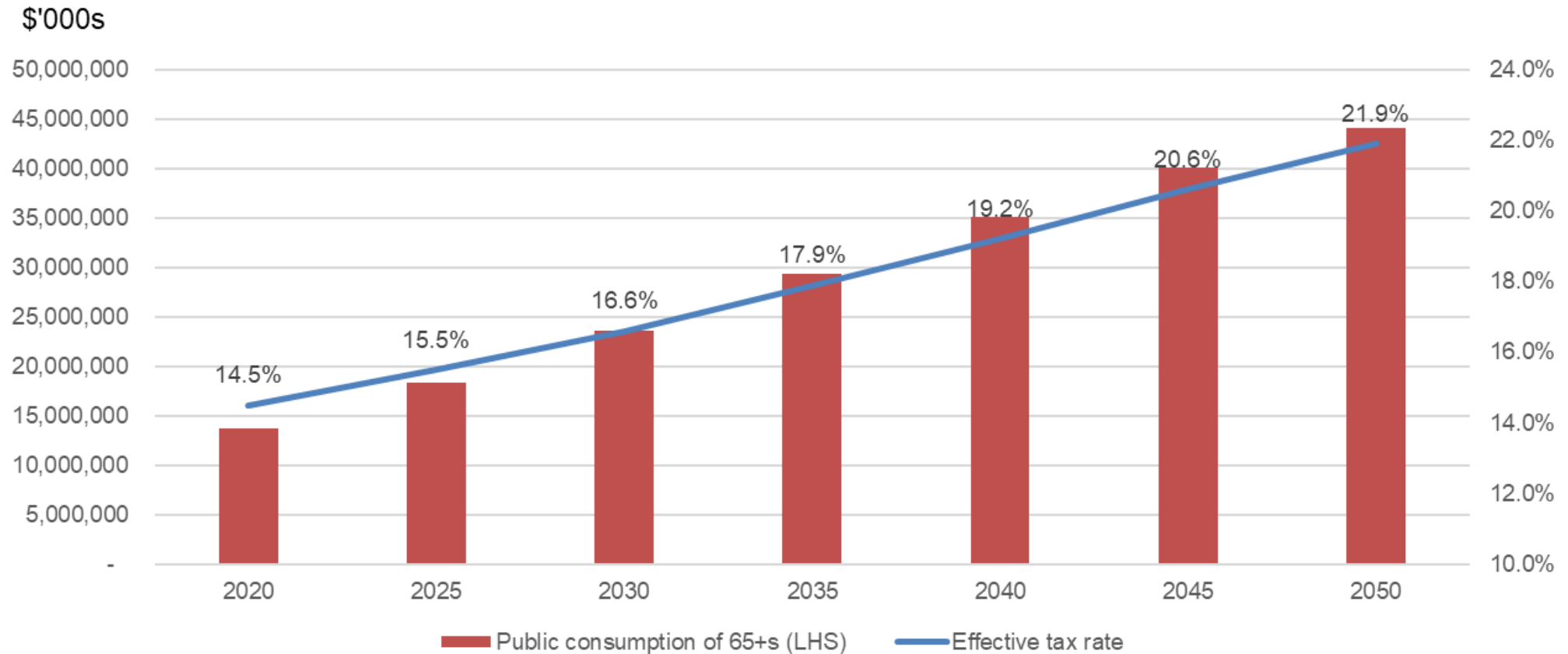
# Projections of the economic life-cycle

Projected public consumption 2018-2100: Singapore residents, \$'000s



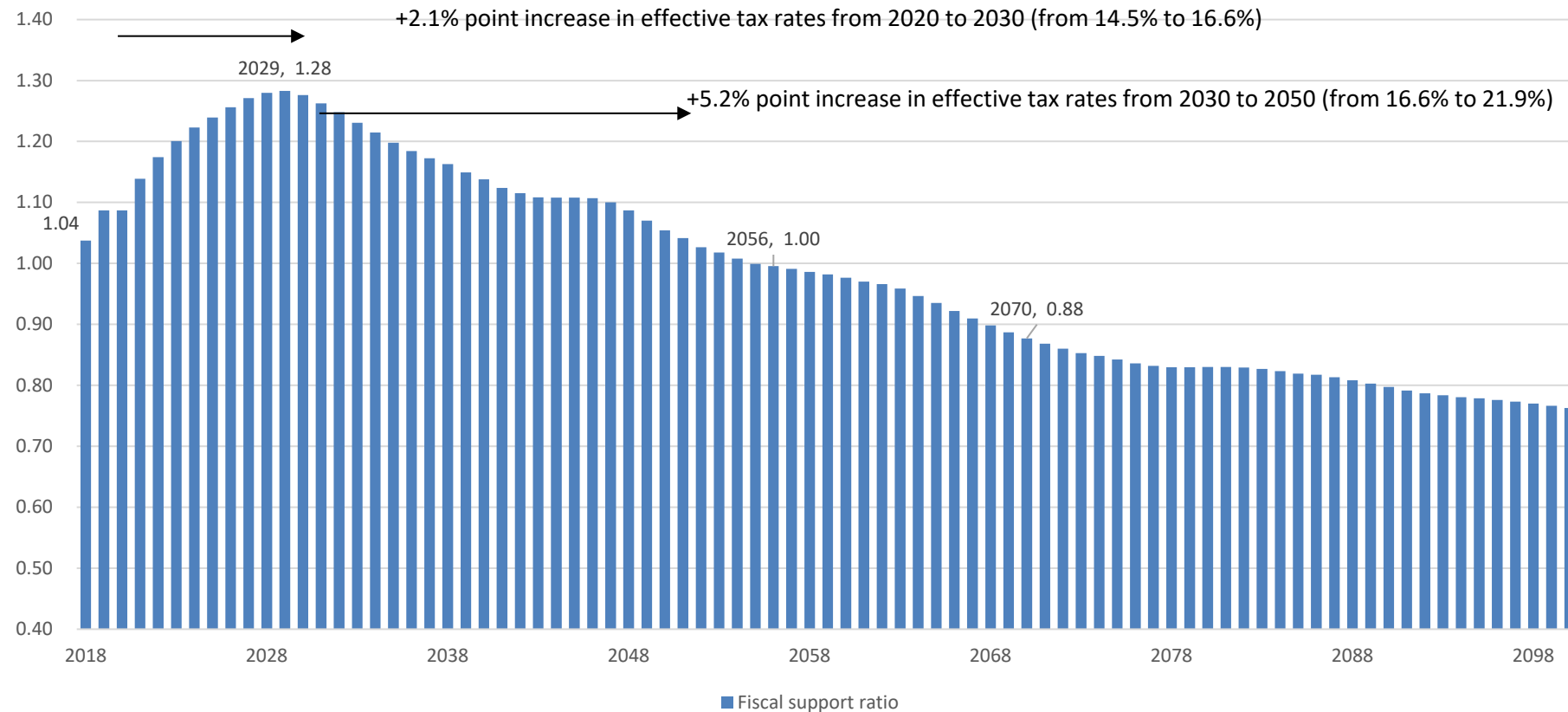
# FISCAL IMPULSE OF AGEING: SINGAPORE

Projected public expenditure on 65+s and effective tax rates 2020-2050



# Projections of the FSR

## Projections of the Fiscal Support Ratio 2018-2100

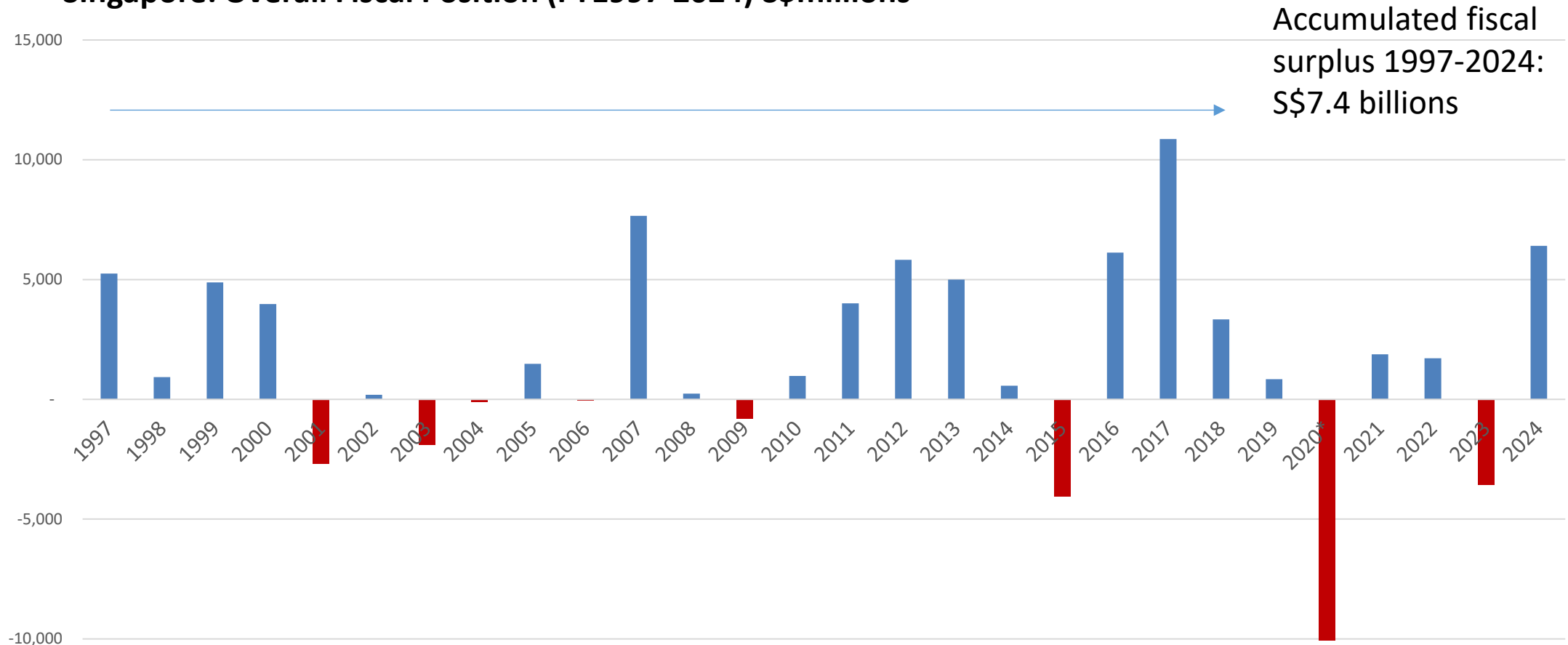


# Policy implications and imperatives

- Accumulate savings whilst demographic dividends (first or second) are being generated
- Change the profile of lifecycle consumption, especially as it relates to human capital investments
- Extend the frontier of older-age labour income (or product)

# Accumulating public savings

Singapore: Overall Fiscal Position (FY1997-2024) S\$millions



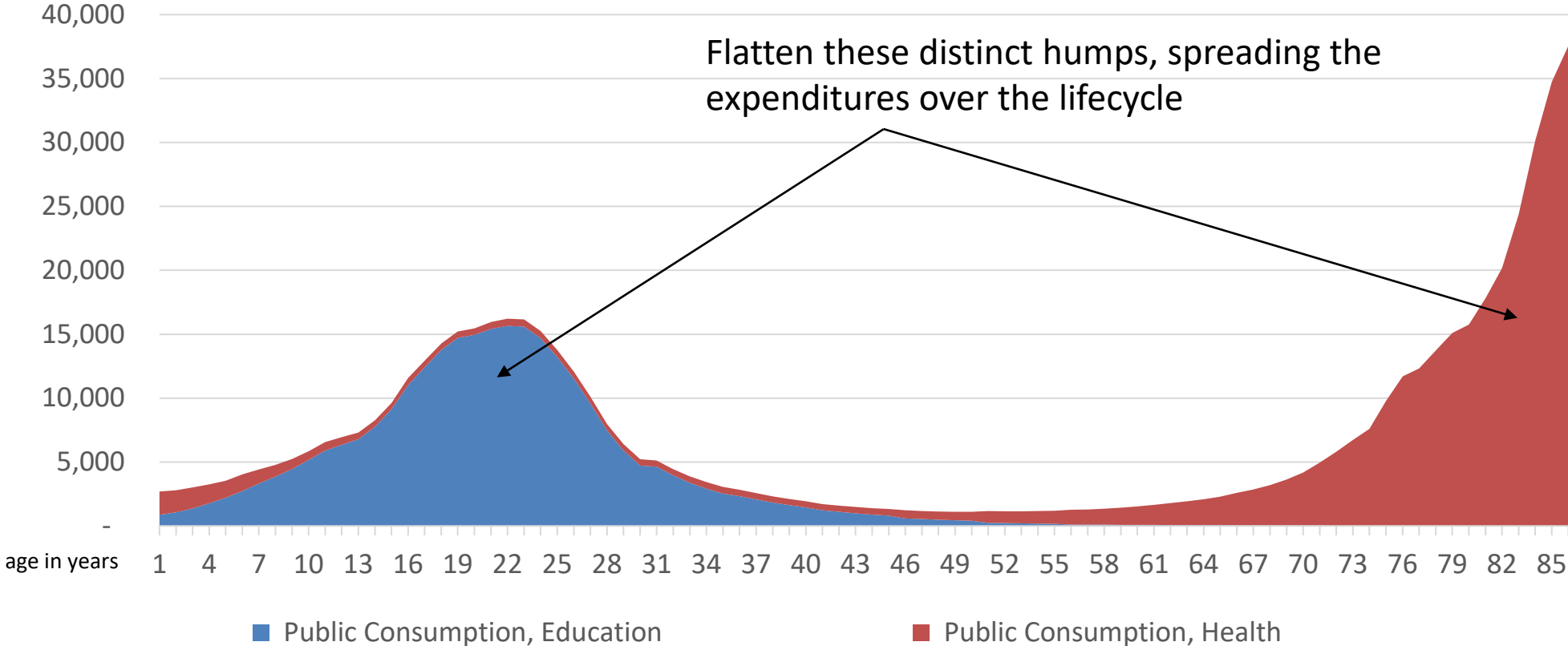
Source: [https://data.gov.sg/datasets/d\\_00f95040967791729d51bd7cd6af2355/view](https://data.gov.sg/datasets/d_00f95040967791729d51bd7cd6af2355/view)



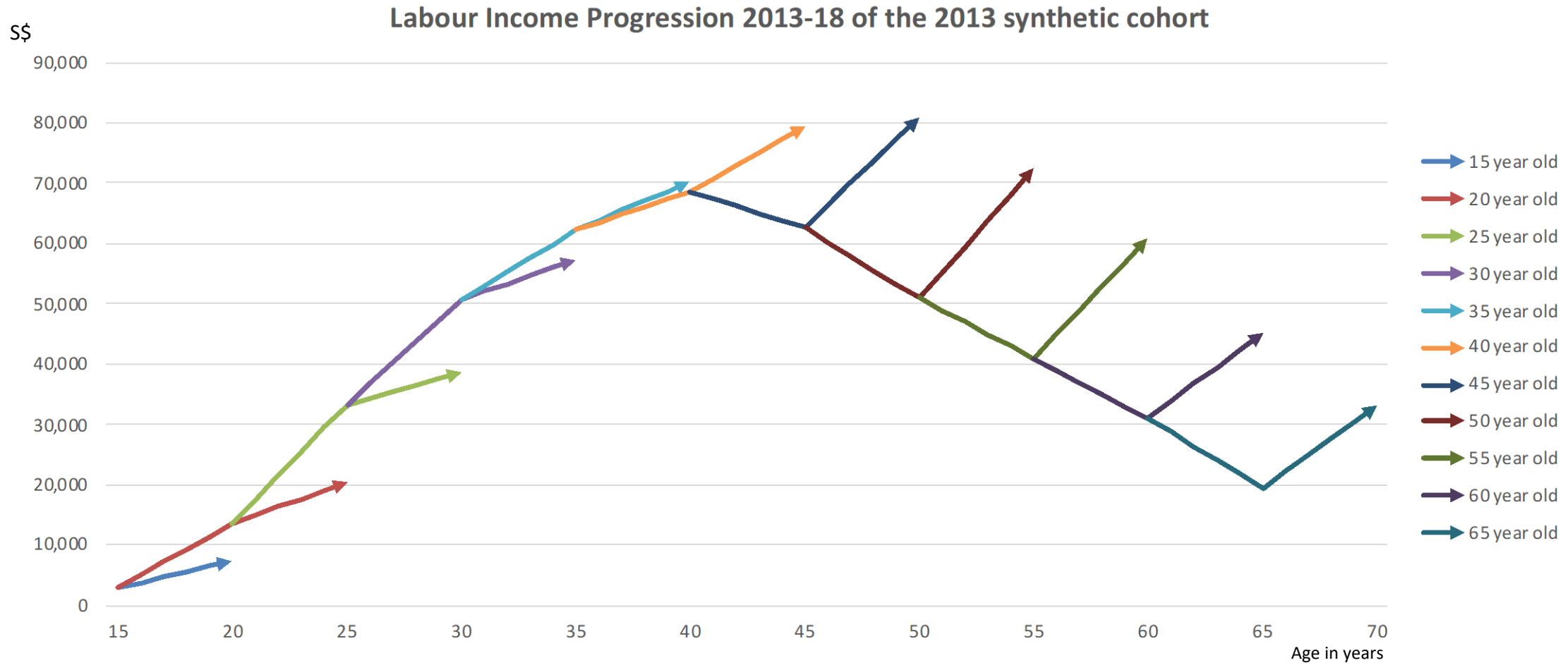


# Change the shape of lifecycle “consumption”

Public consumption age-profiles 2018: per capita values S\$ (Singapore resident population)



# Changing lifetime labour income profiles



# Policy Imperatives Of Population Ageing

## FROM EFFECTIVE OLD-AGE CONSUMERS TO EFFECTIVE PRODUCERS

### Consumption

- Education
  - Lifelong learning
- Health
  - Health promotion, early interventions

Making investments in social infrastructure to yield returns in the long-term

### Labour income

- Senior employment policies
  - Re-skilling and re-training
  - Job redesign, flexibility
  - Anti-age discrimination legislation and older-age employment policies

# REFERENCES

Lee, SH., Kim, J. & Park, D. Demographic Change and Fiscal Sustainability in Asia. Soc Indic Res 134, 287–322 (2017). <https://doi.org/10.1007/s11205-016-1424-0>

Mason, A. (2007). Demographic Dividends: The Past, the Present and the Future. Contributions to Economic Analysis, 281, 75-98. [https://doi.org/10.1016/S0573-8555\(07\)81004-2](https://doi.org/10.1016/S0573-8555(07)81004-2)

Mason, A., Lee, R. and members of the NTA network (2022), Six Ways Population Change Will Affect the Global Economy. Population and Development Review, 48: 51-73. <https://doi.org/10.1111/padr.12469>

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