



Australian Government  
Department of Industry,  
Innovation and Science

Office of the  
Chief Economist

# High growth firms in the Australian economy

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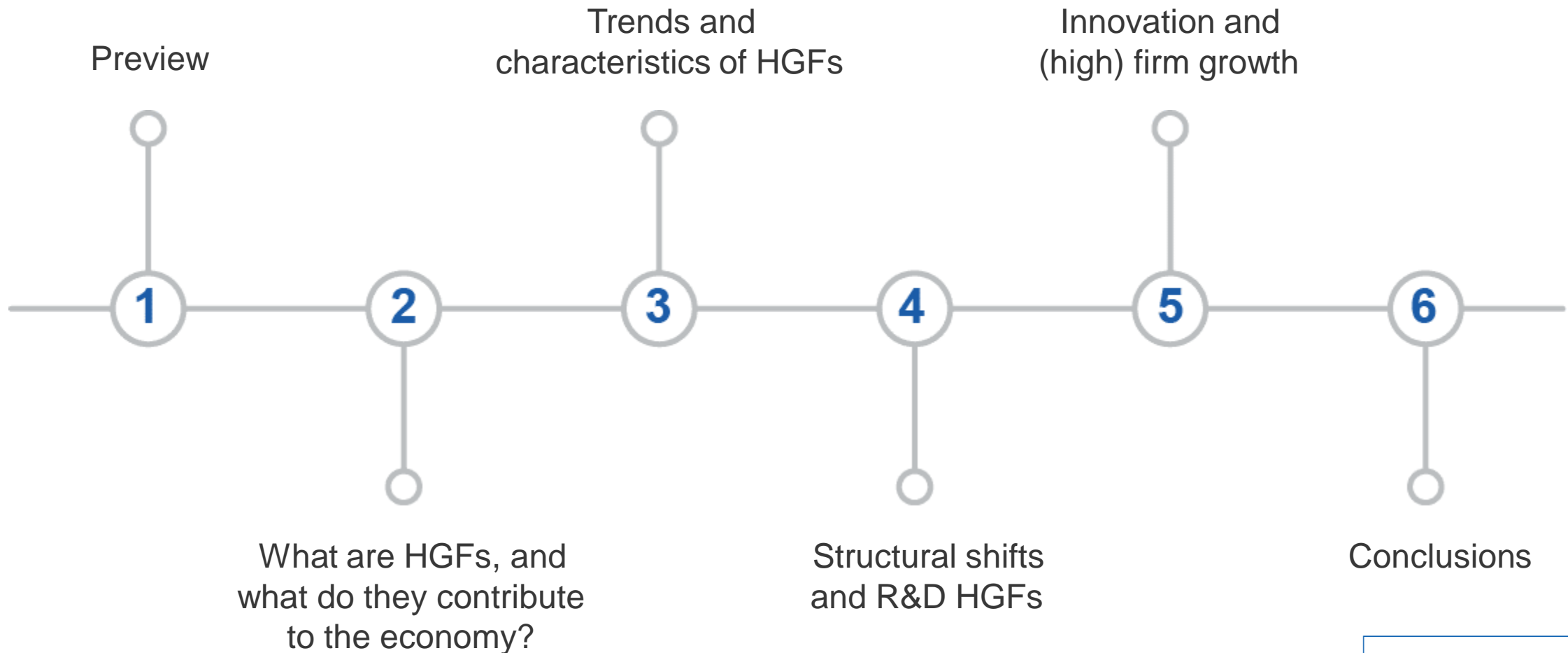
Innovation Research  
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Industry&Innovation  
**Workshop 2017**  
26 September

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# Outline



# Preview



- HGFs contribute significantly to the economy
- HGFs are generally episodic
- There is probably a two way link between HGFs and the macroeconomy
- HGFs tend to be younger and are found in every sector
- Goods and services and marketing innovation are important for firm performance generally. For HGFs, it is mostly goods and services innovation



# What are HGFs and what do they contribute?

# What are High Growth Firms?

## Definition of high growth firms

**High Growth Firms (HGFs)** are firms that achieve at least **20 per cent average annualised growth** in a chosen performance measure (e.g. turnover, employment) **over three consecutive years**

While there is no universal definition of a High Growth Firms, the OECD definition is one of the most widely used.

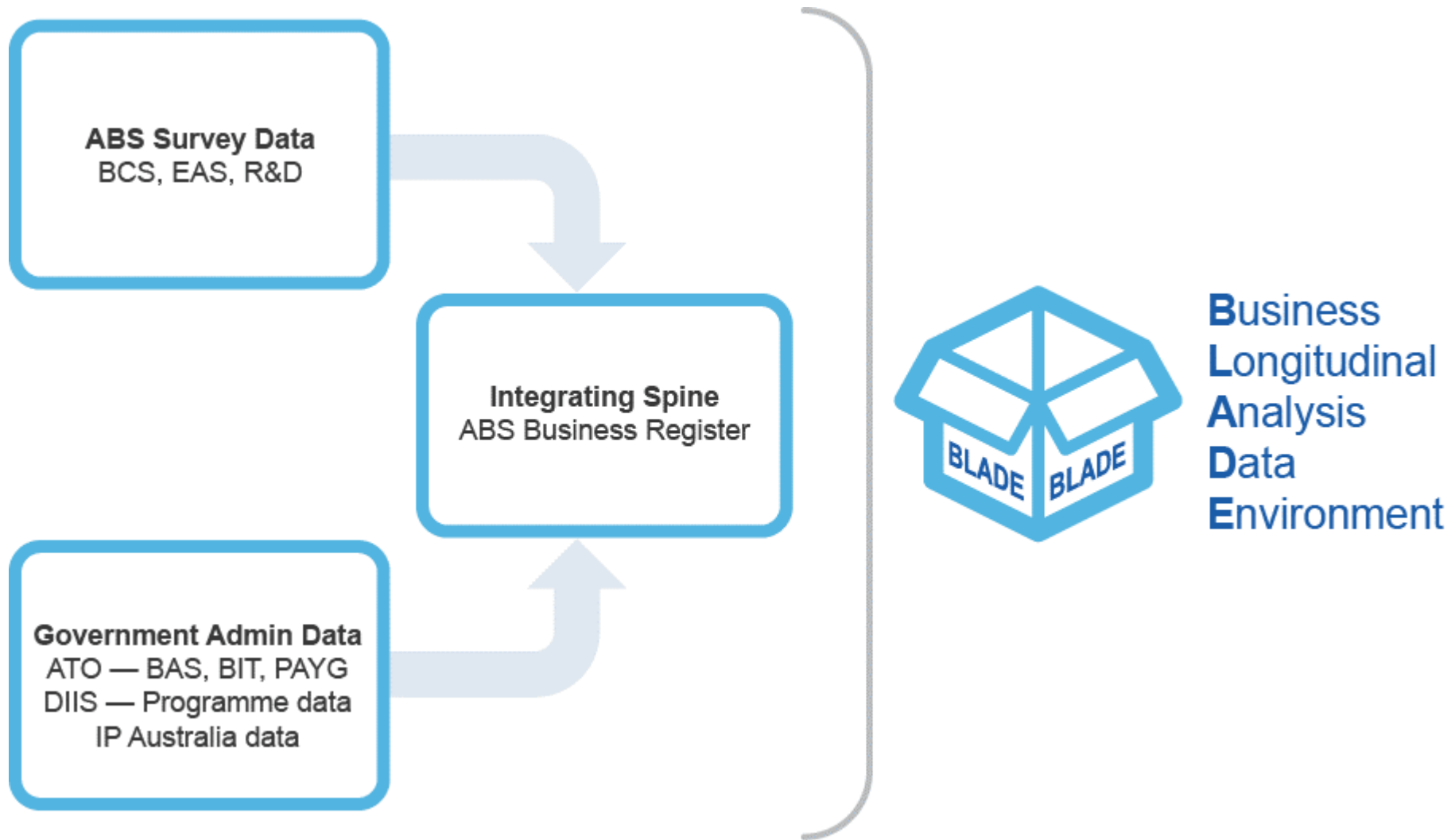
The HGF definition is usually applied to both turnover and employment growth, showing which firms are expanding their employment and increasing their sales

We have **extended** this definition to firms that experienced **high growth in R&D**

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# What is BLADE?



# The economic contribution of HGFs

What HGFs contributed to growth in employment, sales, value added and exports in the Australian economy

## Economic contribution of HGFs, all sectors, 2004–05 to 2011–12

### Employment HGFs

Proportion of firms (per cent)	Contribution to employment growth (per cent FTE growth)
9.0	46.1

### Turnover HGFs

Proportion of firms (per cent)	Contribution to sales growth (per cent)	Contribution to value added growth (per cent)
15.2	65.9	69.4

Source: ABS (2017) Business Longitudinal Data Environment (BLADE). Analysis by Department of Industry, Innovation and Science

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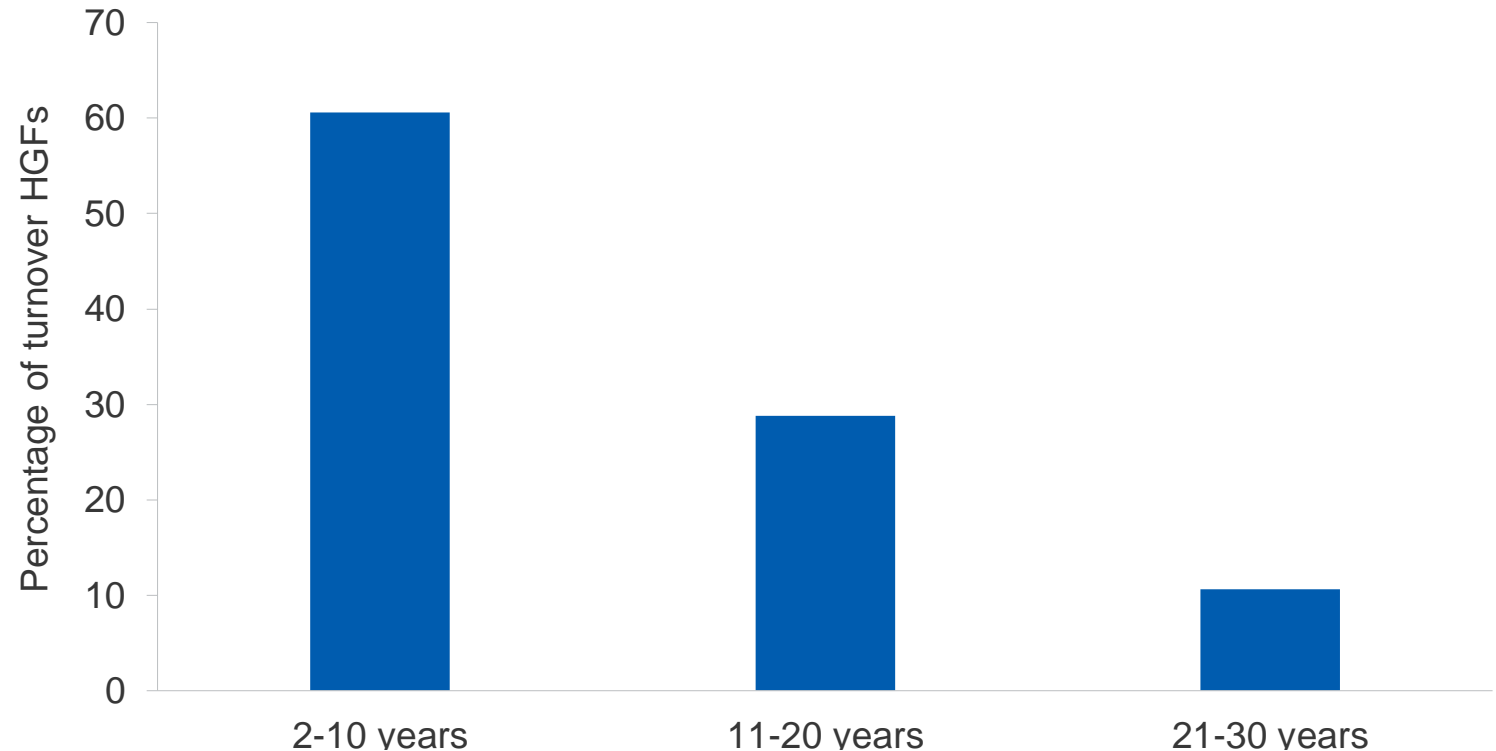
# Trends and characteristics of HGFs



# High growth firms tend to be younger

- HGFs are typically **younger**
- Between 2002–13 the median age of HGFs was **8 years**, and **11 years** for non-HGFs
- Despite being younger, there are only small differences in their size

Age distribution of turnover HGFs, 2002–13



Source: ABS (2017) Business Longitudinal Data Environment (BLADE), Business Characteristics Survey (BCS) data linked to firm-level financial data. Analysis by Department of Industry, Innovation and Science

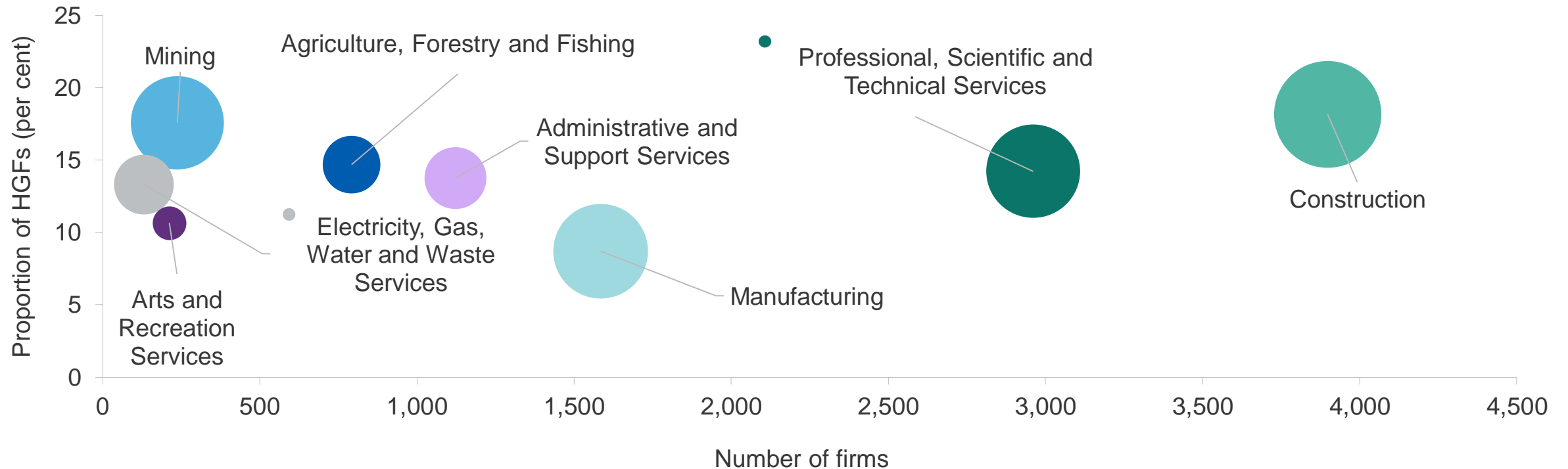
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# HGFs are found in all sectors across the economy

However, there are large differences in the number of HGFs firms in each sector

## Proportion and number of employment HGFs, 2014

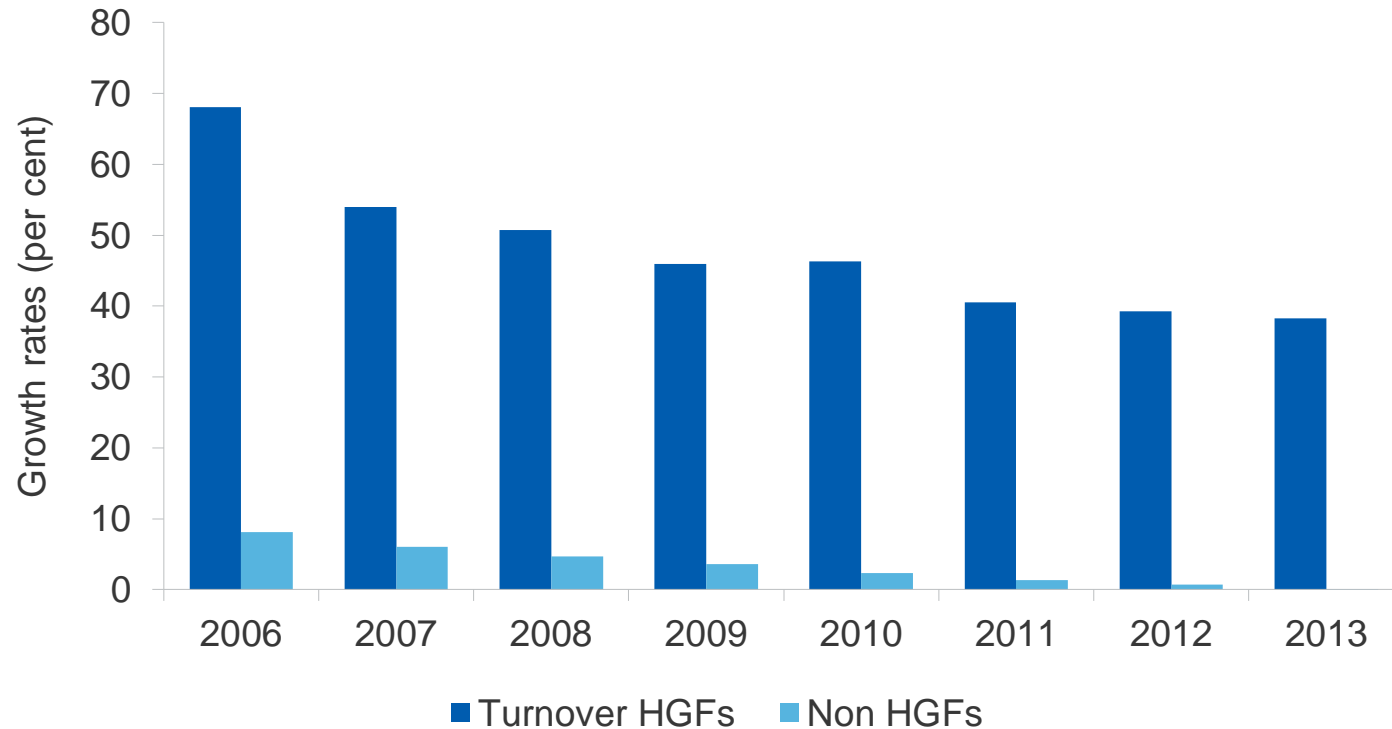


Source: ABS (2017) Business Longitudinal Analysis Data Environment (BLADE).  
Customised data analysis commissioned by the Department of Industry, Innovation and Science.  
Notes: The size of the bubble is gross value added by the sector (2014) over total GDP for 2014.

# Declining growth rates of HGFs

Growth rates in Australian HGFs have declined since 2006

## Firm growth rates, 2006–2013



Source: ABS (2017) Business Longitudinal Analysis Data Environment (BLADE).  
Customised data analysis commissioned by the Department of Industry, Innovation and Science

Median growth rates in each HGF cohort showed impressive performance.

Growth rates have declined over time. But they remain impressive.

Causality probably goes both ways:

- Contribution of HGFs
- Macroeconomic conditions

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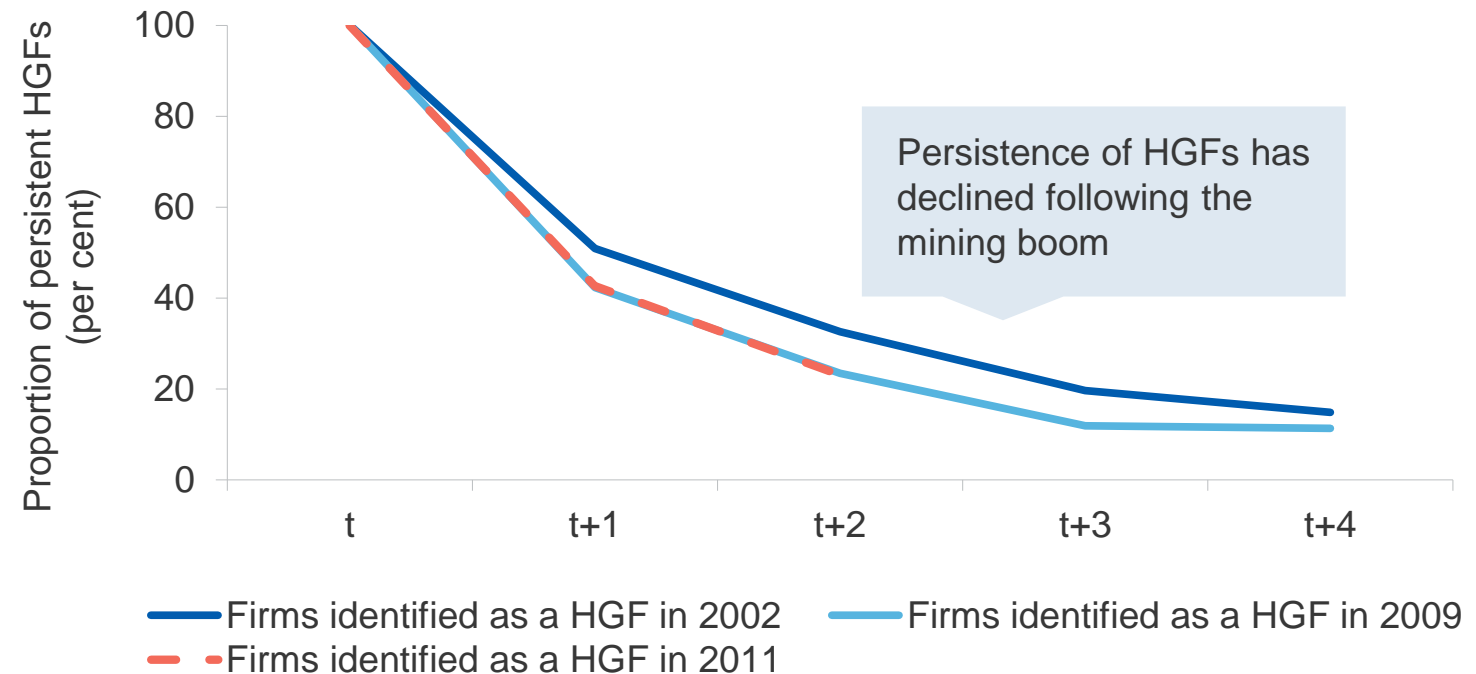
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# The episodic nature of HGFs

The majority of HGFs don't persist as HGFs for long. They slow down.

- Post mining boom, and during the GFC, the persistence of HGFs has **deteriorated**
- However, the persistence of HGFs seems to have **stabilized**
- Firms are better able to maintain growth and persistence in **conducive macroeconomic environment**

**Proportions of persistent Turnover HGFs in different cohorts, 2002–06, 2009–13 and 2011–13**



Source: ABS (2017) Business Longitudinal Analysis Data Environment (BLADE).  
Customised data analysis commissioned by the Department of Industry, Innovation and Science

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# HGFs have increased their turnover

## Revenue of turnover HGFs by firm size category (median values), 2005 and 2014

Firm size	2005 (\$ millions)	2014 (\$ millions)	Difference from 2005 to 2014 (per cent)
Small	1.4	1.7	24
Medium	6.0	8.1	36
Large	108.9	174.4	60

- Turnover HGFs have much **higher revenue**
- The biggest difference (**60 per cent**) is in large firms
- **Fewer HGFs** in the economy but they are **selling more**

Source: ABS (2017) Business Longitudinal Data Environment (BLADE). Analysis by Department of Industry, Innovation and Science.

Notes: The data has been adjusted for inflation.

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# Turnover HGFs are also job creators

Turnover HGFs also contribute a disproportionate amount to FTE growth

- Turnover HGFs between 2002 and 2013 contributed **27.6 per cent** to FTE employment growth
- Compared to just **0.1 per cent** from non-HGFs

## Turnover growth and employment growth for turnover HGFs and non-HGFs (median values), 2002–13

	Turnover growth (per cent)	Employment growth (per cent)
Non-HGFs	1.6	0.1
Turnover HGFs	45.4	27.6

Source: ABS (2017) Business Longitudinal Data Environment (BLADE), Business Characteristics Survey (BCS) data linked to firm-level financial data.  
Analysis by Department of Industry, Innovation and Science.

Notes: Three year compound average

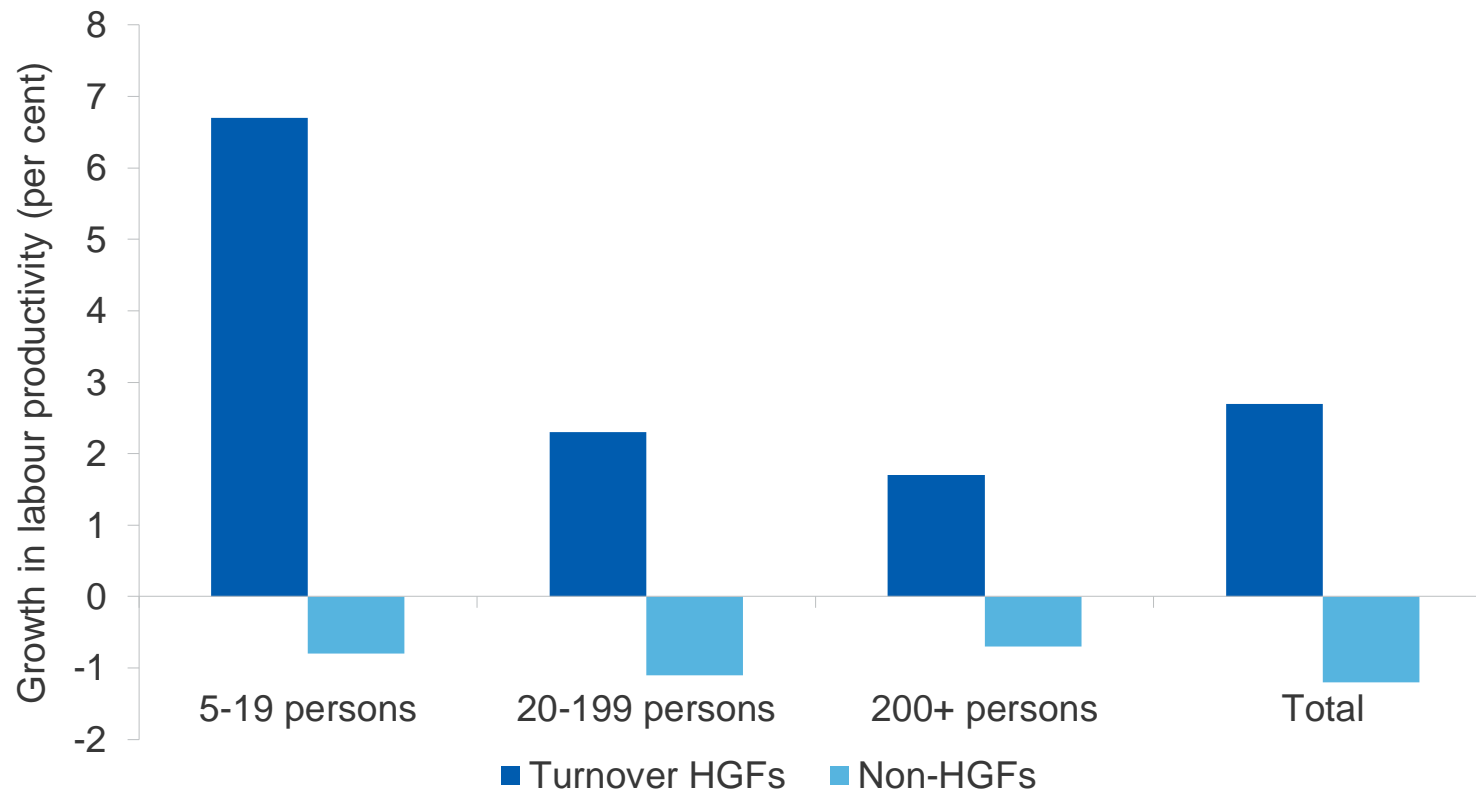
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# Characteristics of HGFs

HGFs have similar levels of labour productivity, but they're growing much faster

## Average annual growth in labour productivity by firm size, 2002–13



- HGFs are prime drivers of **labour productivity**
- **Labour productivity = turnover/employment**
- HGFs are also **job creators**
- Firms with **5–19 employees** show strong growth in labour productivity

Source: ABS (2017) Business Longitudinal Analysis Data Environment (BLADE).

Customised data analysis commissioned by the Department of Industry, Innovation and Science

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# Structural shifts in R&D HGFs

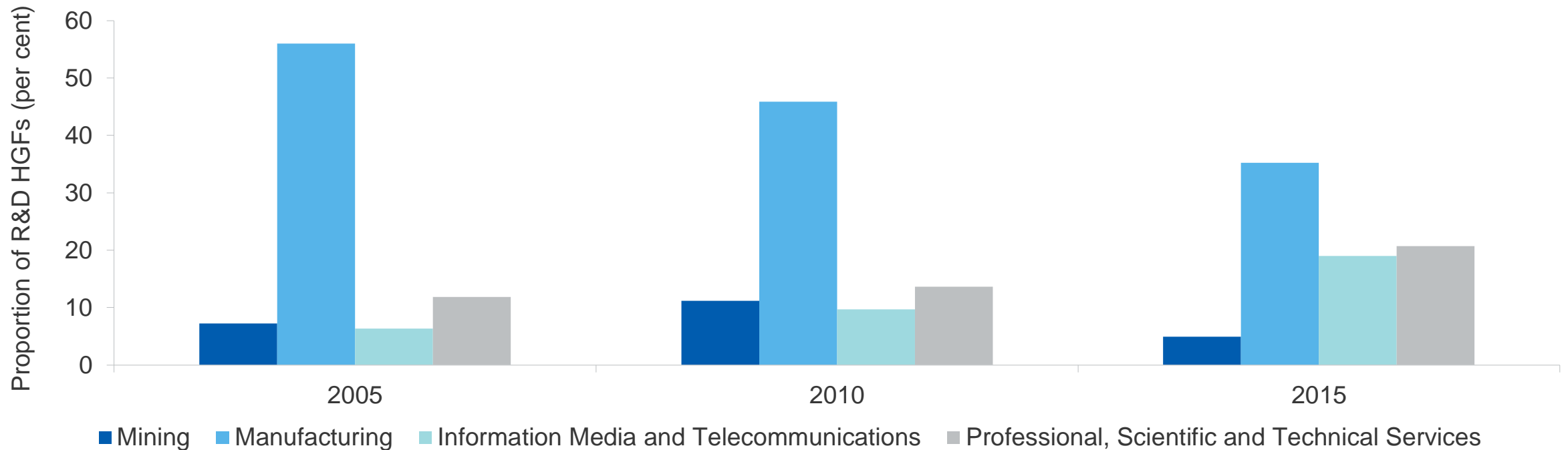


# Proportion of R&D HGFs

Manufacturing has the highest share of R&D HGFs, but that has declined.

There is evidence of a structural shift towards PST and IMT.

## Proportion of R&D HGFs in top four industries, 2005, 2010 and 2015



Source: Department of Industry, Innovation and Science programme data for the R&D Tax Concession (2001 to 2011) and the R&D Tax Incentive (2013 to 2015).

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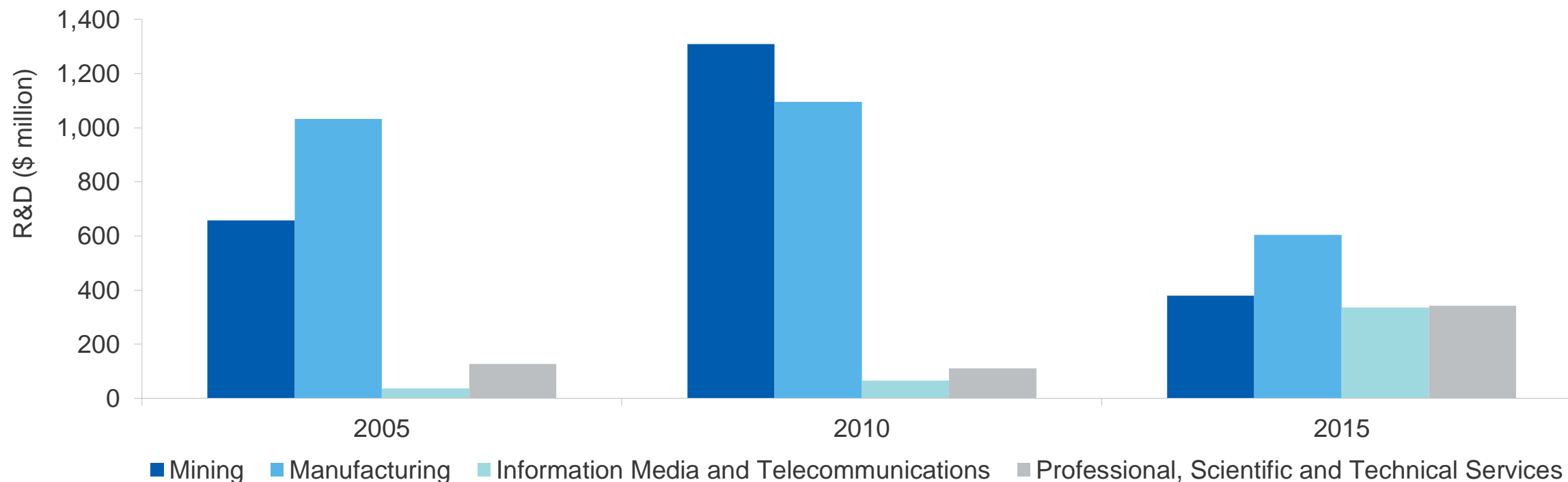
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# Expenditure of R&D HGFs

There is a large difference in R&D expenditure.

The expenditure of R&D HGFs has become more diversified.

## Real R&D by R&D HGFs – top four industries, 2005, 2010 and 2015



Source: Department of Industry, Innovation and Science programme data for the R&D Tax Concession (2001 to 2011) and the R&D Tax Incentive (2013 to 2015).

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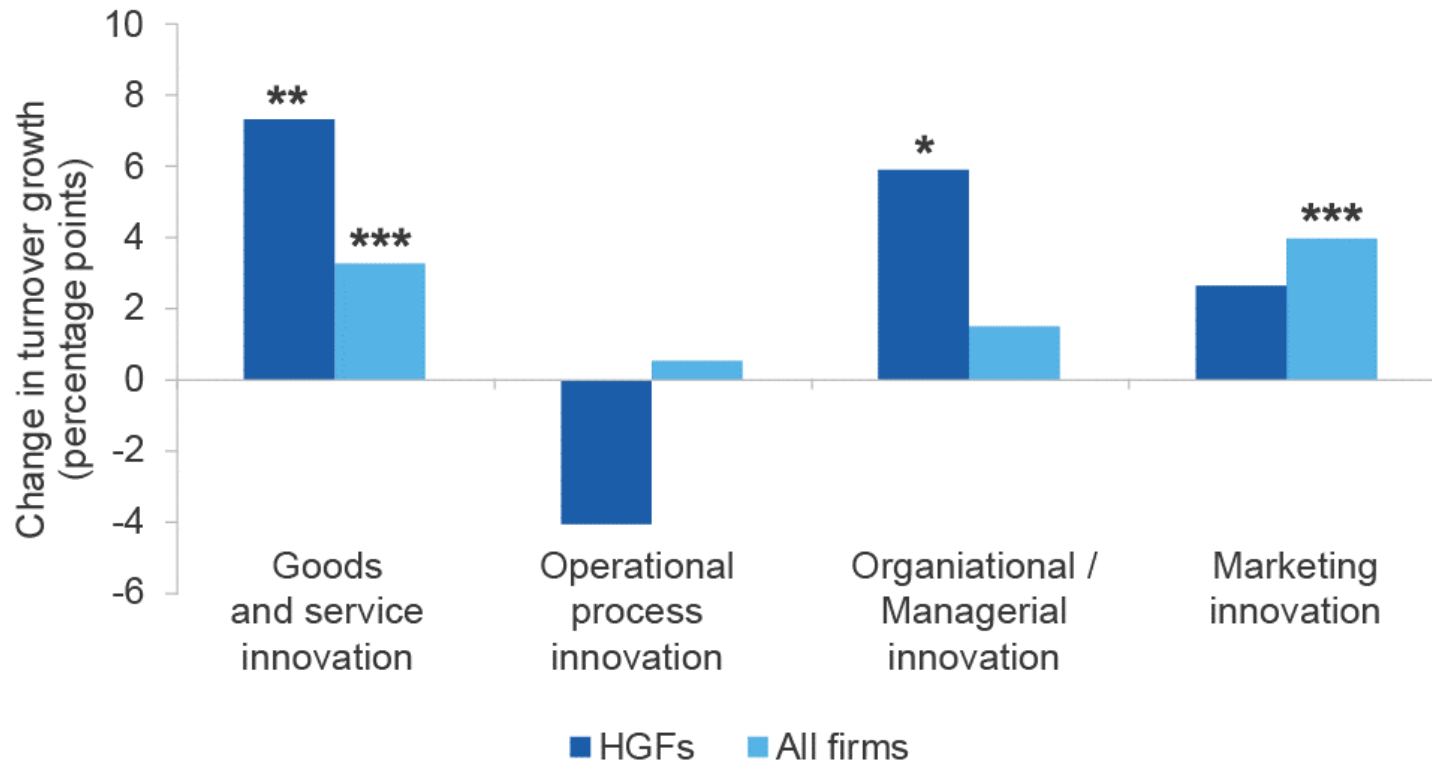
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# Innovation and (high) firm growth

# Innovation is important

## Impact of innovation on firm growth



Different types of innovation have different impacts:

- **Product and marketing** innovation is important for all firms
- **Goods and service** innovation is a lot more important for HGFs
- **Organisational process** innovation shows mixed results

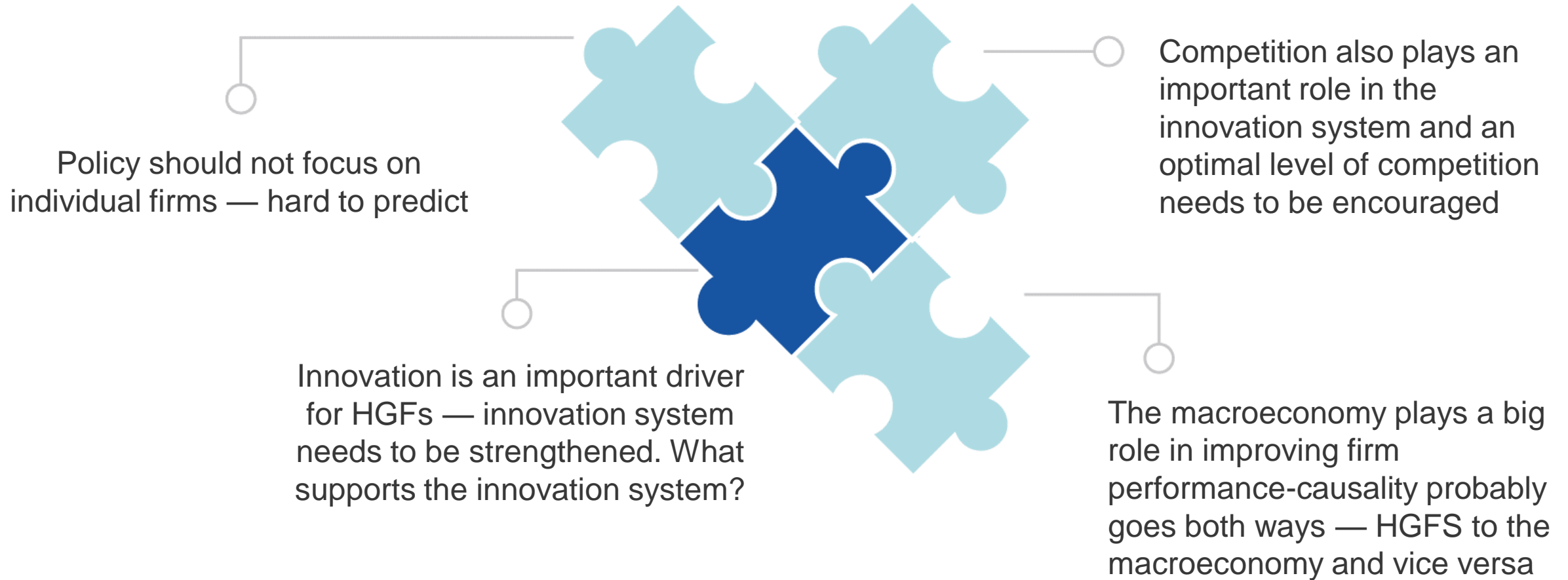
Source: ABS (2017) Business Longitudinal Data Environment (BLADE), Business Characteristics Survey (BCS) data linked to firm-level financial data. Analysis by Department of Industry, Innovation and Science

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

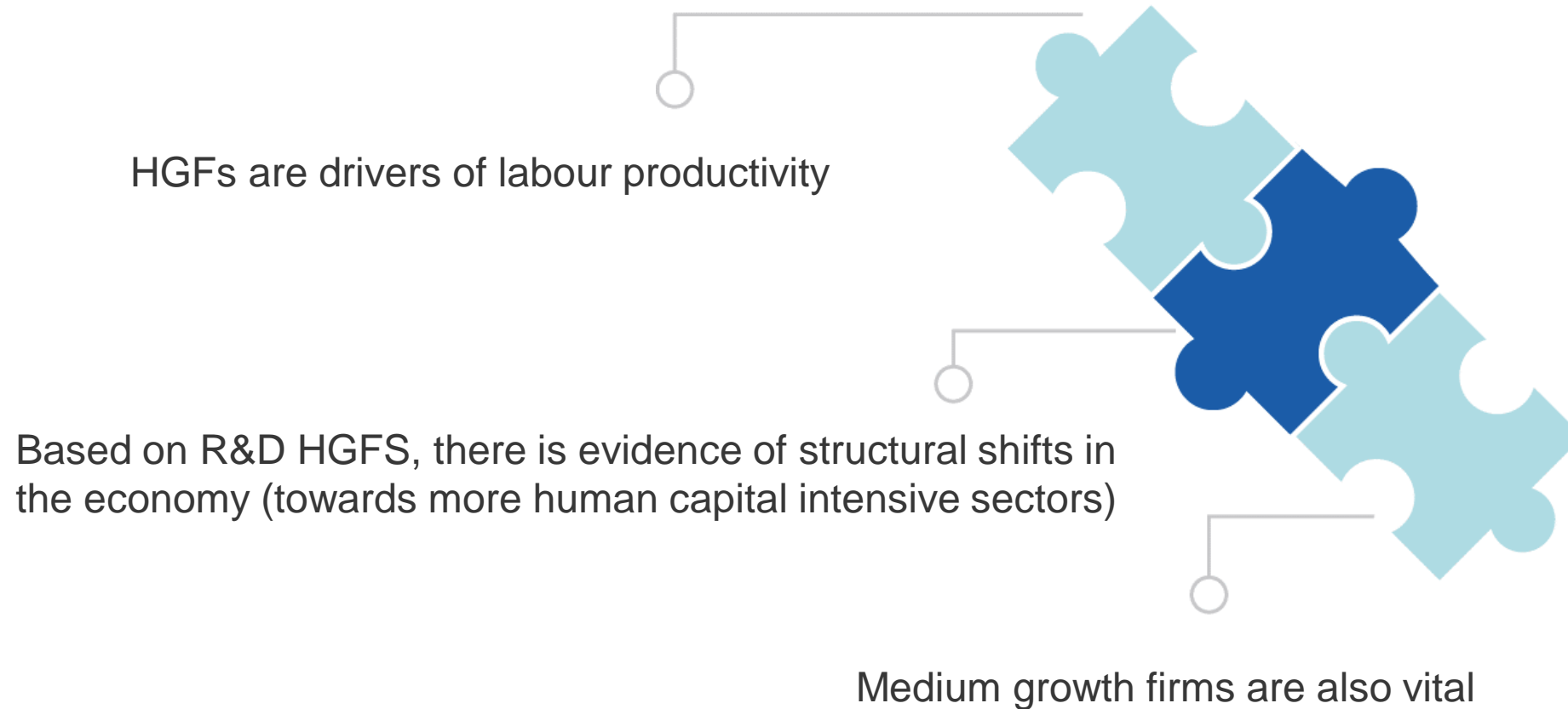


# Conclusions

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# Further information



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