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Research infrastructure for research  
and innovation policy studies

# Fast growing mid-sized firms in Europe: a first exploration

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# Fast-growing firms

- **Fast growing firms** received considerable attention by academic scholars and policymakers (Coad et al., 2014)
  - Crucial role in **creating new jobs** (Birch and Medoff, 1994; Brüderl and Preisendörfer, 2000; Davidsson and Henrekson, 2002; Acs et al., 2008; Acs and Mueller 2008)
- Literature has pointed out that:
  - Firm performance appears to be highly **skewed** (Stanley et al., 1996; Bottazzi and Secchi, 2006)
  - High growth is **difficult to foresee** (Marsili, 2001; Coad, 2009)
  - **Newness** is a more important factor than small size in explaining growth (Henrekson and Johansson, 2010)
  - High growth tends **not to persist** over time (Coad, 2007; Coad and Hözl, 2009; Daunfeldt and Halvarsson, 2012)

# Key issues

- Within this debate, one category of firms received somewhat less attention: **medium-sized firms**
  - Core of job creation in Europe: German 'mittelstand'
  - Positive evidence in Sweden in terms of high growth rates (Davidsson and Delmar, 1997)
  - Positive evidence in the US in terms of persistent employment effects over time (Acs et al., 2008)
- Furthermore, little is known concerning the institutional factors that can stimulate the emergence of fast growing firms
  - Need for **cross-country/regional comparative analysis** to understand the kind of policy support that is most appropriate (Coad et al., 2014)

# Identifying fast growing mid-sized firms in Europe

## Cheetah database

- **Aim of this presentation.** Introducing the Cheetah database
  - Developed in the context of FP7 project “**RISIS** - Research Infrastructure for Research and Innovation Policy Studies”
- **Unit of analysis.** European medium-sized companies that experienced fast-growth rates in 3 growth periods (2008-2011, 2009-2012 and 2010-2013)
- **Content.** Detailed information regarding geographical localization, industry specialization, accounting data and ownership structure of each firm
  - Data source: Bureau Van Dijk’s ORBIS database
  - Data collection on patent ongoing (source PATSTAT)

# Identifying fast growing mid-sized firms in Europe

## Cheetah database – Criteria

1. Firms established in **Europe** (EU-28 countries plus Switzerland, Norway and Israel)
2. Firms are **medium-sized** at the beginning of each observation period (2008, 2009, 2010)
3. Firms experienced **fast growth** in at least one of the three observation periods

# Identifying fast growing mid-sized firms in Europe

## Cheetah database – Criteria (detail)

- Mid-sized criterion:
  - Number of employees between 50 and 4,999 and
  - Turnover lower than €1.5 billion or balance sheet total of less than €2 billion
- Fast-growing firm criterion (OECD/EUROSTAT):
  - *Firms that experienced an average annualized growth rate greater than 20% over a period of three years should be considered high-growth firms. Growth can be measured using either number of employees or turnover.*

## Comparing selection criteria

- Overall the Cheetah database includes **42,369 Fast Growing Medium-Sized Firms**

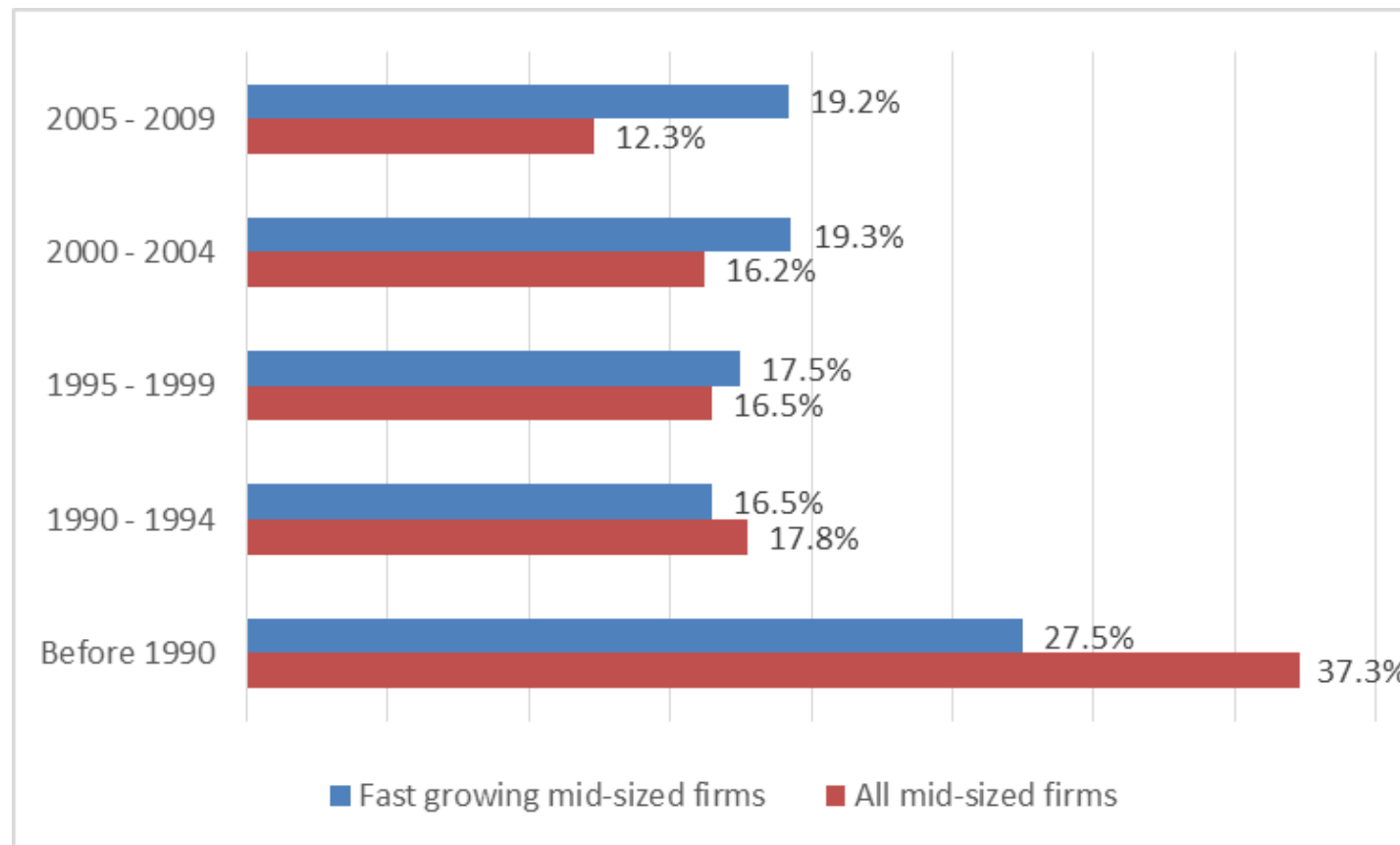
Selection criteria	Period		
	2008-11	2009-12	2010-13
<b>Either employee or turnover growth</b>	17,438	24,993	16,085
<b>Employee growth</b>	6,762	8,071	6,599
<b>Turnover growth</b>	13,648	21,045	12,698
<b>Both employee and turnover</b>	2,972	4,123	3,212



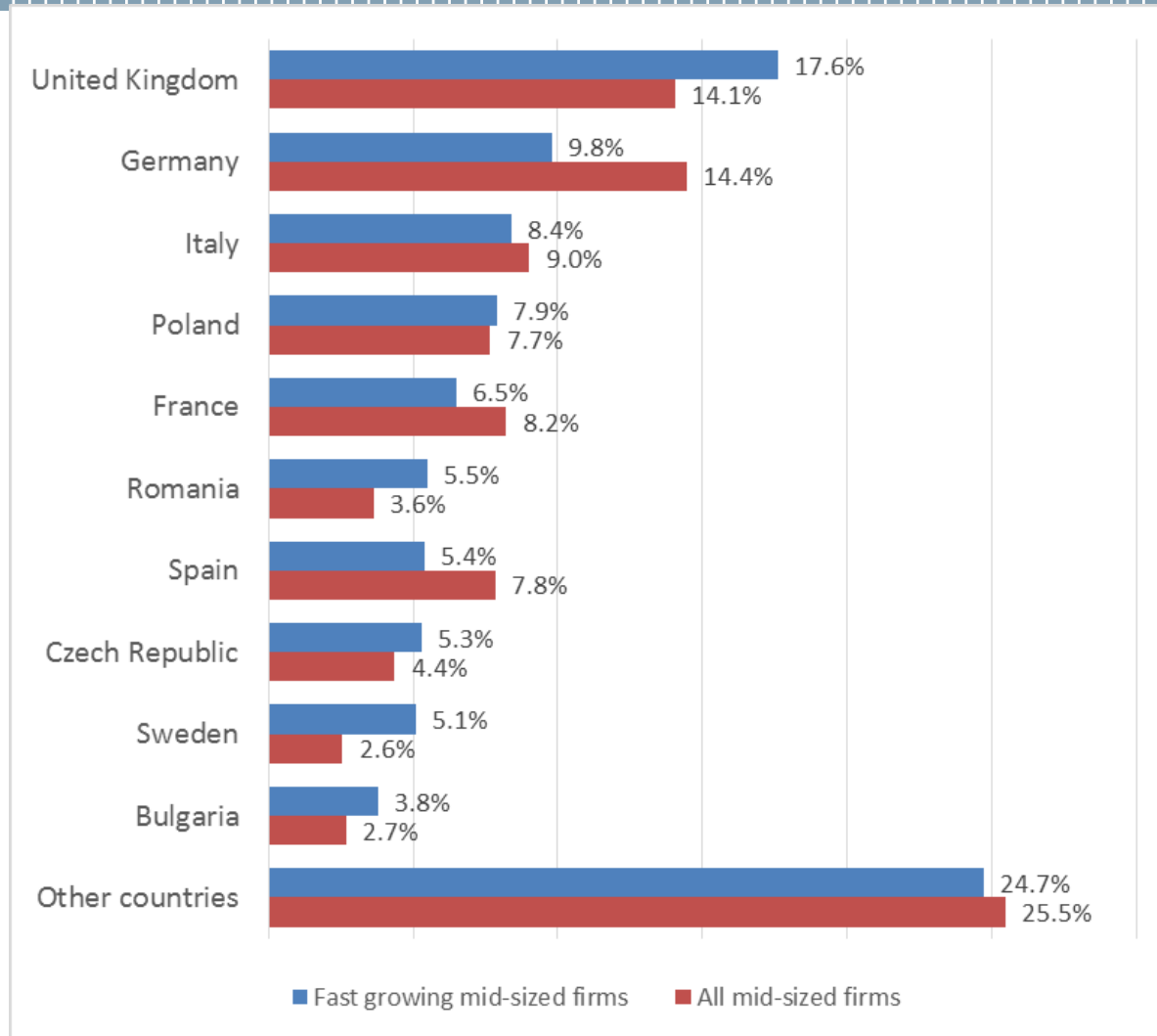
## **Fast growth mid-sized firms vs mid-sized firms**



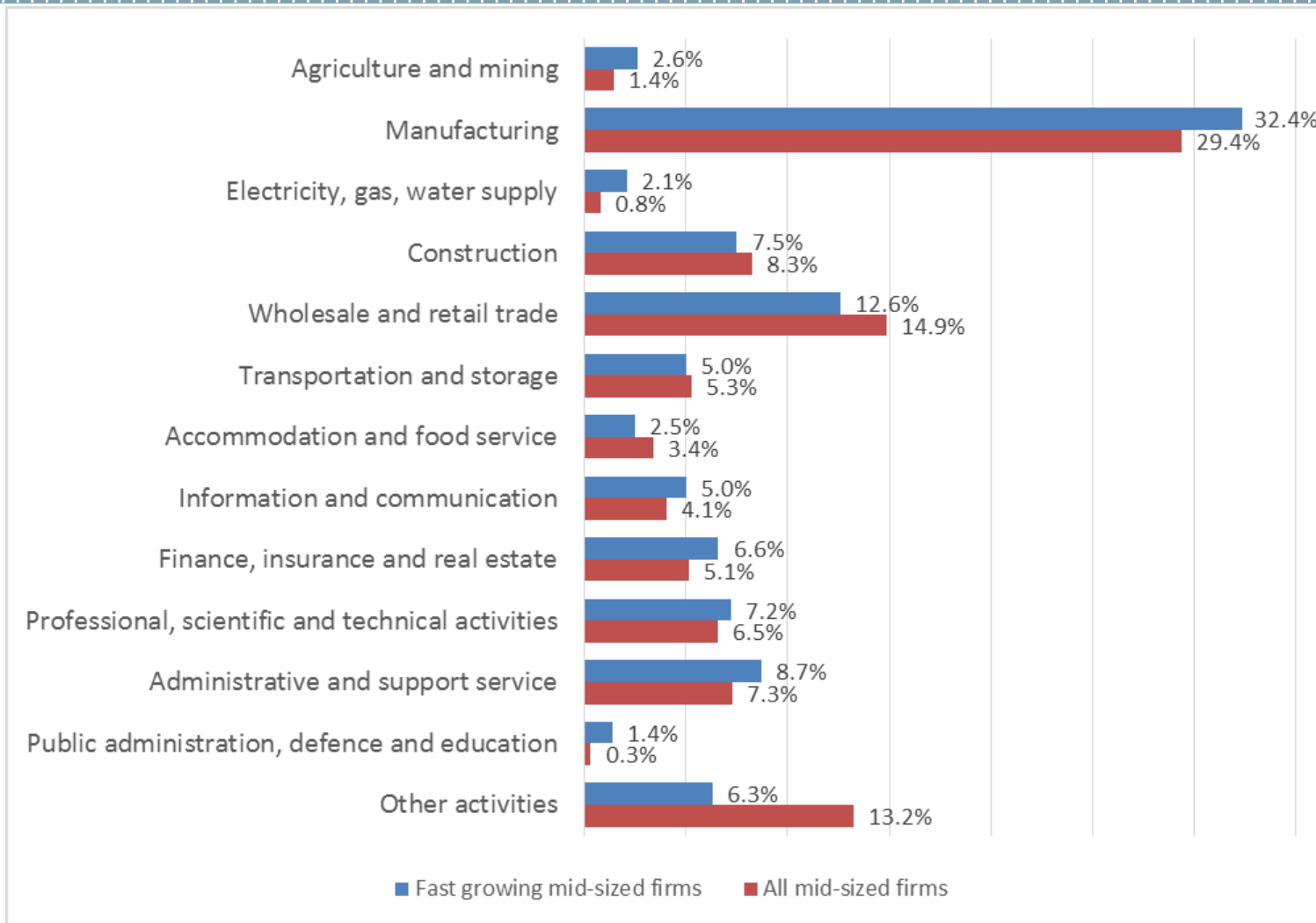
# Fast growth mid-sized firms vs mid-sized firms Distribution by incorporation year



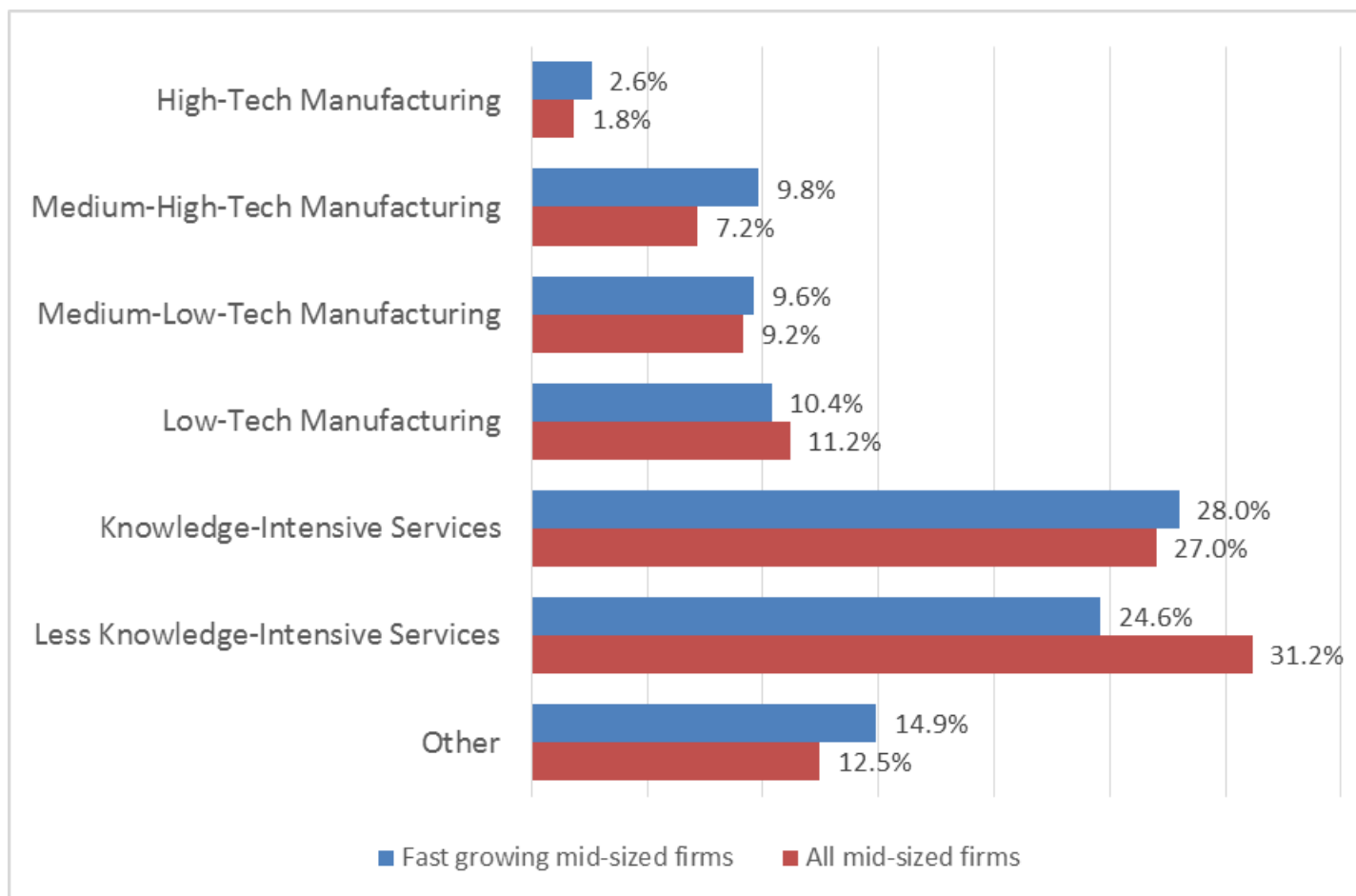
# Fast growth mid-sized firms vs mid-sized firms Distribution by country (top 10)



# Fast growth mid-sized firms vs mid-sized firms Distribution by industry



# Fast growth mid-sized firms vs mid-sized firms Distribution by industry (based on technology level and knowledge intensity)

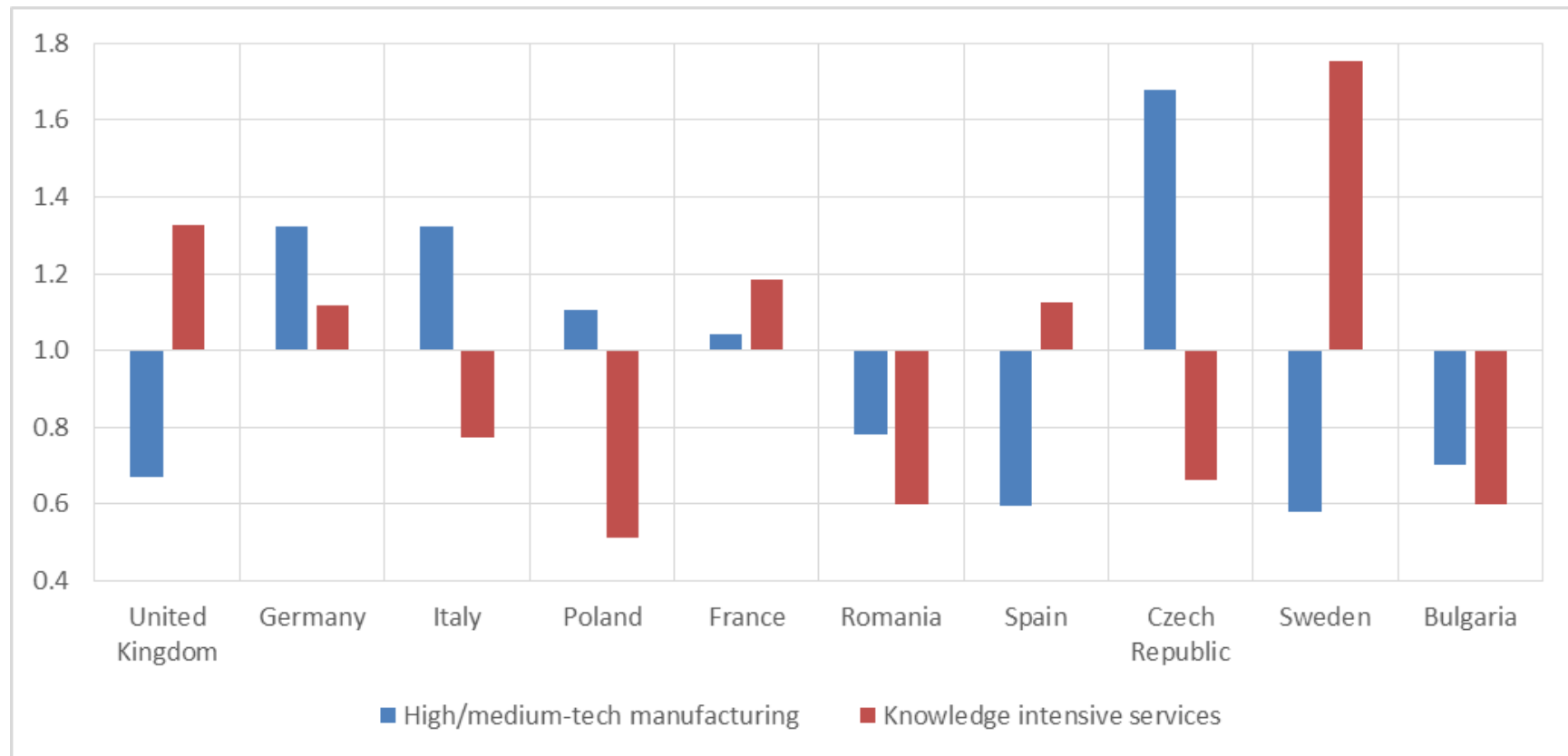




## **Growth patterns of fast growth mid-sized firms**

# Industry specialization (based on technology level and knowledge intensity)

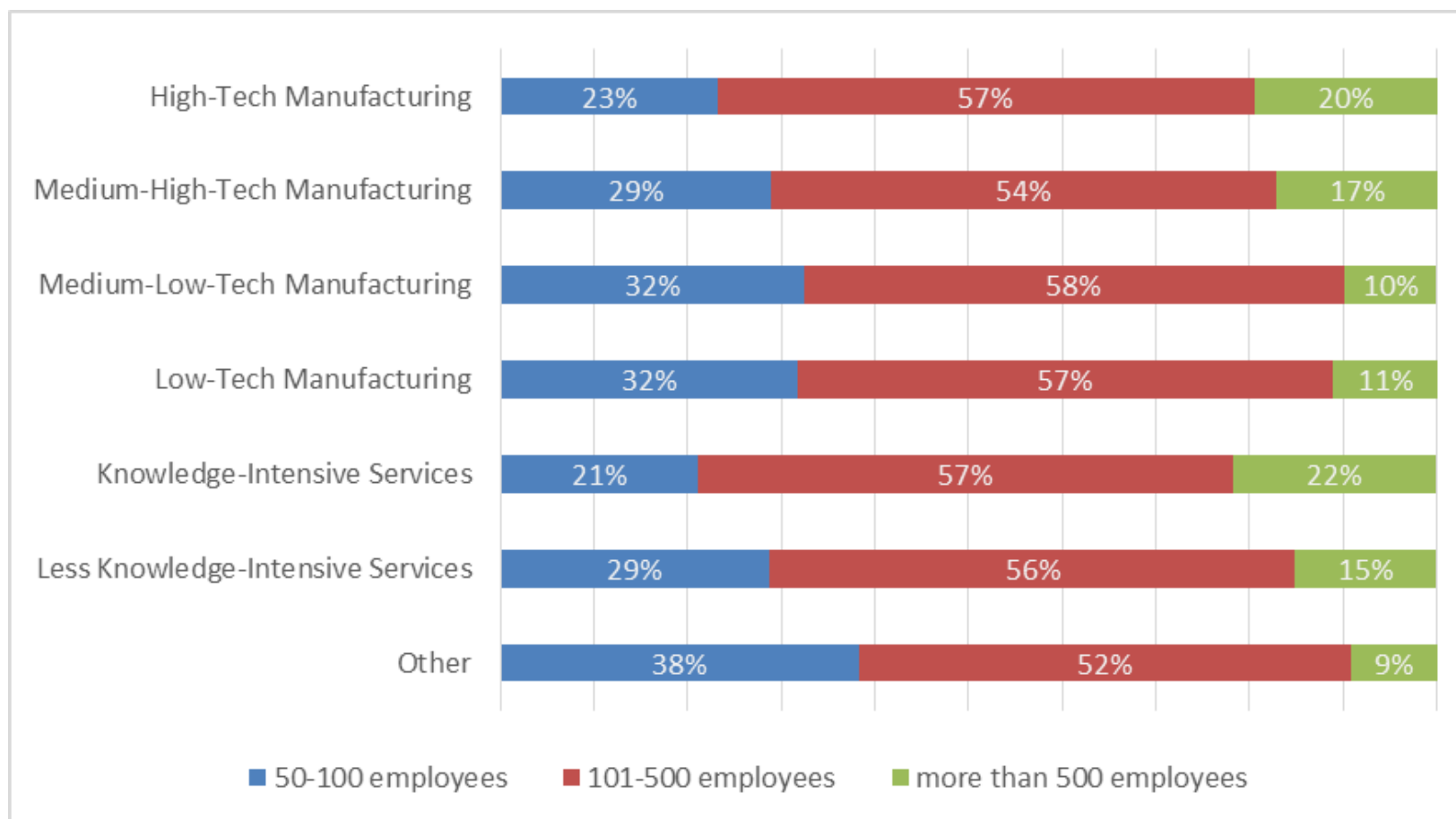
## Balassa indexes by country (top10)



## Controlled vs independent firms by country (top 10%)

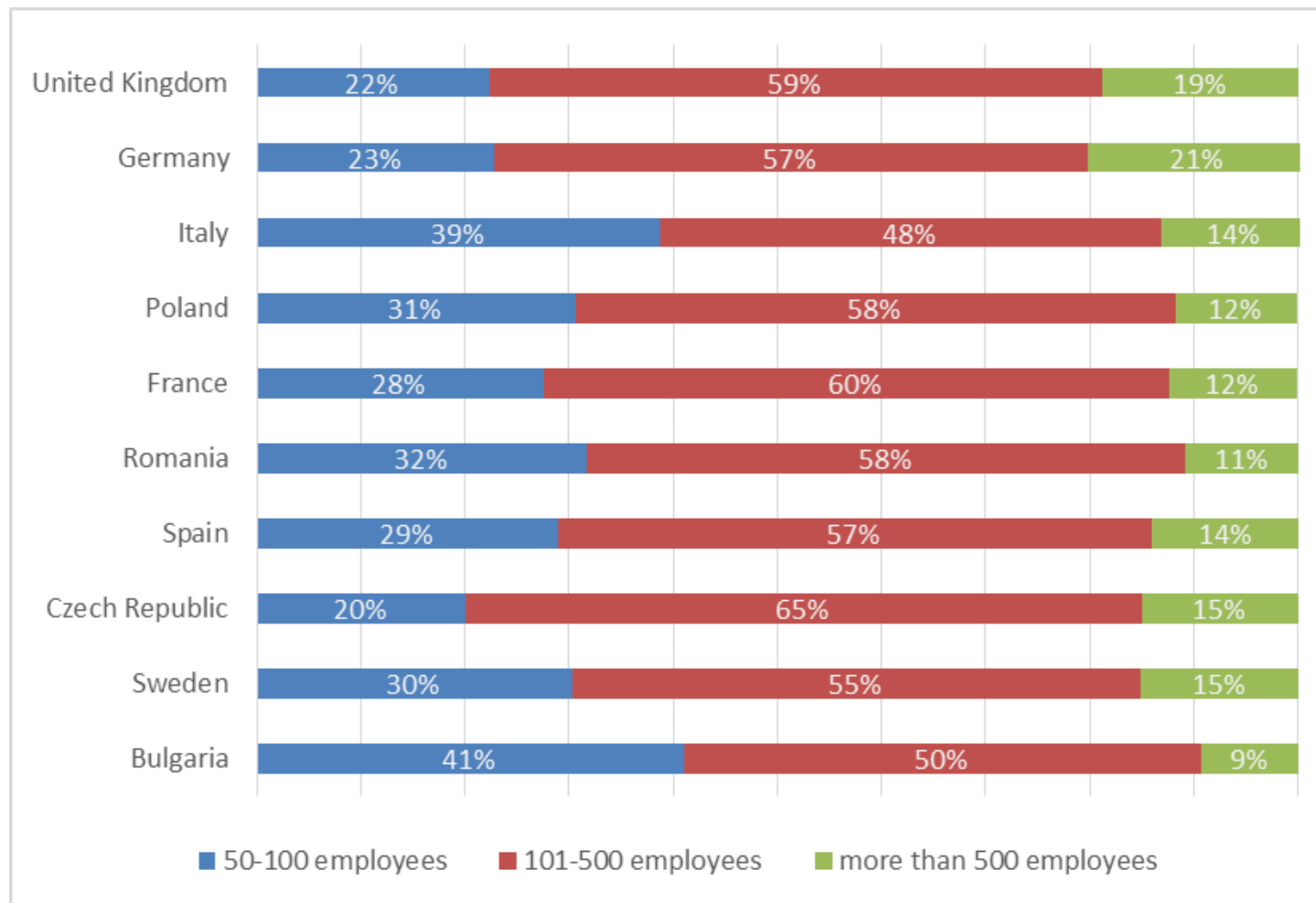
<b>Country</b>	<b>Percentage of independent firms</b>
United Kingdom	32.7%
Germany	35.3%
Italy	48.9%
Poland	50.3%
France	18.4%
Romania	61.0%
Spain	35.7%
Czech Republic	39.6%
Sweden	5.8%
Bulgaria	57.1%
Total	37.0%

# Size classes by industry (based on technology level and knowledge intensity)





# Size classes by country (top 10)



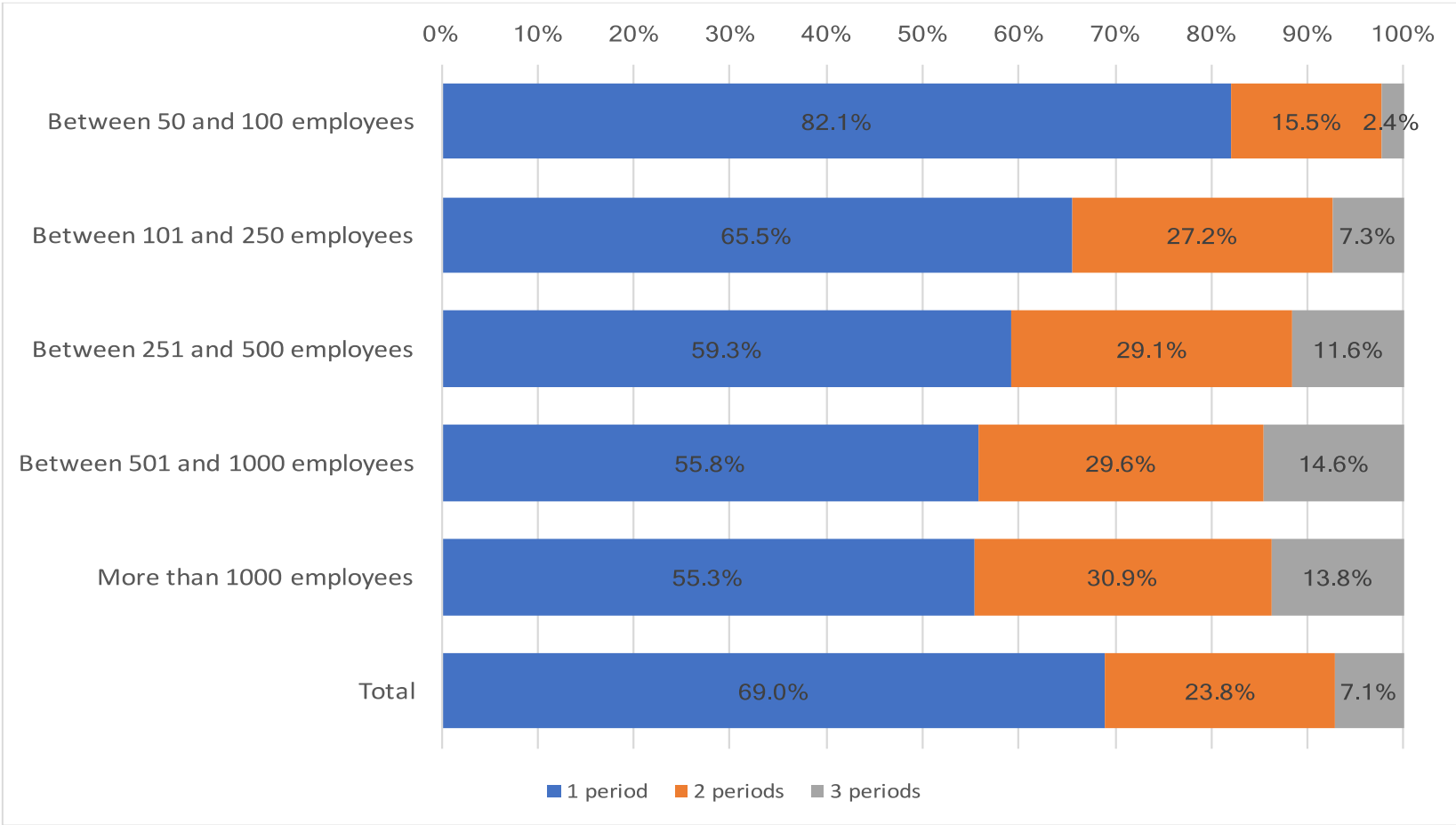
# Persistence over time

- Literature suggests that fast growth is not persistent over time (Coad, 2007; Coad and Hölzl, 2009; Daunfeldt and Halvarsson, 2012)
- However, some firms experienced growth in more than 1 observation period

<b>Number of growth periods</b>	<b>Number of firms</b>	<b>Percentage</b>
<b>One period</b>	29,245	69.0%
<b>Two periods</b>	10,101	23.8%
<b>Three period</b>	3,023	7.1%
<b>Total</b>	42,369	100.0%

# Persistence over time

## Distribution by size classes



# Conclusions

- Heterogeneity across countries
- Fast growth is not limited to high-tech/knowledge intensive industries
- Persistence is difficult (but a non-negligible amount of firms are able to grow for more than 1 period)
- Possible avenues for future research:
  - Institutional determinants and agglomeration effects
  - Mode of growth (organic vs. external)
  - Just offshoring? Role of subsidiaries of large incumbents
  - Regularity of growth over time
  - Innovation and growth