



Australian Government
The Treasury



Analysis of Australia's permanent migration program using Treasury's lifecycle general equilibrium model

Australian Conference of Economists

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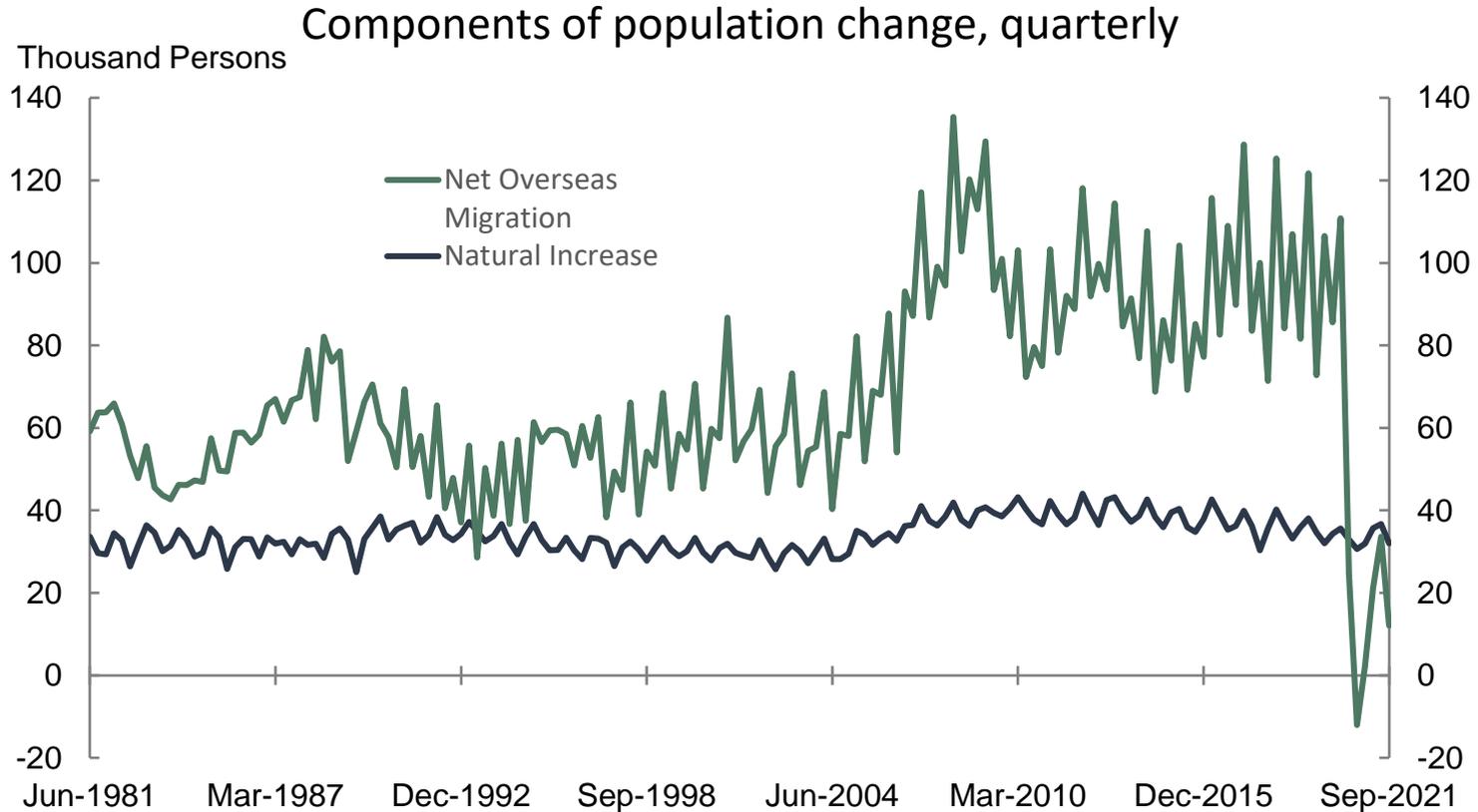
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Overview

1. Motivation
2. Methodology
3. Results

Motivation

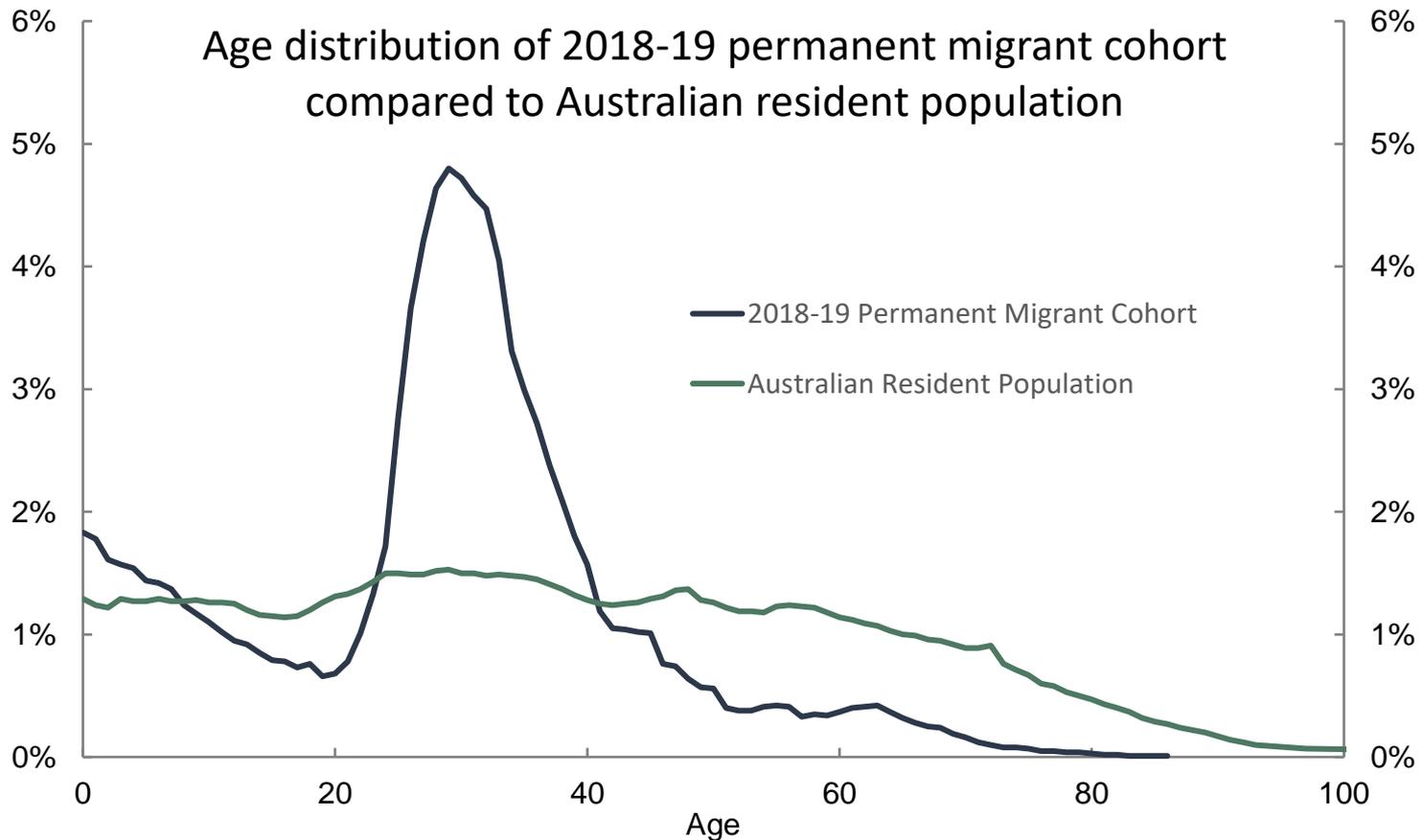
Migration has driven recent population and employment growth



ABS 3101.0 National, state and territory population

Motivation

Migrants' age and skill profiles differ from existing residents



Policy

- Australia's permanent migration program is carefully designed to achieve a range of economic and social outcomes that meet Australia's needs
 - Planning level currently 160,000, set in Federal Budget
- Permanent migration program comprises two broad streams:
 - Skilled
 - Family/partner
 - (Humanitarian)

Research Question

- What are the relative economic effects of permanent migrants in different visa classes?
 - Labour supply and productivity
 - Firm investment
 - Government revenue and expenditure

$$Y = F(\lambda N, K)$$

Y is real GDP, λ is labour augmenting technical progress, N is aggregate labour supply, K is the capital stock.

Treasury's Overlapping Generations Model of the Australian Economy

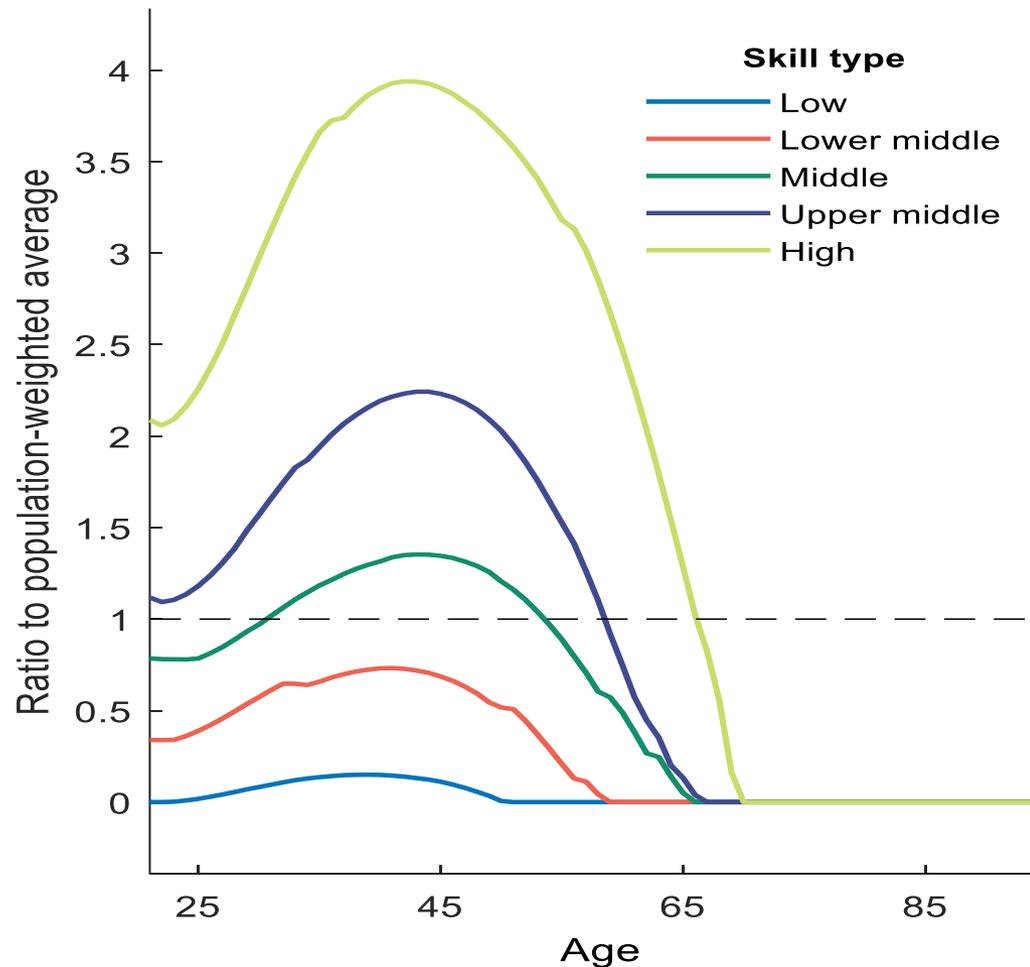
- Workhorse counterfactual fiscal policy analysis model
 - Dynamic general equilibrium
 - Rational and forward looking agents
 - Finitely-lived households
 - Household heterogeneity by age and skill
 - Government with long-term budget constraint
 - Small open economy
- Calibrated to match Australian demographic, economic, government and financial data in 2015-16

Model Structure

- 75 overlapping generations of households, aged 21-95
- Seven production sectors
- Detailed treatment of major taxes and government transfers
 - Binding government budget constraint
- Traded goods market and fund markets

Scenario design

Migrants enter economy on age-dependent productivity profiles

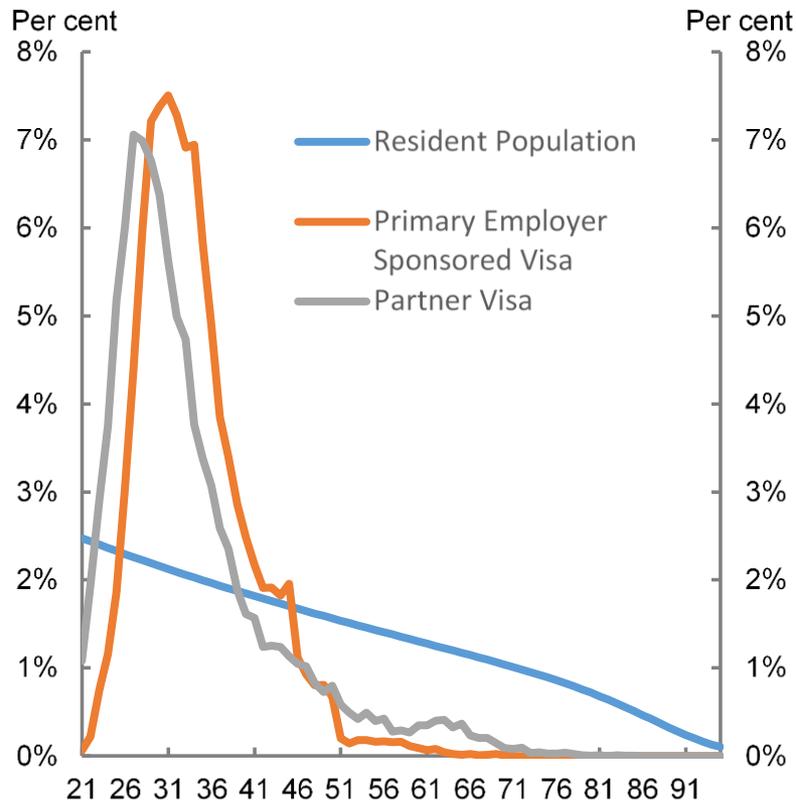


Scenario calibration

- Administrative data on 2018-19 permanent migration cohort:
 - Age distribution on arrival, from visa data
 - Skill distribution, calculated from income tax data
- All other characteristics of migrants same as Australian resident of the same age and skill level.
- Transitional dynamics

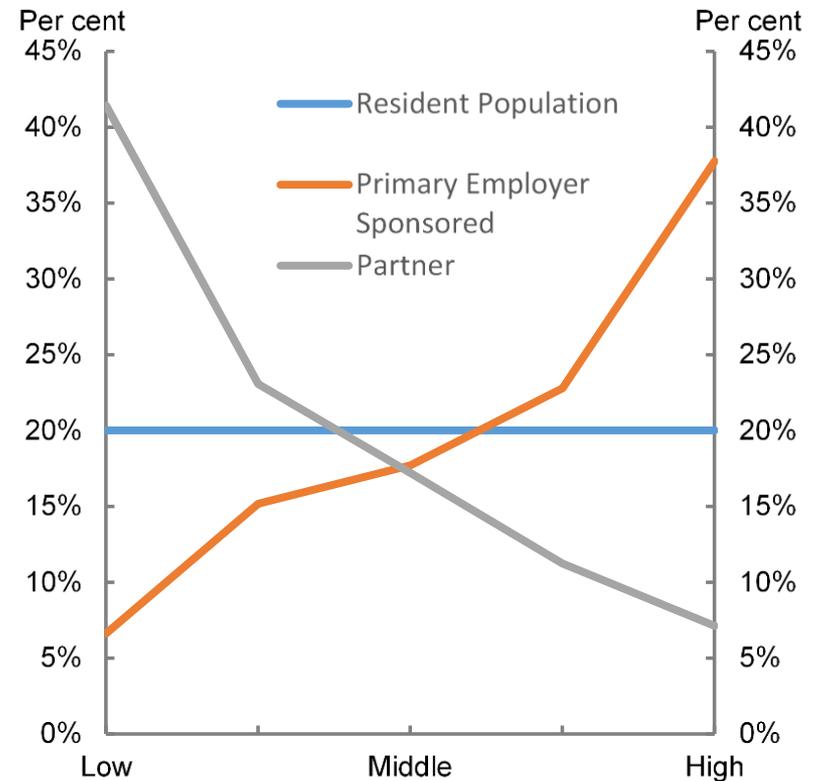
Calibration – illustration

Age distribution, selected visa classes



The model only includes those aged 21 – 95.

Skill distribution, selected visa classes



Skill levels are relative to existing residents' income quintiles, hence the resident distribution is even.

Lifetime economic activity effect

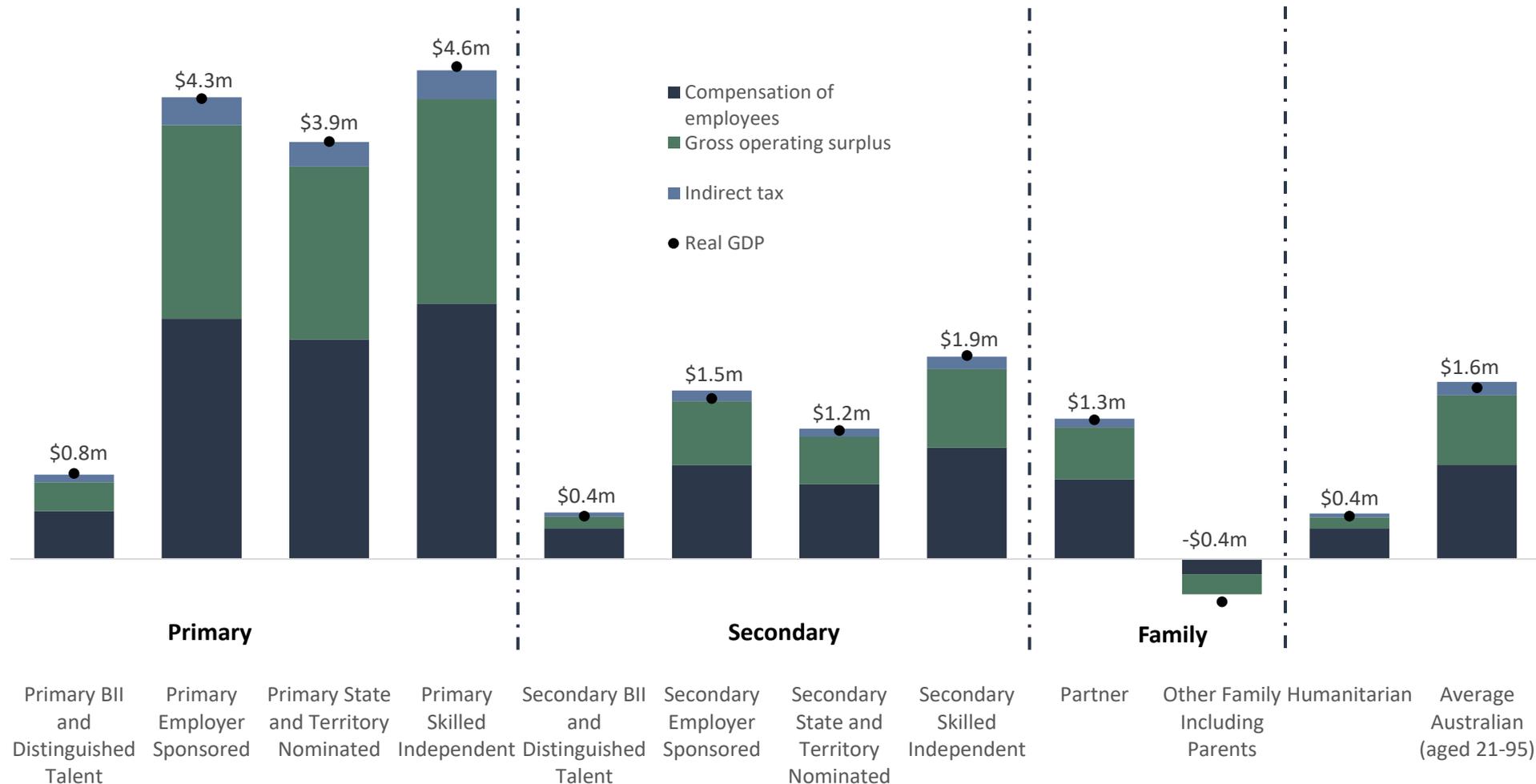
- We calculate a lifetime economic activity effect as the discounted present value of the stream of additional real GDP that flows directly and indirectly from their economic activities

Main findings

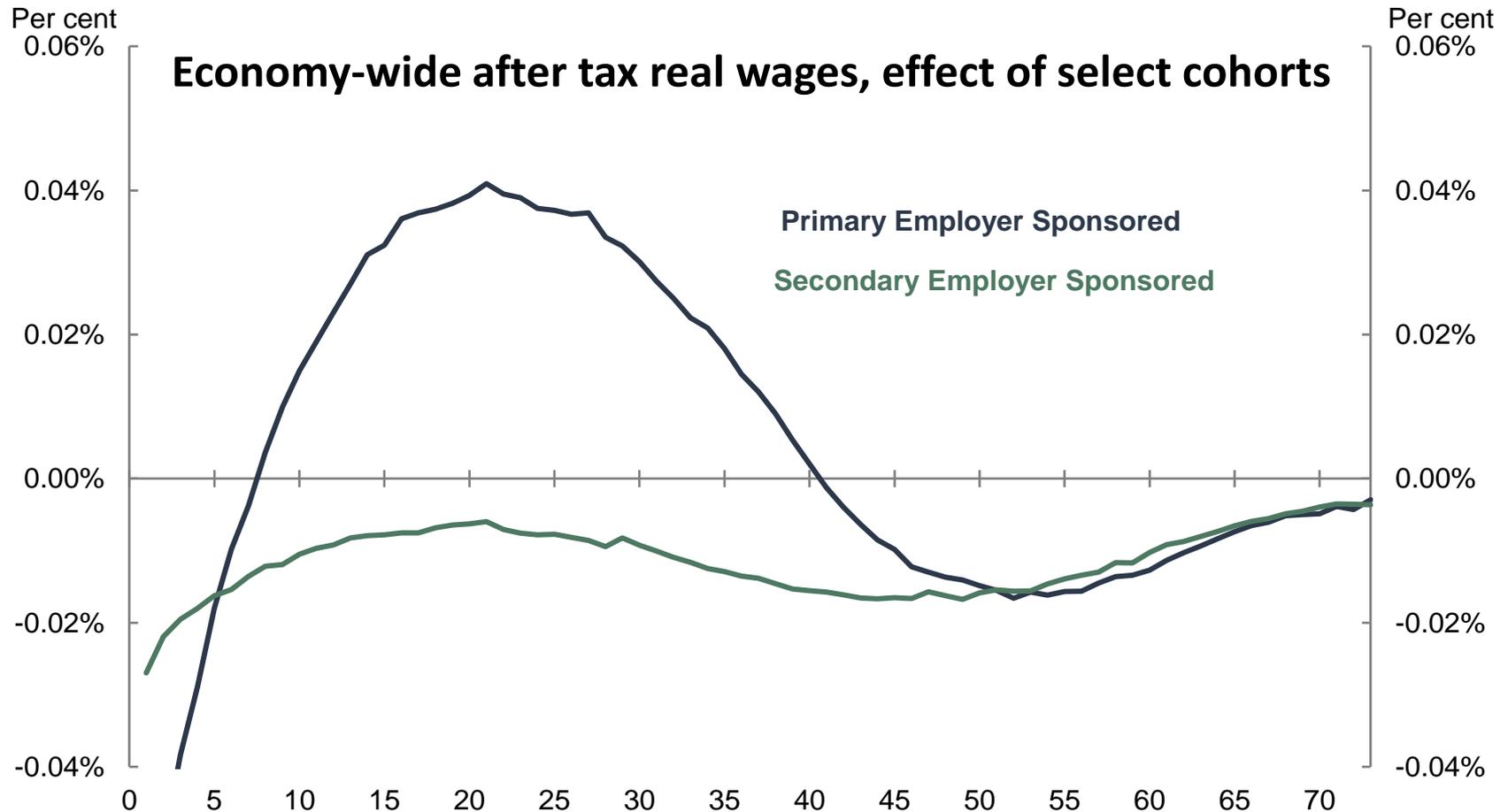
- Younger and more highly skilled migrants have a larger economic activity effect
- Almost half of the contribution reflects additional investment by Australian firms, which increases capital income.
- “Average” permanent migrant similar to average Australian, but significant heterogeneity among visa classes
- In total, the 2018-19 migrant cohort is estimated to add over \$300 billion to real GDP over their lifetime (2018-19 \$)

Detailed findings

Lifetime contributions to GDP (direct and indirect) per permanent migrant, by visa class, net present value (\$2018-19)



No aggregate real wages effect, but heterogeneity among visa classes



What the analysis doesn't consider

- Migrant concentration in certain professions or industries
- Spare capacity in labour or goods markets
- Contribution of next generation born to migrants
- Productivity effects beyond changes to age and skill distributions (e.g. knowledge “spillovers”)
- Societal, cultural and environmental effects of migration
- Visa processing fees

Conclusion

- Migration policy has a profound impact on Australia's society and economy and aims to achieve a range of outcomes
- Among permanent migrants, younger and more highly skilled migrants provide the biggest boost to economic activity
- Our contribution quantifies the general equilibrium economic activity effects of the permanent migration program and reveals the heterogeneous effects across visa classes