



# **“Business R&D and innovation investment and firm’s economic performance”**

## **IRI research activities**

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# Topics

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1. Corporate R&D and productivity gains
2. Sector specific?
3. R&D and employment
4. Entrepreneurship
5. Data sources and methods





# 1. Corporate R&D and productivity gains

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- Building on existing body of IRI research
- Positive effect of R&D on productivity at firm level, but
  - o No compelling reason for “erga omnes” support
  - o No clear policy instruments for targeting the support to particular types of companies
  - o No clear picture on how measures to stimulate R&D affect firm performance
  - o R&D intensity should not be pursued as a target in its own right; it’s growth and jobs ...



## 2. *Sector specific?*

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- Some sectors (car manufacturers, pharmaceuticals, ...) lend themselves better for comparisons between companies than others; focus on comparison of companies that sell similar goods/services in the same markets
- The structure of economic activity and vertical integration is changing so rapidly that statistical classifications fail to keep up; this in itself can be a sign of innovation
- IRI is increasingly looking at size, age/maturity, location as determinants of corporate R&D investments



### 3. R&D and employment

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- Jobs are created by firms that are successful in bringing new goods and services to the market; R&D is just one way of keeping a leading edge on other companies

Examples of research questions:

- o *Are there differences in employment growth in SMEs and larger innovative firms? What are they?*
- o *Does the competitive advantage gained on the back of R&D lead to more jobs and for how long?*





## 4. Entrepreneurship

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- The lack of young innovative high-tech enterprises has been identified as a major reason why Europe is lagging behind the US in R&D and innovation
- EC/OECD are working on developing an indicator which would emphasise this aspect in addition to the 3% R&D intensity target
- Again, this cannot be a target in its own right, but it is useful to include an indicator reflecting the business climate for innovators and start-ups, which can be improved by policy measures





## 5. Data and methods

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- The R&D Scoreboard is a great trigger of interest in IRI work but has its flaws for data analysis that goes beyond descriptive statistical analysis
- CIS and a wider set of company data, also covering non-R&D based innovation and allowing for the analysis of market shares and job creation, would be in line with the broadening of the scope of IRI work
- Surveys and company interviews are highly welcome and useful in the argumentation and presentation of the policy-relevant results of econometric analysis





## **Project: R&D or non-R&D**

- Productivity of firms investing in R&D vs. not investing in R&D
- Data: Compustat, selected sectors, value added
- Possible collaboration: Univ. of Groningen, Univ. of Piacenza, OECD







## **Project: Scoreboard analysis**

- Topic: Productivity of top investing companies in R&D; vertical integration; size; age; location
- Data: Bureau van Dijk; OECD ANBERD





## Projects (ABC): R&D and jobs

- Topic: Number and persistence of jobs created; differences between innovative and non-innovative firms
- A) Data: 9-year balanced panel of 3300 Spanish innovative firms; Encuesta sobre Innovación en las Empresas; Analysis based on quantile regression approach to capture firm heterogeneity; More countries?
- B) Scoreboard panel data
- C) Descriptive statistical analysis comparing employment growth according to CIS 3 and CIS 2008 by sector and for different firm sizes





## Projects (DEF): R&D entrepreneurship

- Topic: Why EU enterprises are holding back on R&D

D) Fragmented market; non-transferable R&D

E) Too far away from technology frontier

F) Gap between science and business; project selection

In collaboration with academic community

Data: various sources, FP, CIS, EIF, Max Planck

