



Australian Government  
Department of Industry,  
Innovation and Science

Office of the  
Chief Economist

# Entrepreneurship Dynamics in Australia

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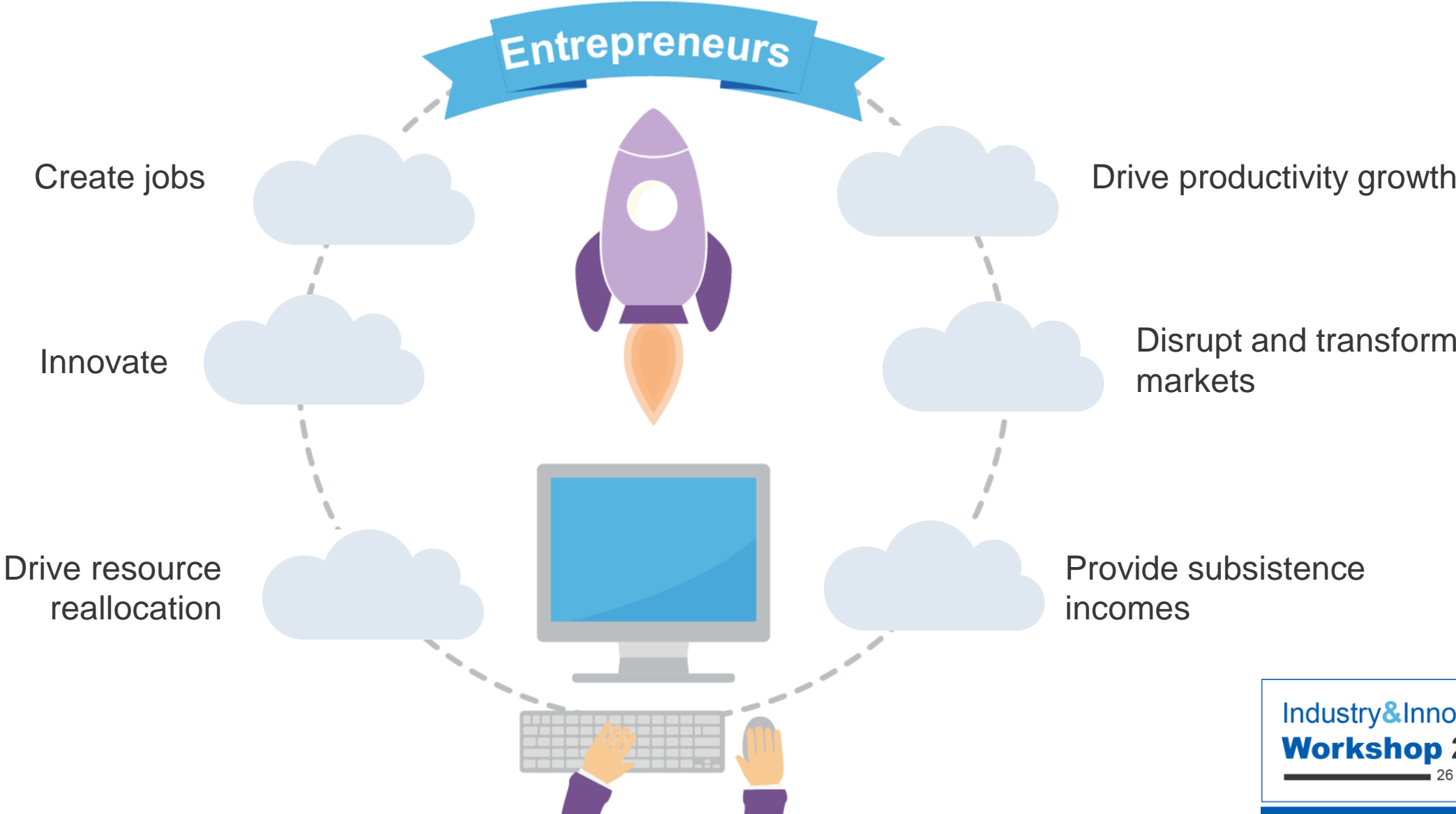
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26 September 2017

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# Entrepreneurs

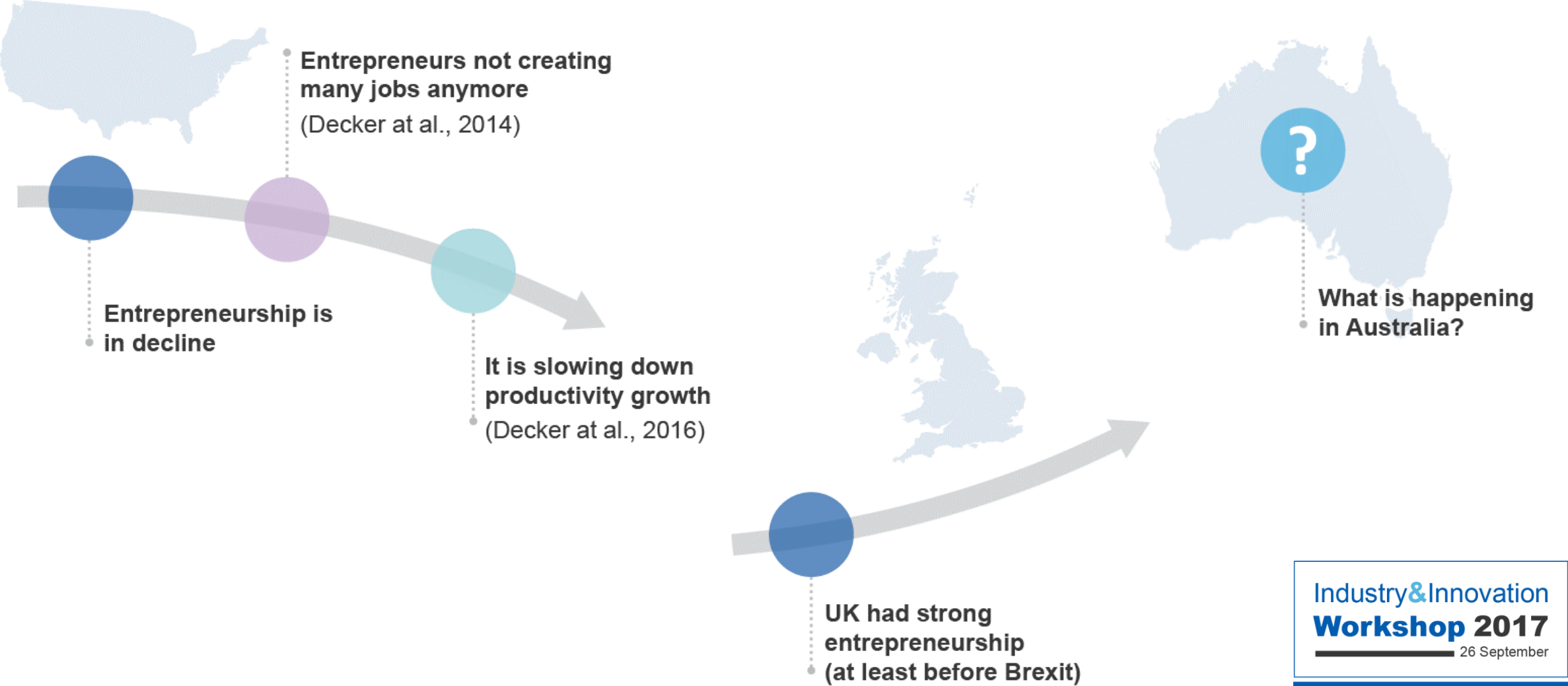


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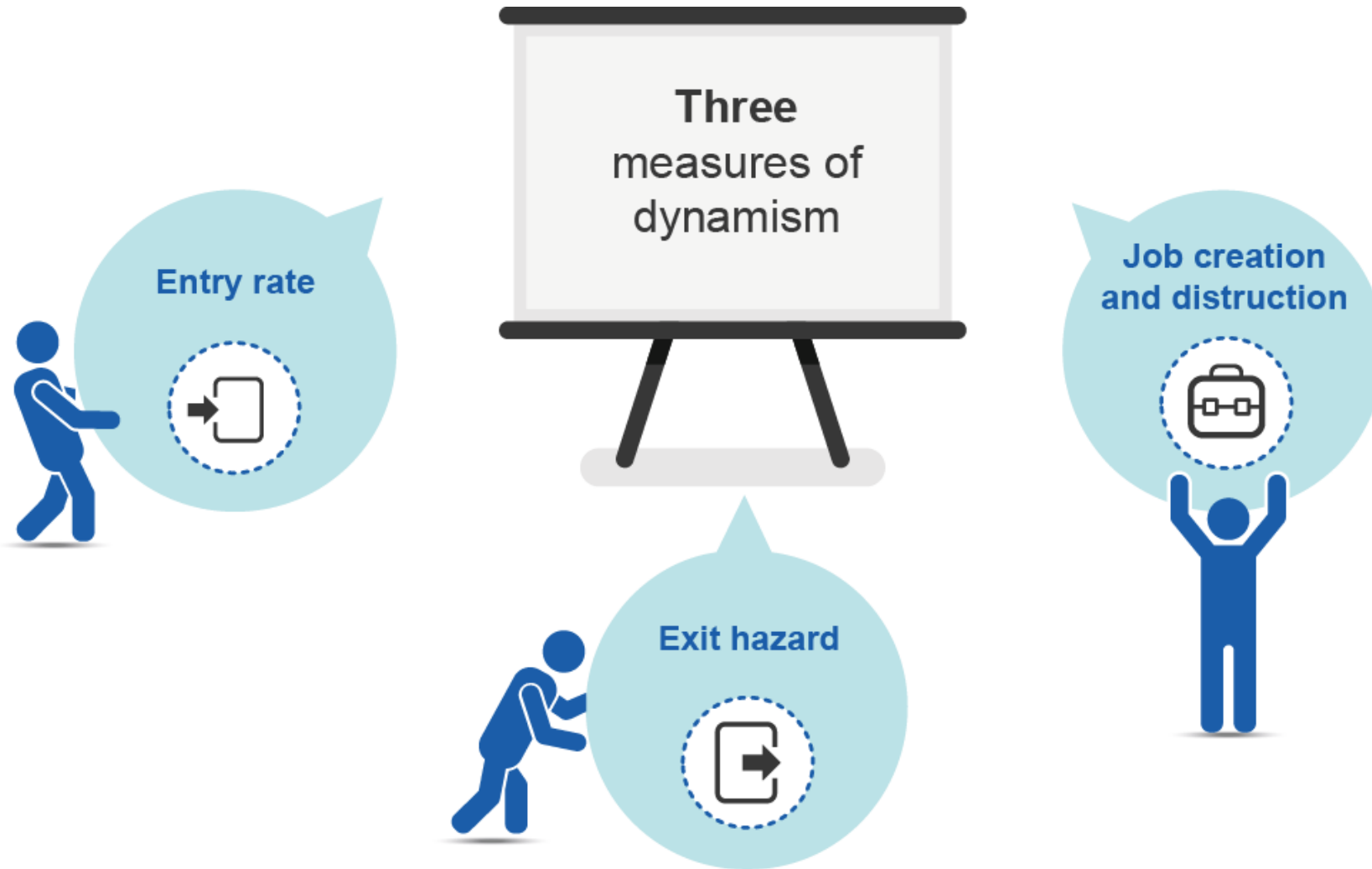
# Elsewhere

Not every country is experiencing a decline in entrepreneurship(OECD 2016)



# This study

Three measures of dynamism. Looking at the time trends.



# Micro analysis

## Business Longitudinal Analysis Data Environment (BLADE)

- Source: ABS+ATO
- Core: BIT+BAS+PAYG
- All firms registered for GST
- Covers (fiscal) 2002 to 2015
- About 48 million firm-years
- About 22 million related to young firms
- Operational and financial information on firms



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# Entrepreneurs

## Definition



**Entry:** First ever appearance of a firm

**Exit:** Last ever appearance of a firm

### Excluded

- Financial Asset Investing (ANZSIC 6240) and Superannuation Funds (ANZSIC 6330)
- New firms belonging to a larger firm

### Uncertain

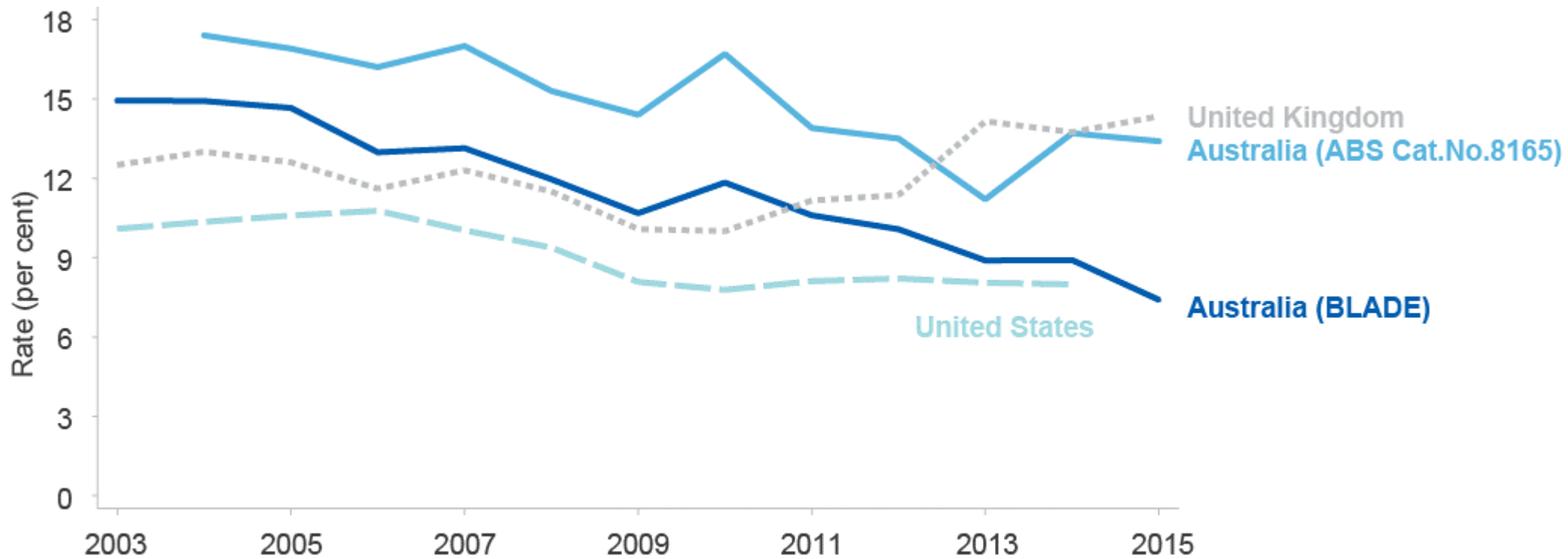
- Firm is born large
- Phoenix companies

# Dynamics

# Entry

# Entry rate

Figure 1: The entry rate of entrepreneurs in Australia and a few other countries



Source: Bakhtiari S (2017) *Entrepreneurship Dynamics in Australia: Lessons from Micro-data*

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# Entry

By industry



- The same picture shared by individual industries
- Decline slower in some industries: Mining, Admin Services, Healthcare Services
- Decline faster in other industries

# Dynamics

Exit

# Exit hazard

The probability that a firm fails at age  $T$  having survived to that age

Estimating by cohort

Controlling for a range of other factors:

- Age
- Industry
- Only ages 0 to 3

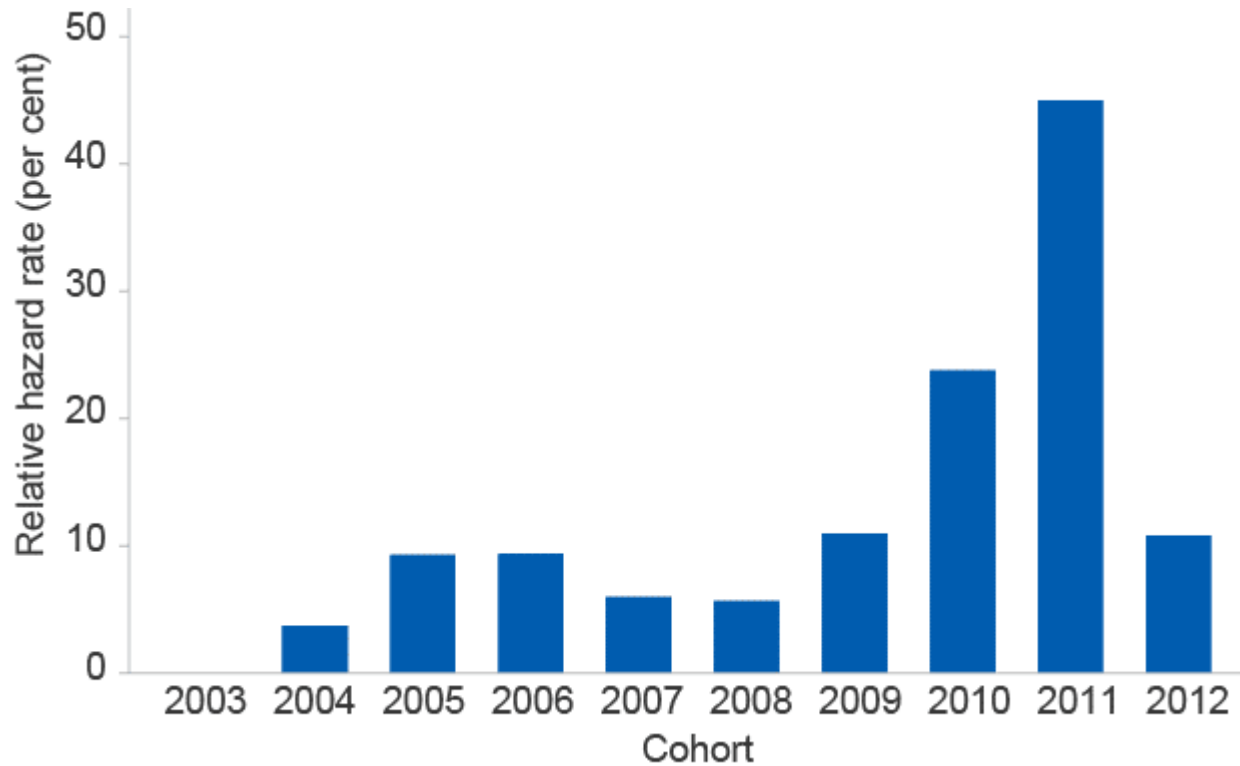


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# Relative hazard rates

Figure 2: Relative hazard rates by cohort



Source: Bakhtiari S (2017) *Entrepreneurship Dynamics in Australia: Lessons from Micro-data*

- Setting cohort 2003 as base
- An abrupt and seemingly permanent increase in hazard in 2005
- A substantial but temporary increase in hazard during 2009–2011

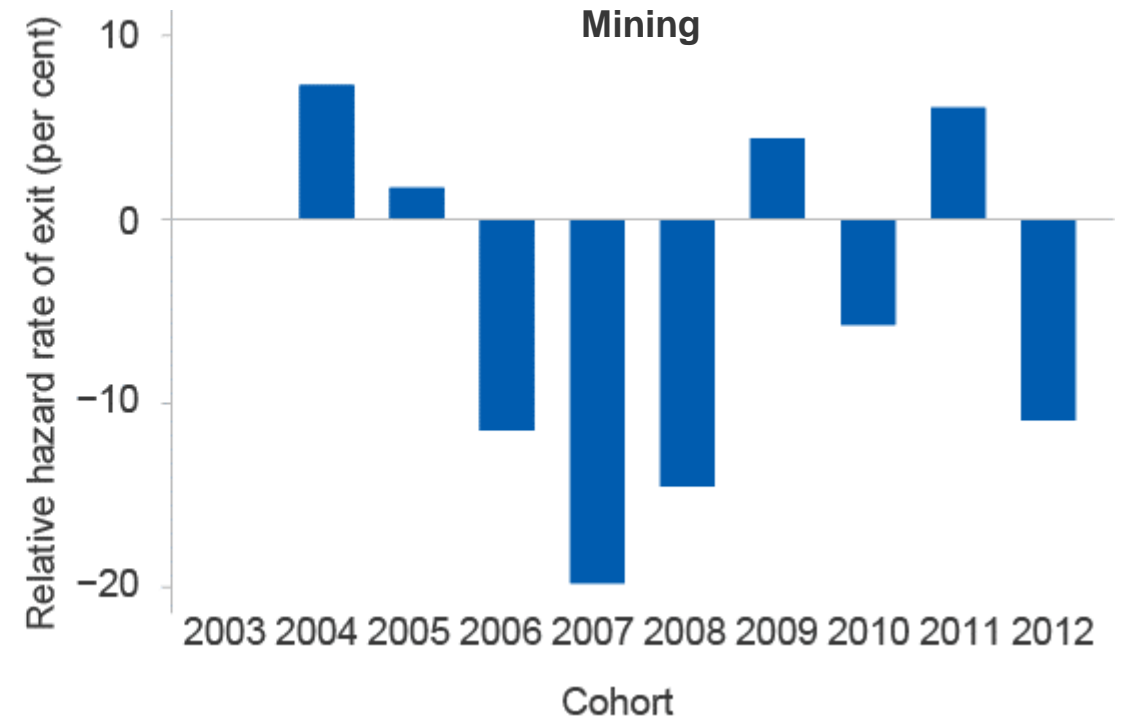
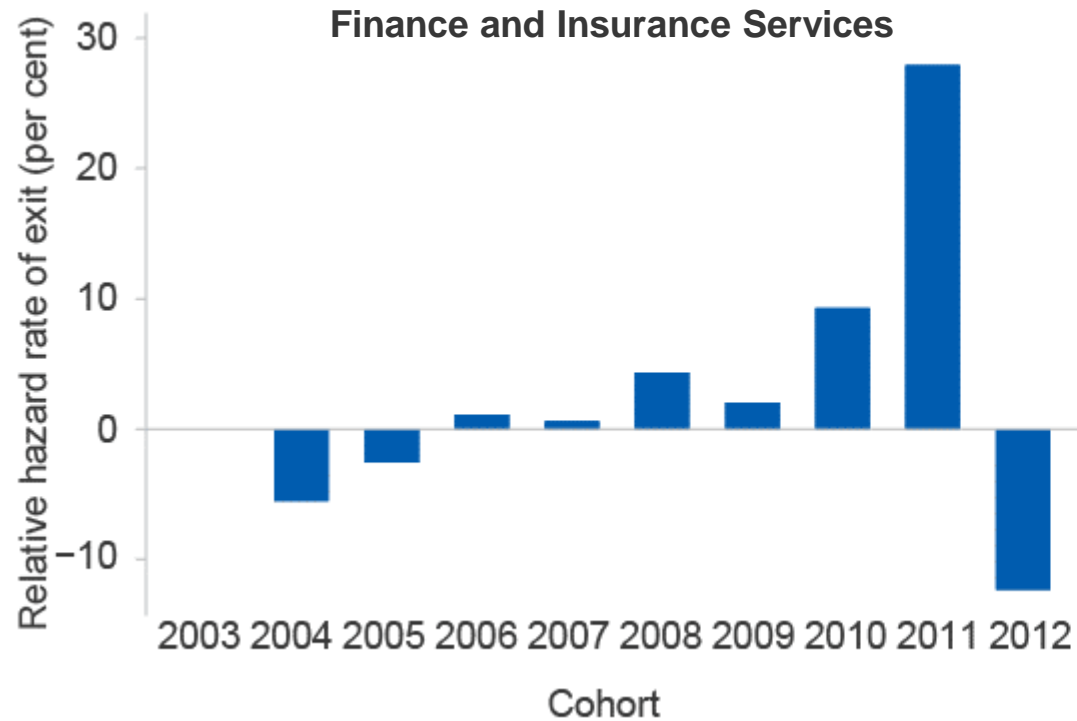
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# Relative hazard rates

Two exceptions

**Figure 3: The exceptions to the rule**



Source: Bakhtiari S (2017) *Entrepreneurship Dynamics in Australia: Lessons from Micro-data*

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# Dynamics

Job creation and destruction

# Job creation and destruction



- **Job creation:** Change in employment among expanding firms
- **Job destruction:** change in employment among shrinking firms
- Focusing on **small** young firms
- Using FTE

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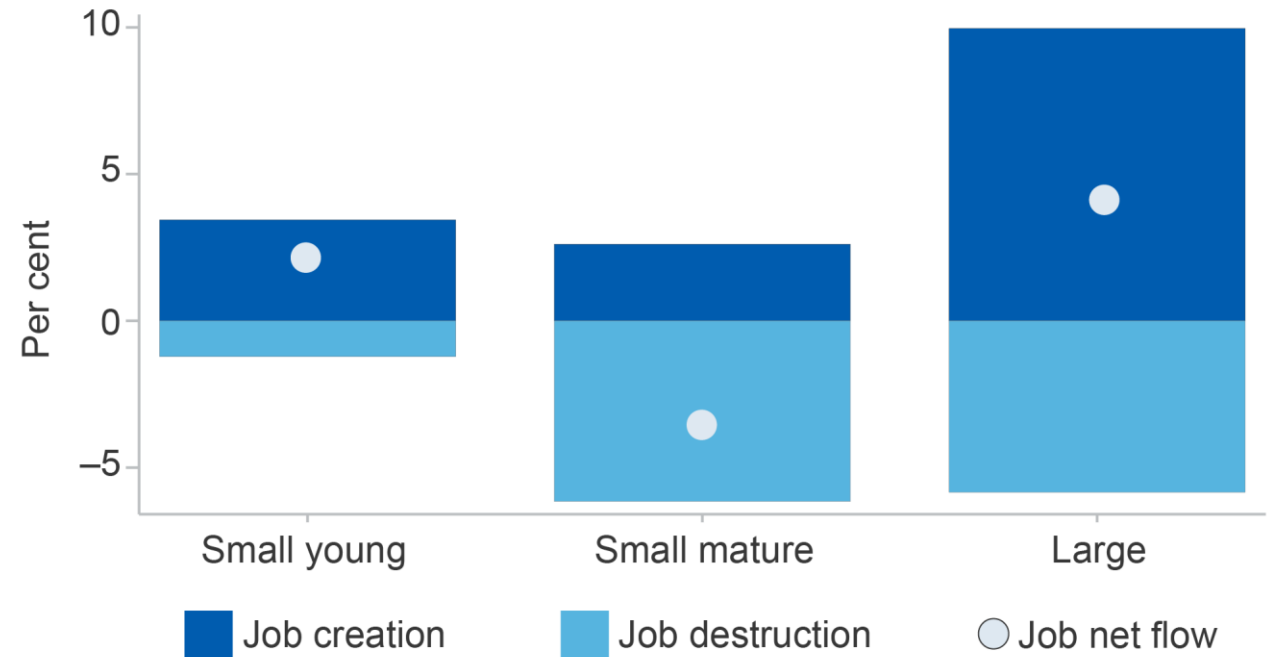
# Small young firms

Contribution to job market 2004–2014

80% of jobs added to economy is by small young firms.

- Small young and large firms add jobs
- Small mature firms destroy jobs
- Without small young firms, the job market practically stands still

**Figure 4: Job creation and destruction by different firm categories**



Source: Bakhtiari S (2017) *Entrepreneurship Dynamics in Australia: Lessons from Micro-data*

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# Declining entrepreneurship

Impact on the job market

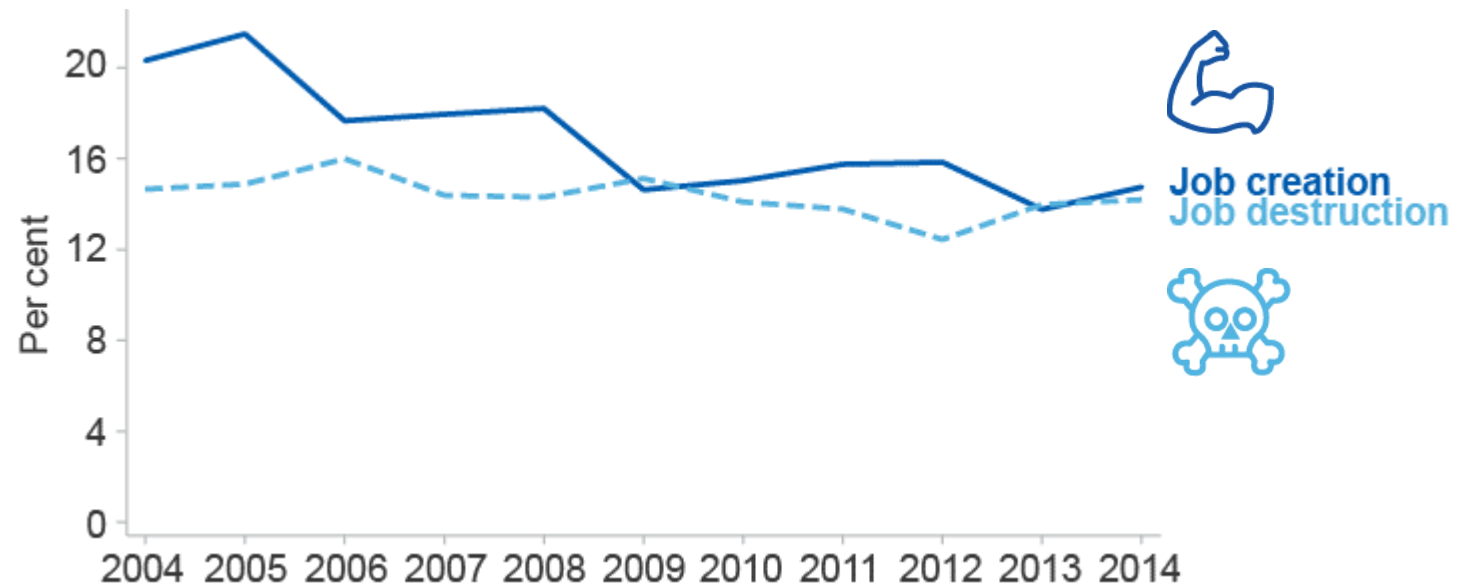
**Job destruction:** rate is quite stable

**Job creation:** rate is falling

**Two reasons:**

1. Fewer entrepreneurs.
2. Entrepreneurs not creating jobs (double trouble).

**Figure 5: Job creation and destruction rates in Australia**



Source: Bakhtiari S (2017) *Entrepreneurship Dynamics in Australia: Lessons from Micro-data*

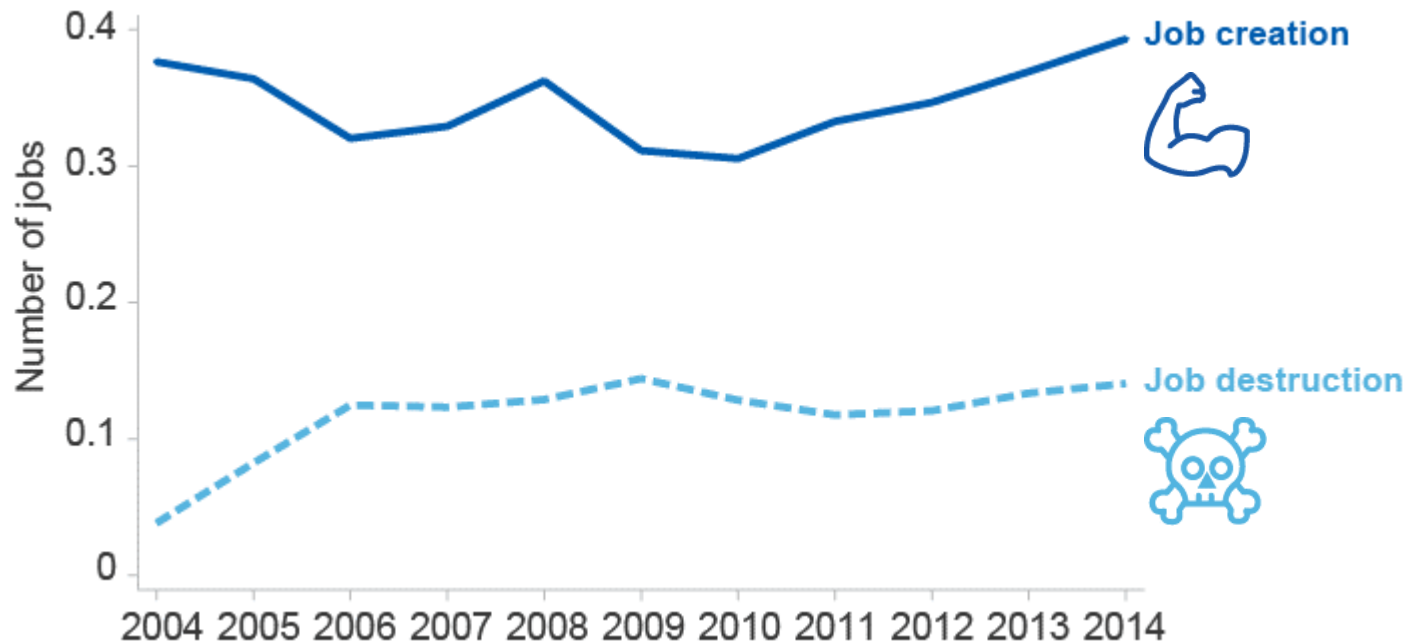
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# Small young firms

## Job creation prowess

**Figure 6: Average number of jobs created and destroyed by a small young firm**



- **Job destruction:** stable
- **Job creation:** also stable and even increasing
- Small young firms are doing a swell job
- One less thing to worry about!

Source: Bakhtiari S (2017) *Entrepreneurship Dynamics in Australia: Lessons from Micro-data*

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# The cause?

A big mystery



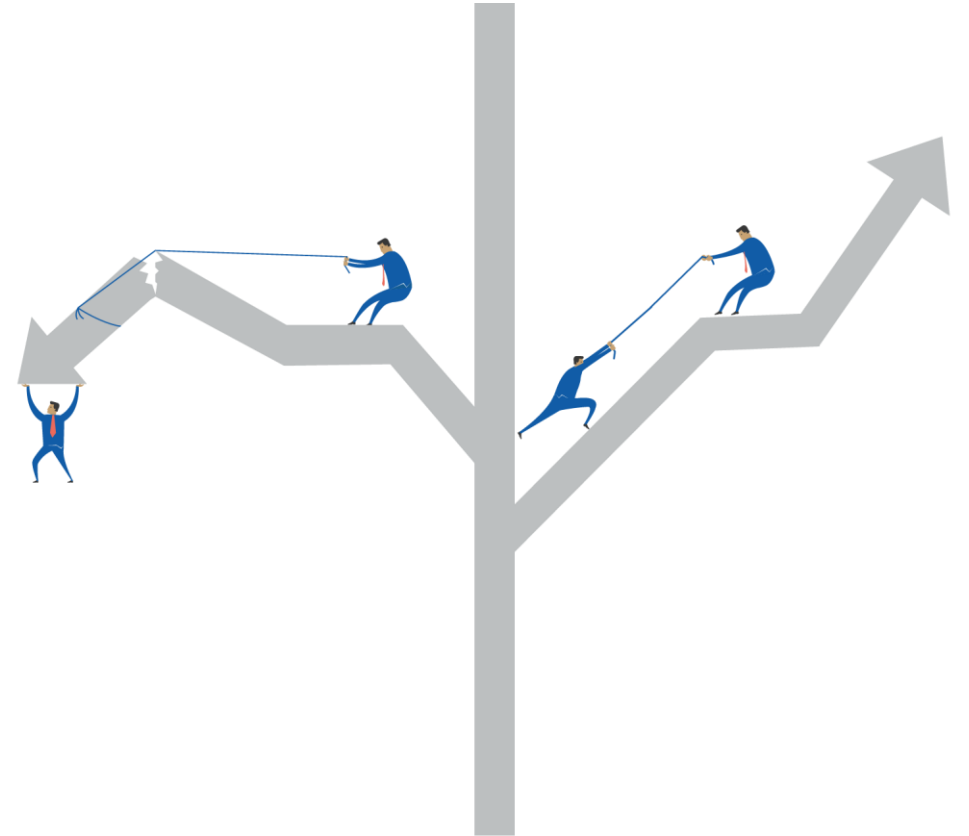
- **Resources boom:** Started in 2005 and diverted major financial resources.
- **Rising borrowing costs:** Starting 2005, a gap opened between small and large firm interest rates.
- **Globalisation:** In 2005 China overtook the US as Australia's larger trading partner.
- **Changing demographics:** Proportion of prime entrepreneurial age adults falling.
- **Centralization:** Herfindahl index in Australian industries has slowly increased over the years.

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# Conclusion

- Entrepreneurship rate in Australia has been on the **decline** since 2005.
- Entrepreneurs facing **higher risks** since 2005.
- **Job creation lower** because of the decline.
- Job creation by **entrepreneurs still going strong**.
- Need to **investigate the cause** and remedy it.



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# Further information



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# Sneak Preview

Do entrepreneurs have productivity advantage?



- Estimating Total Factor Productivity (TFP).
- Young firms quite unproductive.
- Not if they are transformative.
- Interesting productivity dynamics happening within different types of clusters.
- Draft: forthcoming.