

Earnings, Skills and Structural Change

Michael Coelli¹

¹Department of Economics, University of Melbourne

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Employment White Paper

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Overview

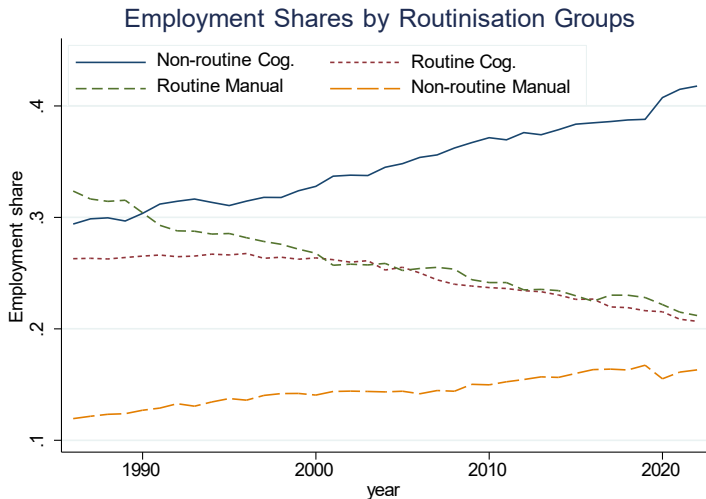
Jobs and Skills Summit “outcomes” for higher education were limited:

- 1 Up to 20,000 additional places for under-represented groups in areas of skill shortage (already announced, over 2023/24).
- 2 Job-Ready Graduates review relegated to the Universities Accord (recently announced).

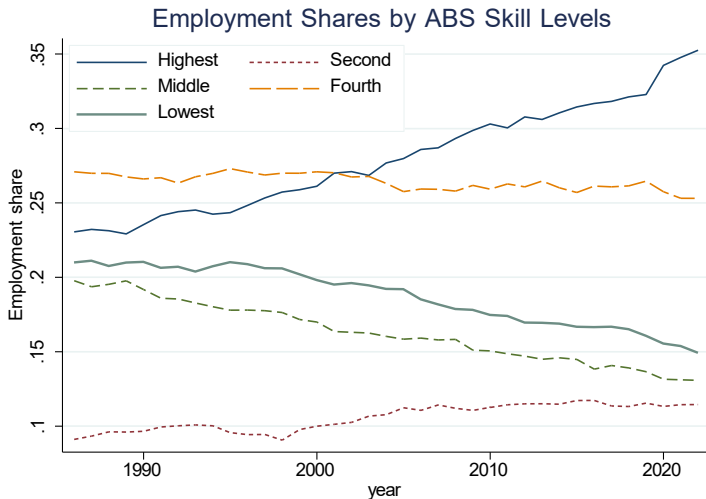
I will touch briefly on the following:

- 1 What has been happening to the demand for labour by:
(1) occupations by main tasks, (2) skill level, and (3) earnings level.
- 2 Education expansion, returns to educ. and skill-biased tech. change.
- 3 Job-Ready Graduates.

Employment by Task Group

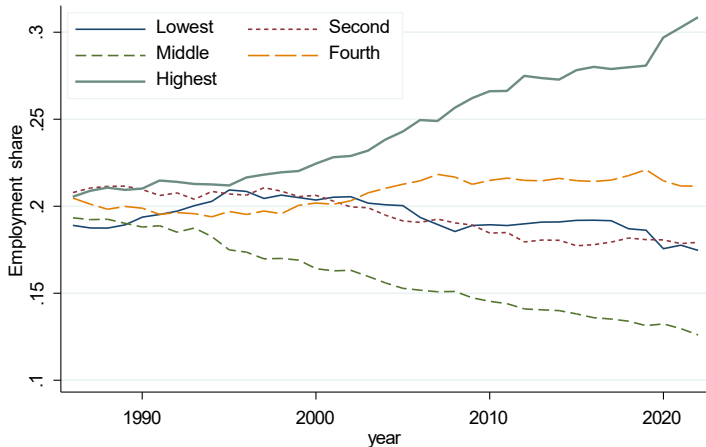


Employment by ABS Skill Level



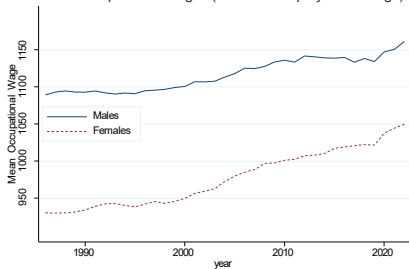
Employment by Earnings Quantile

Employment Shares by Occupation Earnings Quantiles
(2006 FT Employee Earnings)

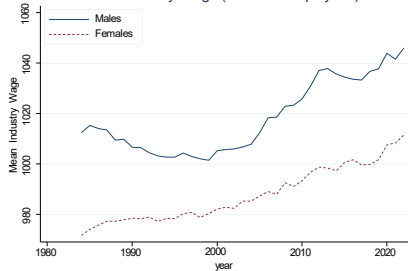


Mean Earnings – based on Occupation and Industry

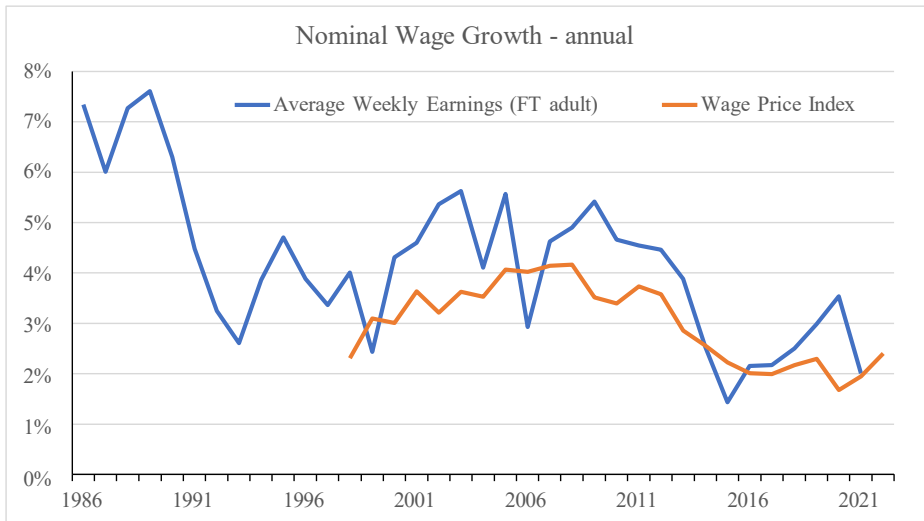
Mean Occupational Wages (2006 FT Employee Earnings)



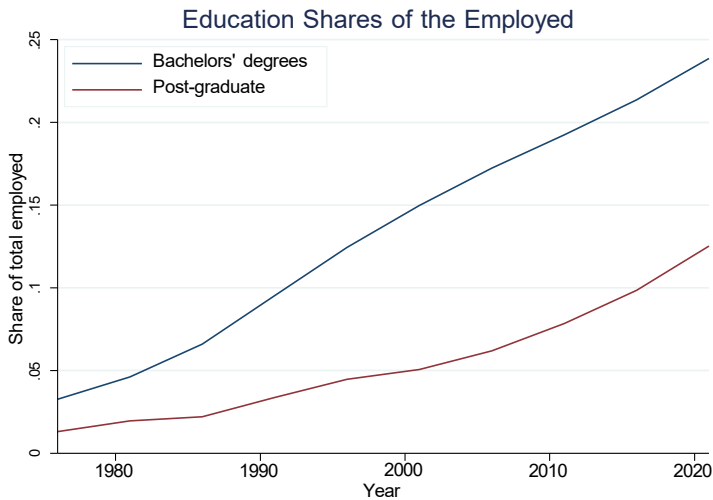
Mean Industry Wage (2006 FT Employees)



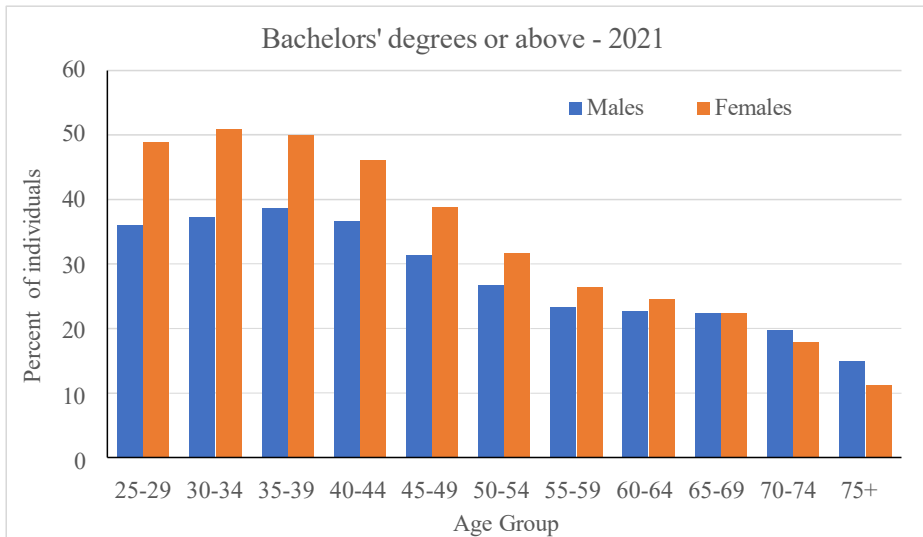
Earnings Growth



Massive Higher Education Expansion



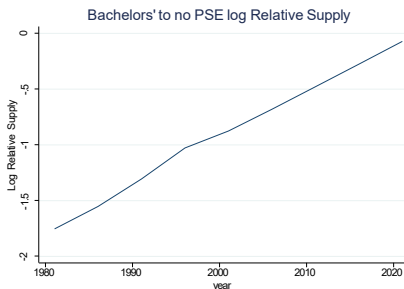
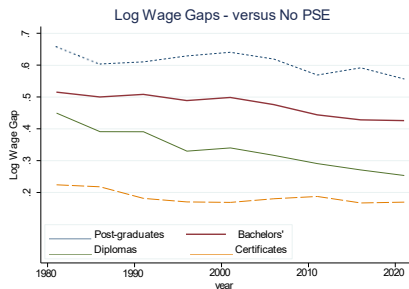
Expansion Set to Continue



Earnings and Supply by Education

Technological change widely believed to be skill-biased:

- raising productivity of (demand for) high-skilled relative to low-skilled.



The “race” between education and technology in Australia:

- education appears to be winning.

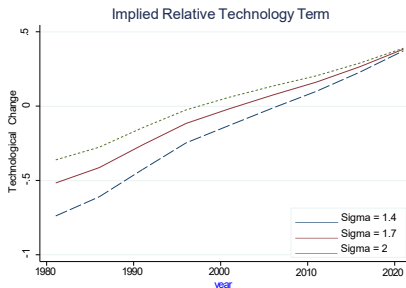
Implied Demand for Labour by Skill

Simple canonical model of skill-biased technological change, based on CES production function, labour by skill paid marginal products, with:

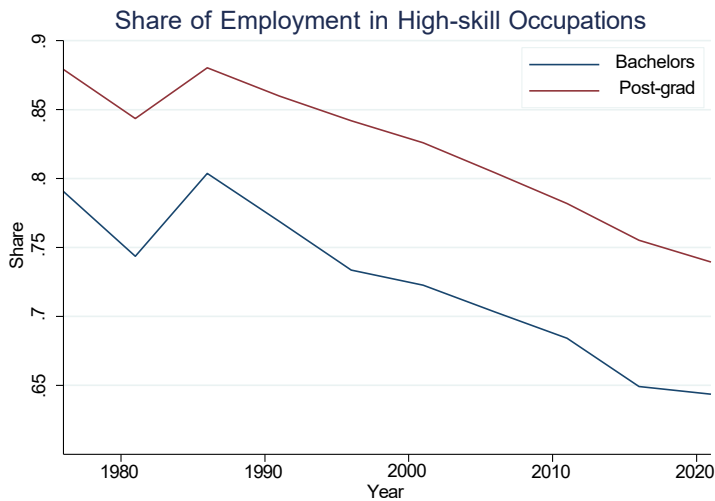
- substitution between high and low-skill workers (elasticity = “Sigma” = σ),
- and evolution of labour-augmenting technological change.

$$\ln \frac{w_{Ht}}{w_{Lt}} = \frac{\sigma - 1}{\sigma} \ln \frac{A_{Ht}}{A_{Lt}} - \frac{1}{\sigma} \ln \frac{H_t}{L_t}$$

Relative productivity of (demand for) high to low-skill workers still rising, but pace of increase slowed in 1990s (“similar” to the US).



University Graduates – Falling Down the Ladder?



Job-Ready Graduates – Fees versus Subsidies

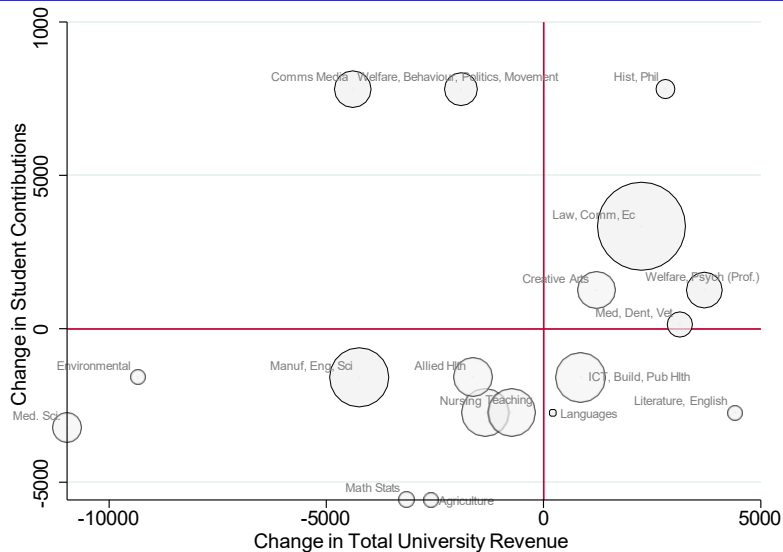
Job-Ready Graduates package, introduced for 2021 university intake:

- Changed student contribution amounts (HECS / HELP) by field to arguably induce more students into “in-demand” careers.
- Changed government contribution levels supposedly so university per-student revenues reflect costs of provision.
- But incentives for students and universities not generally aligned.

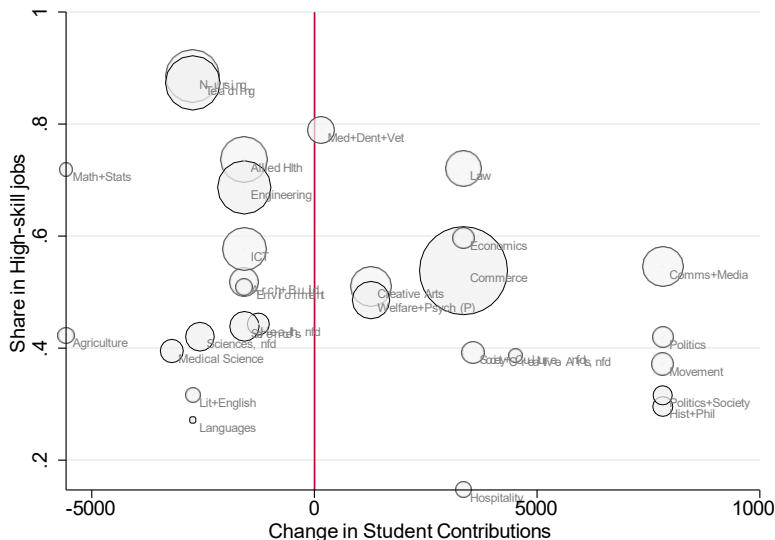
Ongoing research by Yong, Coelli and Kabatek (2022):

- Student responses (preferences) to HECS changes only small.
- University responses (enrollment) essentially zero.

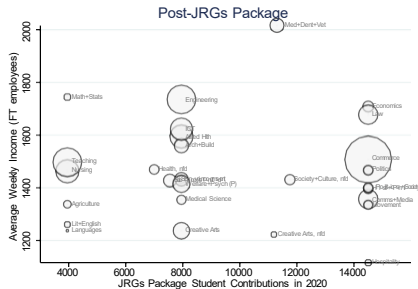
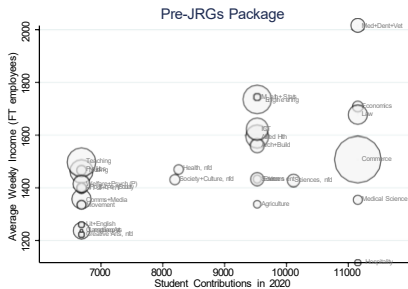
Changes in Fees and University Revenue – JRGs Package



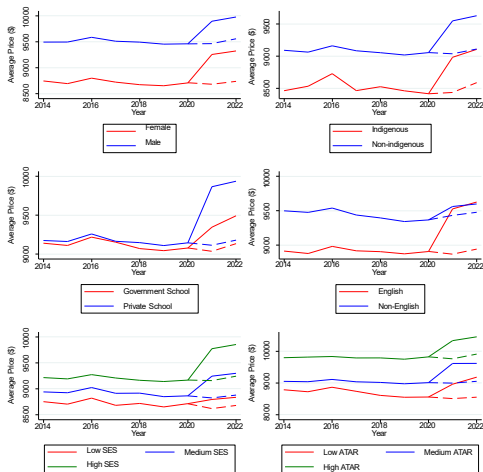
Change in Fees vs Fields in Demand? High-skill Job



Fees Pre and Post JRGs Package – FT Weekly Earnings



Fee Changes by Student Characteristics



Note: Dashed lines are the counterfactual outcome based on CPI-adjusted pre-policy prices with post-policy enrolment levels. Dollar amounts are in real terms, indexed to 2022. The three ATAR groups are for ATARs less than 70, between 70-90, and above 90. School type, SES, and ATAR all have missing values in the dataset, so enrolments with missing data have been excluded from those relevant demographic calculations.

Summary and Discussion

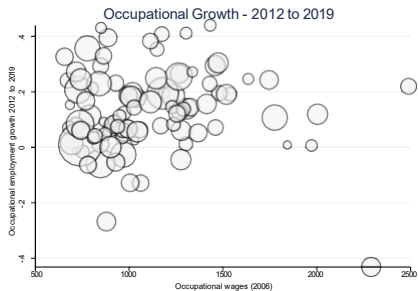
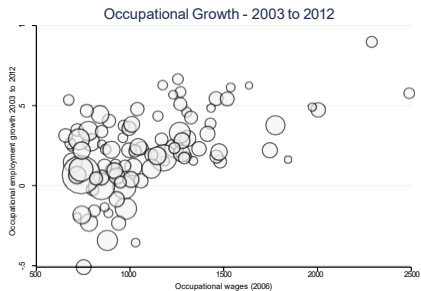
What has been happening:

- Technological change has raised demand for skilled workers,
– but supply thus far has more than met that demand.
- Earnings growth may finally be picking up,
– movements across occupations and increases within some (private) jobs.

Some questions for discussion:

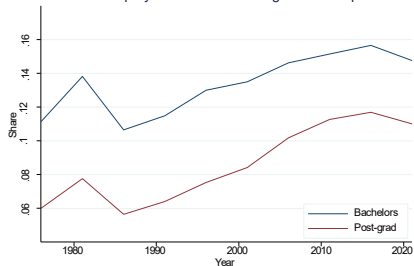
- 1 Is the earnings slowdown over?
- 2 Is the university sector large enough?
- 3 On what basis should university fees be set?
– Costs / benefits, equity / efficiency.

Occupation Growth – Boom and Stagnation

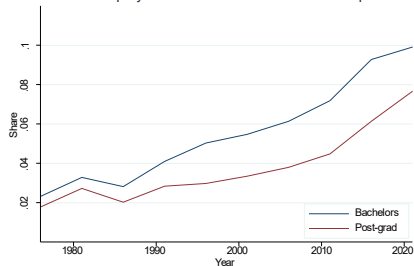


University Graduates – Lower-skill jobs

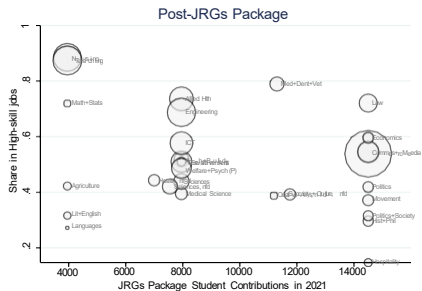
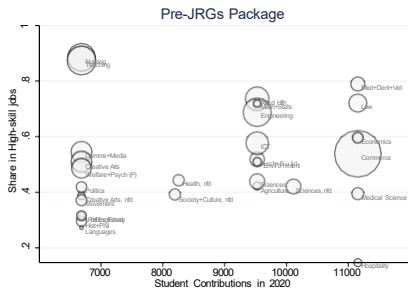
Share of Employment in Routine cognitive Occupations



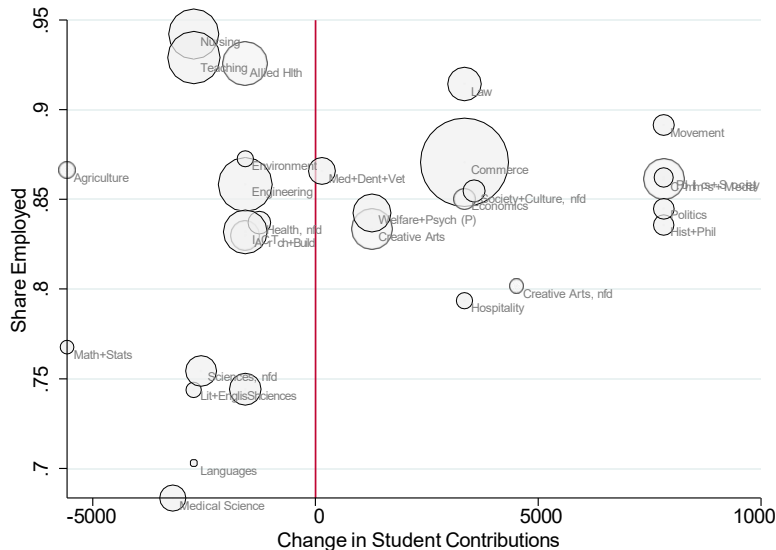
Share of Employment in Non-routine Manual Occupations



Fees Pre and Post JRGs Package – High-skill Job Share



Change in Fees vs Fields in Demand? Share Employed



Change in Fees vs Fields in Demand? Employed Full-time

