

# **Business Dynamism in the UK: New Findings using a Novel Dataset**

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# Business Dynamism

- Business dynamism is a study of birth, growth and decline of businesses and its impact on employment
- What motivates us?
  - Between 2012 to 2016 : Inter-departmental Business Register (IDBR) workforce expanded by 3.2 million jobs (in gross)
  - Only 1.8 million (net) jobs would have been added if job creation and destruction rate had remained as they were before 2008.
    - Important to understand business dynamism to identify the origin of employment growth

# What we do

- Measure employment dynamics of UK businesses from 1999 to 2019
- Building on microdata from the Inter-Departmental Business Register (IDBR) to examine dynamics at a quarterly frequency
  - Improves existing use of IDBR snapshot data
  - Capture within-quarter changes
- Use IDBR PAYE information to derive employment measure
- Derive a consistent firm age from the new activity, entry and exit measures

# Data innovation: Longitudinal Business Database

Use datasets from the Longitudinal Business Database (LBD). It improves existing business databases:

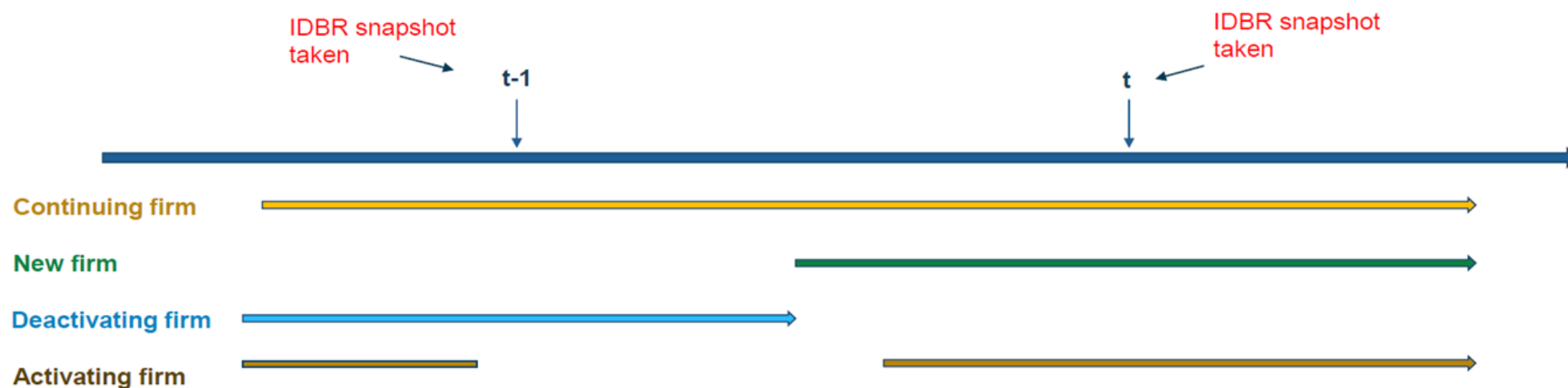
- Near-population coverage with quarterly frequency
- Enable multi-level linking of data from survey and administrative source
- Construct datasets using consecutive IDBR snapshots
- Capture continuity within a quarter, within-quarter changes of industry and business structure

# Issue of individual snapshot data

Individual snapshot does not capture activity of individual firms over a period of time

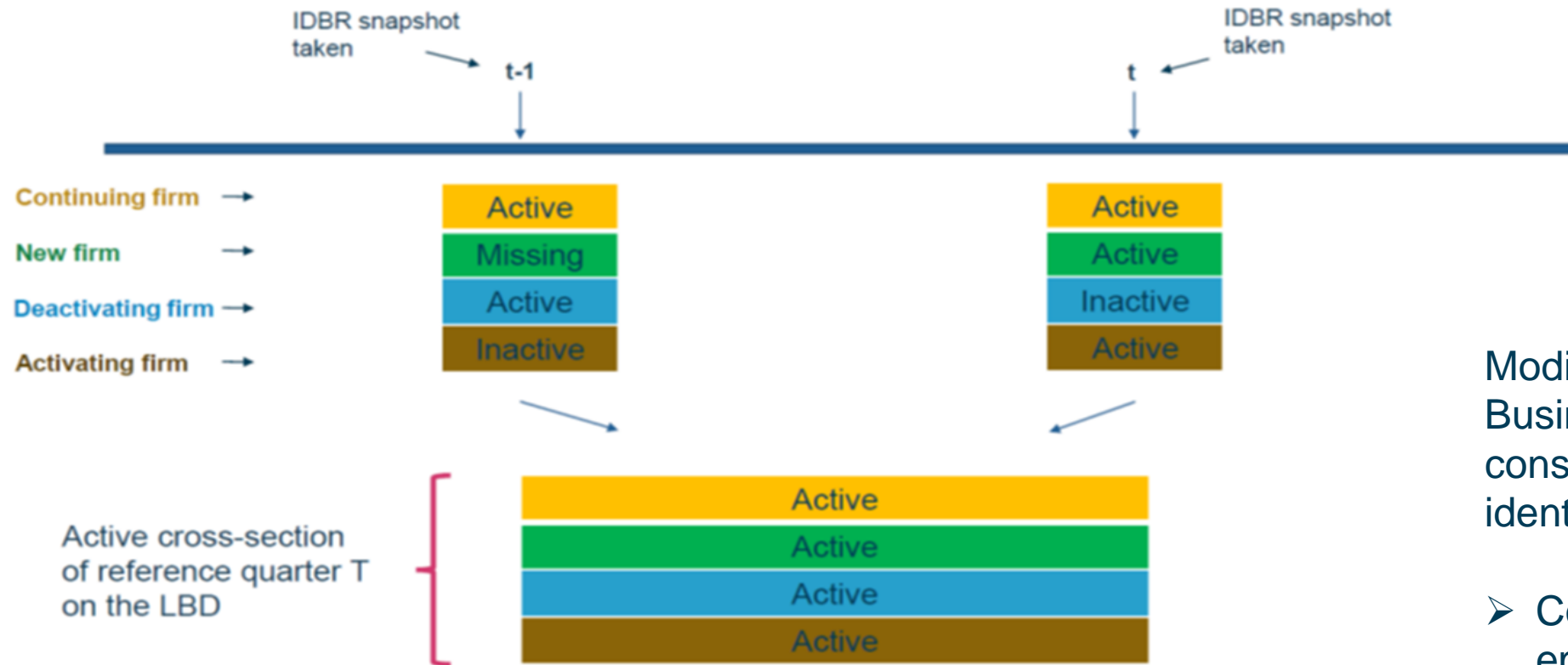
- Snapshot data represents what is true at the point in time, not over a quarter

❖ An illustration:



# Quarterly Active Enterprise Populations

Each LBD cross-section is created using of consecutive snapshots



Modified criteria used by ONS Business Demography to consecutive IDBR snapshots to identify active enterprises:

- Compare turnover, employment, number of live Valued Added Tax (VAT) and Pay As you Earn (PAYE) units

# Data innovation: Age estimate

- Difficult to distinguish genuine births of enterprises from pure legal and administrative changes, see Criscuolo et al (2014)
- Firm birth and death variables present in the IDBR snapshots are inaccurate
- Our age estimate: counts consecutive quarters with signs of activity, accounts for periods of disrupted activity
  - Two different age measures at two different points in time if a firm becomes inactive and then reactivates
  - Count 4 quarters of inactivity to restart the counter

# Data innovation: Employment measure from PAYE links

- IDBR enterprise employment records: primarily derived from the Business Register Employment Survey (BRES), complemented with other surveys and administrative sources
- Existing UK business databases take information about firm-level employment from the IDBR
- We use IDBR PAYE information to derive employment measure
  - Count number of employees on PAYE scheme in real time as enterprise employment
  - Use BRES and other smaller surveys for enterprises that are not covered by PAYE



# Employment contributions due to job creation and job destruction

Employment contributions over the active total IDBR workforce (including public sector), UK,  
1999 to 2007 and 2011 to 2019

## Employment contributions (%)

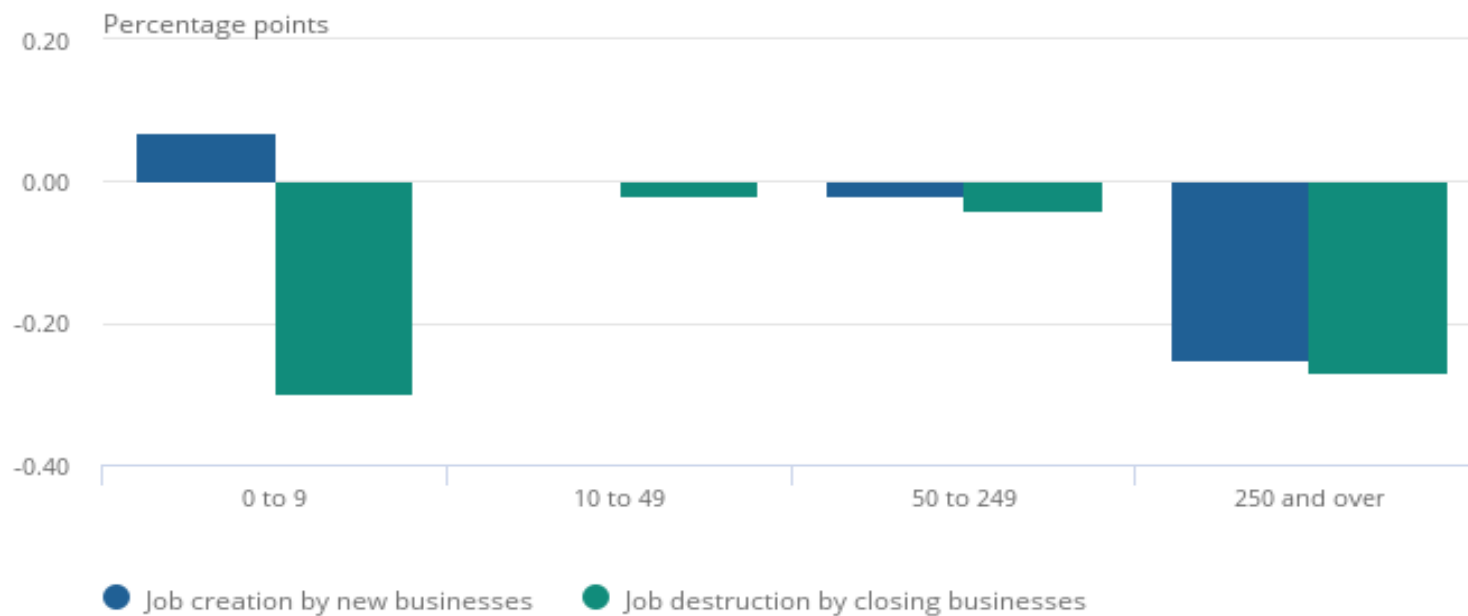
	1999 to 2007	2011 to 2019	Change
Job creation	5.12	4.82	-0.30
New businesses	1.31	1.12	-0.19
Incumbents, growing	3.81	3.70	-0.11
Job destruction	4.71	4.37	-0.34
Closing businesses	1.36	0.74	-0.62
Incumbents, shrinking	3.35	3.63	0.28
Net effect	0.41	0.45	0.04
Net effect incumbents	0.46	0.07	-0.39

Source: Office for National Statistics – Inter-Departmental Business Register (IDBR)

# Employment contributions due to job creation and job destruction

- In the decade to 2019, business dynamism has declined in the UK, in particular through reduced job destruction
- Incumbents created fewer jobs and destroying more jobs
- Prashar et al. (2019): net effect of incumbents is greater than new businesses – existing firms created more jobs
- Our findings: new firms created more jobs than existing firms

The difference in quarterly average contributions by new and closing businesses by size, UK, from 1999 to 2007 and 2011 to 2019



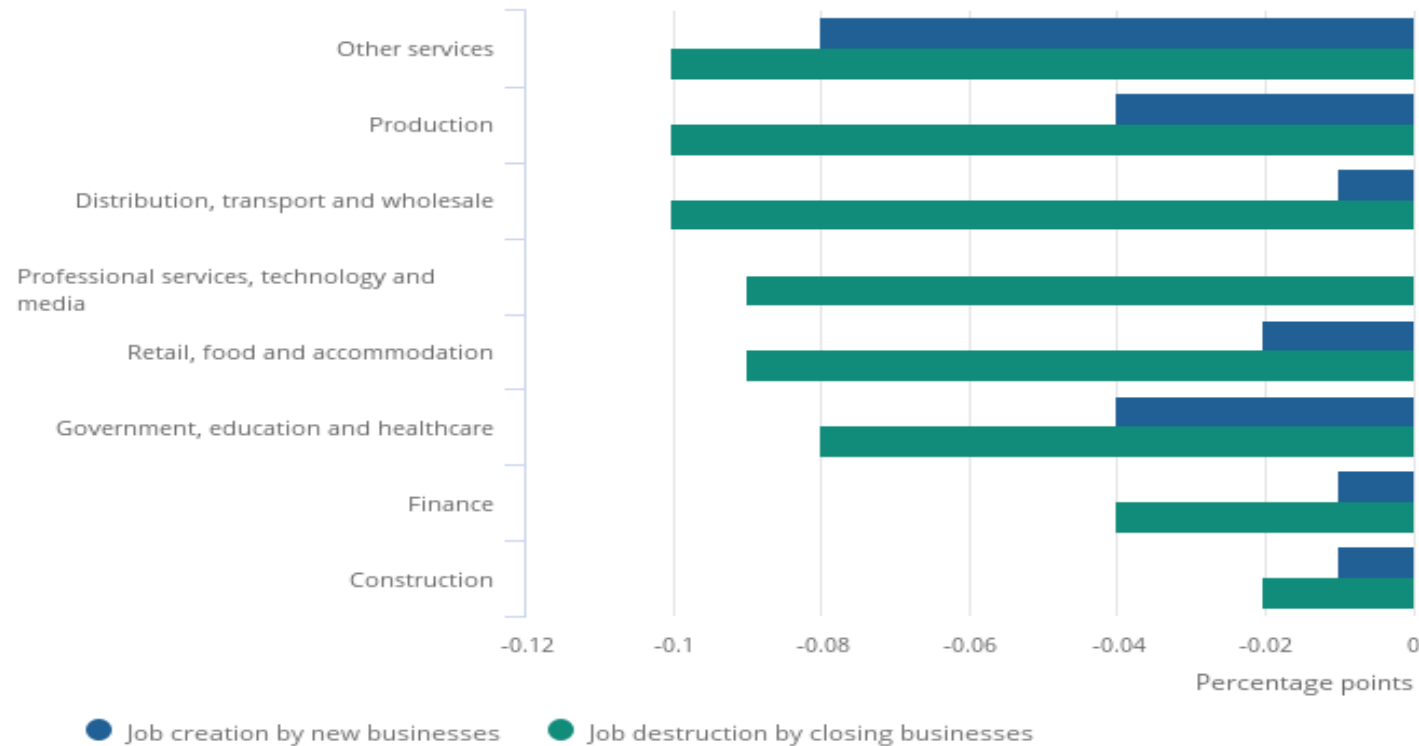
## Job creation and destruction by firm size

Source: Office for National Statistics – Inter-Departmental Business Register (IDBR)

# Job creation and destruction by firm size

- Micro businesses are primarily responsible for the decline in job destruction rate from exit
- Large businesses have experienced a substantial decline in both job creation and destruction
- Anyadisk-Danes et al. (2013): small firms are responsible for a significant amount of job creation
- Our findings: micro firms are net job destroyers

The change in job destruction by closing firms and job creation from new businesses, UK, from 1999 to 2007 and 2011 to 2019



## Change in job creation and job destruction by industries

Source: Office for National Statistics – Inter-Departmental Business Register (IDBR)

# Change in job creation and job destruction by industries

- Job destruction by closing businesses has fallen across all industries since the 2008/09 economic downturn
- In all industries, this was accompanied by a fall in the job creation rate from new firms
- The decline in business dynamism was widespread across the economy, not concentrated in any industries

Job creation rates from new businesses and job destruction rates from closing businesses by different age bands as a proportion of the active total IDBR

Employment contribution (%)

		1999 to 2007	2011 to 2019
0 to 1	Net effect	0.75	0.76
	Job creation <sup>1</sup>	1.30	1.11
	Job destruction	0.55	0.35
2 to 4	Net effect	-0.19	-0.11
	Job destruction	0.19	0.12
5 to 9	Net effect	-0.24	-0.08
	Job destruction	0.25	0.08
10 to 14	Net effect	-0.12	-0.05
	Job destruction	0.14	0.05
15 and over	Net effect	-0.24	-0.15
	Job destruction	0.24	0.15

Job creation rates and job destruction rates by age bands

Source: Office for National Statistics – Inter-Departmental Business Register (IDBR)

Notes

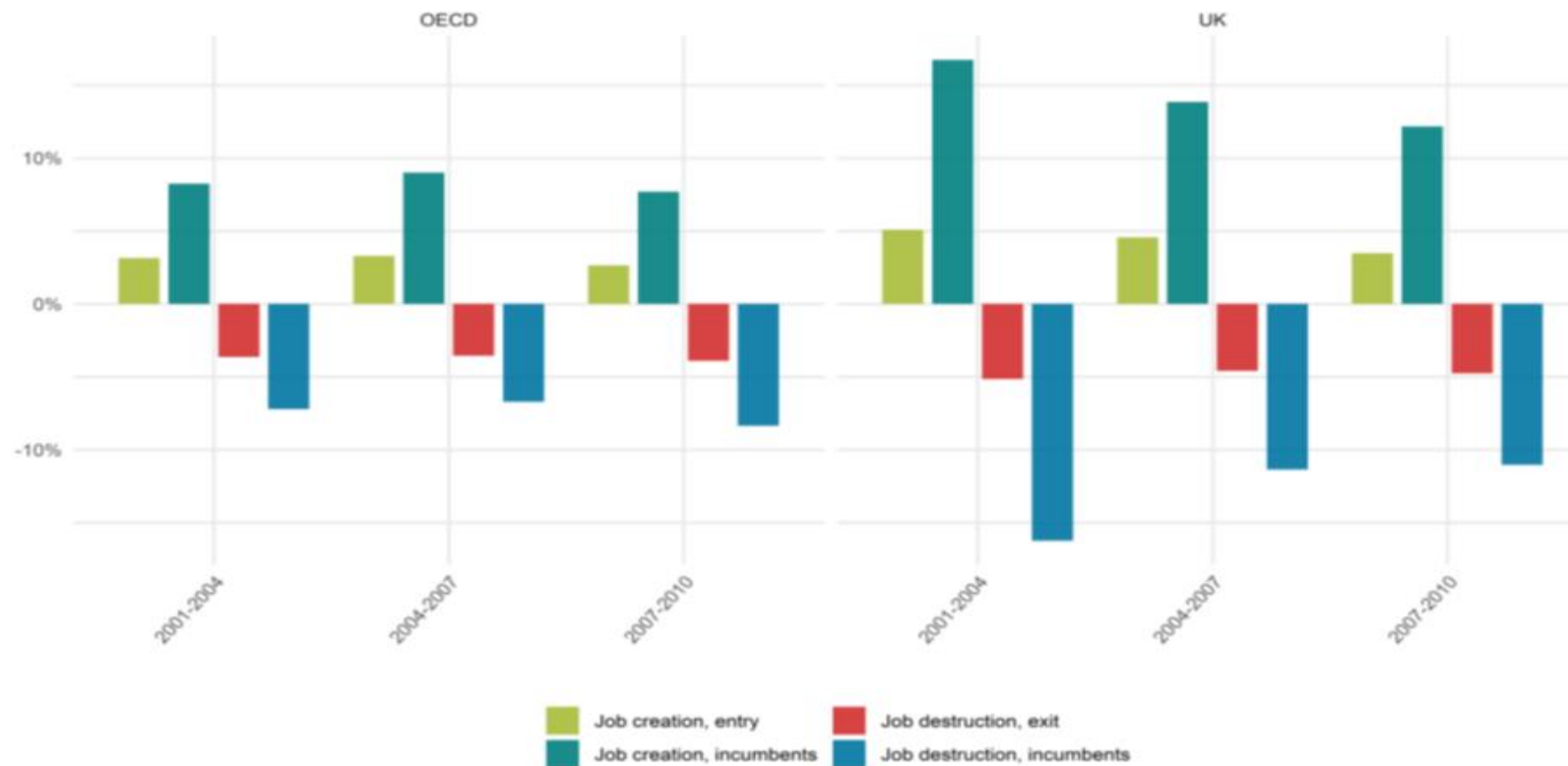
1. While technically we are calculating the reactivations of older firms as job creation from entrants, the effect is small and almost zero.

# Job creation rates and job destruction rates by age bands

- Age has an important role in UK's business dynamism both in terms of job creation by entry and job destruction by exit
- Young businesses have been creating and destroying most jobs over the last 20 years



Gross job flows by intensive (incumbents) and extensive (entry/exit) margins, periods between 2001 and 2010



## International Comparison

Source: Office for National Statistics – Inter-Departmental Business Register (IDBR), OECD – DynEmp

# International comparison

- The trends are similar, but the UK figures are larger in magnitude. UK also shows a more persistent decline
- UK's contribution to job creation and destruction from young SMEs to total employment is similar to its counterparts in countries like US, Canada, Italy and France
- Annual extensive and intensive reallocation rates for US and UK:
  - Extensive margin trends and levels in the UK are consistent with those of the US. Intensive margin shows more differences between the 2 countries

# Concluding Remarks: Potentials

- Our dataset capture activity and changes for enterprises over a period of time
- Link all IDBR business units to establish a longitudinal identity spines – our ongoing LBD project:
  - A consistent framework to link surveys and administrative data over time: construct different linked datasets for multiple uses
- Enable us to further explore the use of administrative data and to conduct sub-national level analysis
- Enable us to establish consistent measures of firm entry, exit and growth

# Questions and Comments?