Sustainability and Equity in the Australian Generational Economy

JAMES MAHMUD RICE, JEROMEY B TEMPLE, PETER F MCDONALD
DEMOGRAPHY AND AGEING UNIT, MELBOURNE SCHOOL OF POPULATION AND GLOBAL HEALTH
UNIVERSITY OF MELBOURNE
Introduction

Explore indicators of
- Consumption
- Fiscal sustainability
- Intergenerational inequality

In Australia

For the time period between 2010 and 2066

Across 72 demographic and economic scenarios
- 24 demographic scenarios
- 3 economic scenarios
Consumption

Indicator

◦ Mean per capita consumption across all ages between 2010 and 2066
Fiscal sustainability

Indicator of fiscal unsustainability

- Similar to the “consumption deficit” as described by Gal and Monostori
- Consumption deficit = (PVC – PVL) / PVL
  - PVC = Present value of aggregate consumption between 2010 and 2066
  - PVL = Present value of aggregate labour income between 2010 and 2066
  - Discount rate = 5 per cent per annum
- Indicates the extent of future consumption unfunded by labour income
Intergenerational inequality

Indicator
- IGI index for consumption for the time period between 2010 and 2066

Essentially
- Gini coefficient for age-adjusted inequalities in consumption across birth cohorts

Why care about intergenerational inequality?

For more information on the IGI index
Per capita income by birth cohort, Australia, 1981-82 to 2009-10
Age-adjusted income by birth cohort, Australia, 1981-82 to 2009-10 (1915 = 1)
24 demographic scenarios

Total fertility rate
  ◦ High, medium, low

Life expectancy at birth
  ◦ High, medium

Net overseas migration
  ◦ High, medium, low, zero
3 economic scenarios

Equal growth
- Consumption and labour income grow at 1.5 per cent per annum

Component-specific growth
- Individual components of consumption and labour income grow at the rates at which they grew between 1981-82 and 2009-10
- Between 1981-82 and 2009-10, generally
  - Components of consumption grew by more than 1.5 per cent per annum
  - Components of labour income grew by less than 1.5 per cent per annum

Zero growth
Data sources

Australian National Transfer Accounts, 1981-82 to 2009-10
Australian Bureau of Statistics population projections, 2017 to 2066
Total fertility rate

- Mean consumption (divided by 100,000): Low fertility 0.66, Medium fertility 0.66, High fertility 0.66
- Consumption deficit: Low fertility 0.40, Medium fertility 0.41, High fertility 0.42
- IGI index: Low fertility 0.32, Medium fertility 0.32, High fertility 0.32

Legend:
- Low fertility
- Medium fertility
- High fertility
Life expectancy at birth

<table>
<thead>
<tr>
<th></th>
<th>Medium life expectancy</th>
<th>High life expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean consumption</td>
<td>0.66</td>
<td>0.66</td>
</tr>
<tr>
<td>(divided by 100 000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption deficit</td>
<td>0.40</td>
<td>0.42</td>
</tr>
<tr>
<td>IGI index</td>
<td>0.32</td>
<td>0.32</td>
</tr>
</tbody>
</table>

Mean consumption (divided by 100 000): 0.66, 0.66
Consumption deficit: 0.40, 0.42
IGI index: 0.32, 0.32
Net overseas migration

Mean consumption (divided by 100,000)

- Zero NOM: 0.65
- Low NOM: 0.66
- Medium NOM: 0.66
- High NOM: 0.67

Consumption deficit

- Zero NOM: 0.43
- Low NOM: 0.41
- Medium NOM: 0.40
- High NOM: 0.40

IGI index

- Zero NOM: 0.32
- Low NOM: 0.32
- Medium NOM: 0.32
- High NOM: 0.32
Growth

Mean consumption (divided by 100,000)

- Zero growth: 0.40
- Equal 1.5 per cent growth: 0.65
- Component-specific growth: 0.93

Consumption deficit

- Zero growth: 0.30
- Equal 1.5 per cent growth: 0.31
- Component-specific growth: 0.61

IGI index

- Zero growth: 0.00
- Equal 1.5 per cent growth: 0.36
- Component-specific growth: 0.59
Conclusion

Other indicators of consumption, fiscal sustainability, or intergenerational inequality?

Additional economic scenarios
- Additional growth rates
- Additional policy-specific scenarios, for example
  - Later retirement
  - Higher female labour force participation

Extending population projections beyond 2066