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# Panel 1: Corporate R&D strategies and EU's long-term competitiveness

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## R&D and firms' performance

R&d is a **costly** and **risky** activity.... always.

**BUT**

R&D increases always firms' **internal capabilities**, **competences**, **skills**, and **absorptive capacity**

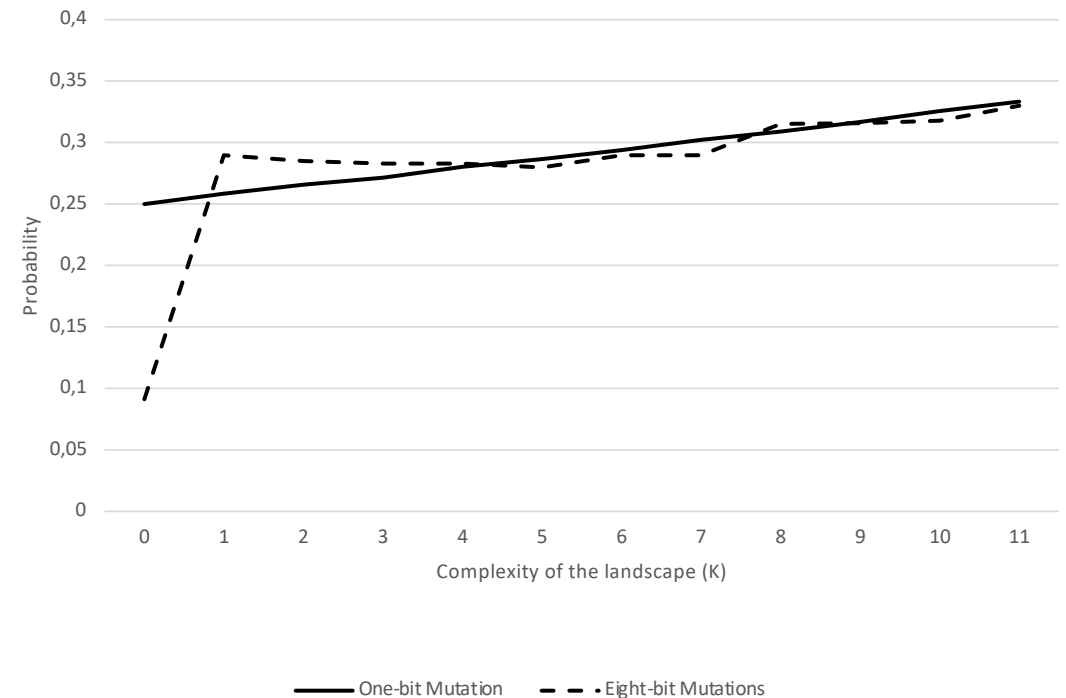
Even when the **innovation** project **fails** (Cefis, Leoncini, Marengo, 2024)

When innovation projects have success (introduction of innovation or the adoption of a new technology)

=> R&D activities **enhance firm's** and **performance** and **also in M&A** (Cefis, Marsili, Rigamonti, 2020)

The adoption of the **digital technologies** seems to increase productivity, especially **labour productivity even more** (Cefis, Scrofani and Tubiana, 2024)

*Probability of introducing a successful innovation after failure with different search strategy*



Source: Cefis, Leoncini, Marengo, 2024



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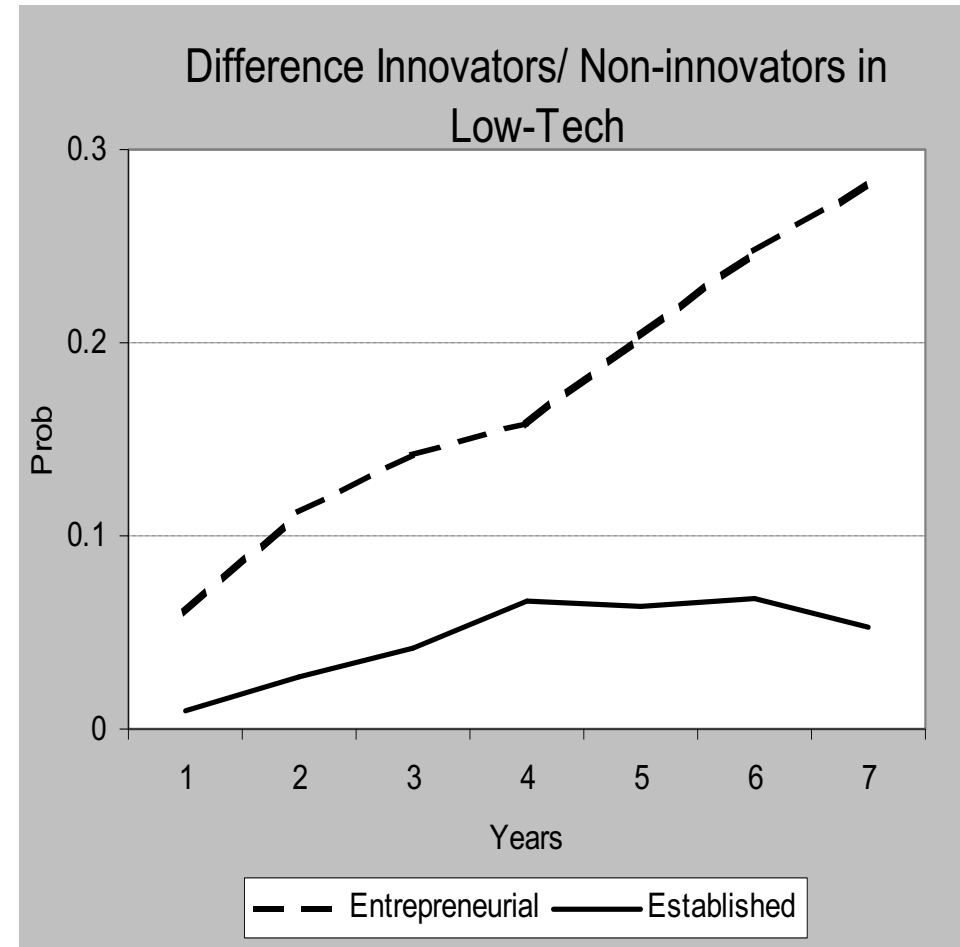
# Long-term impact of R&D

Firms' **survival** is the first indicator of firms' performance

Innovators have **higher probability of survival** than **NON-innovator** (Cefis, Coad, Lucini-Paioni, 2024)

Especially for the **young and small firms** there is a relevant and significant **innovation premium** in terms of survival; +23% during infancy (Cefis and Marsili, 2006; 2012)

Even if we consider periods with **exogenous shock** (i.e. **Covid19**) or **financial crisis** (i.e. **Subprime crisis 2007-2009**) there is an innovation premium in terms of survival (Cefis and Marsili, 2019)



Source: Cefis and Marsili, 2012



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# R&d and Patents

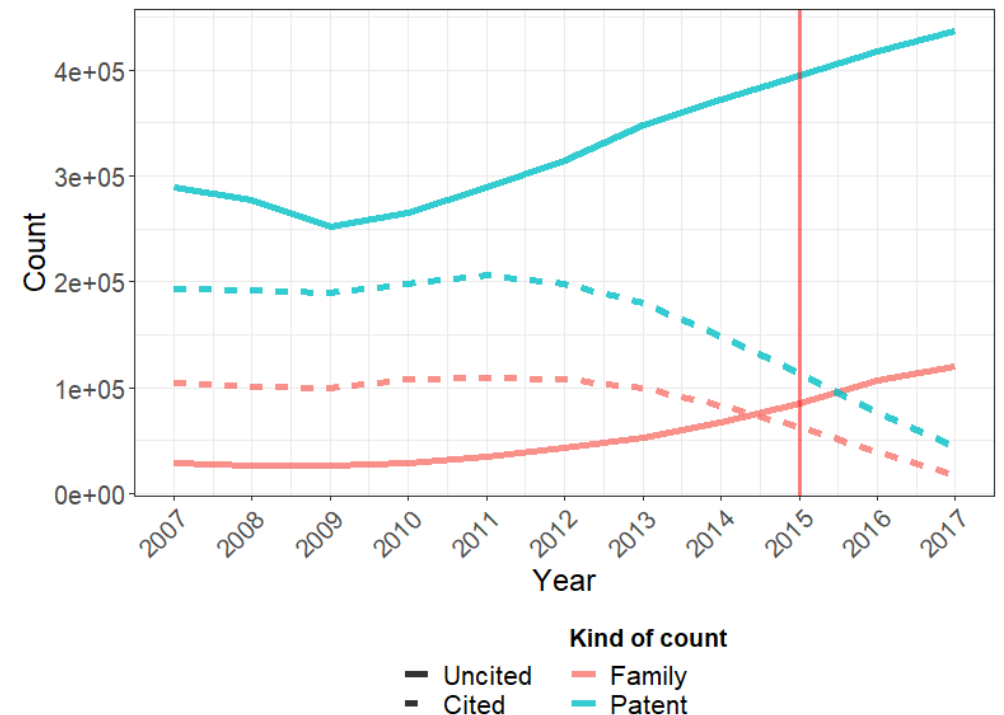
Increasing R&D investments generally relates to an **increasing number of granted patents**

So is there **an increase in creativity**? In discovering new things? **An increase in the technological pace**?

The majority of granted patents **are not introduced to the market and remain without citations**; they do not contribute to the cumulative knowledge of **society**. (Cefis, Grassano, Tubiana, 2024)

The majority are **strategic patents**

Cited and uncited patent (family) count.



Source: Cefis, Grassano, Tubiana, 2024



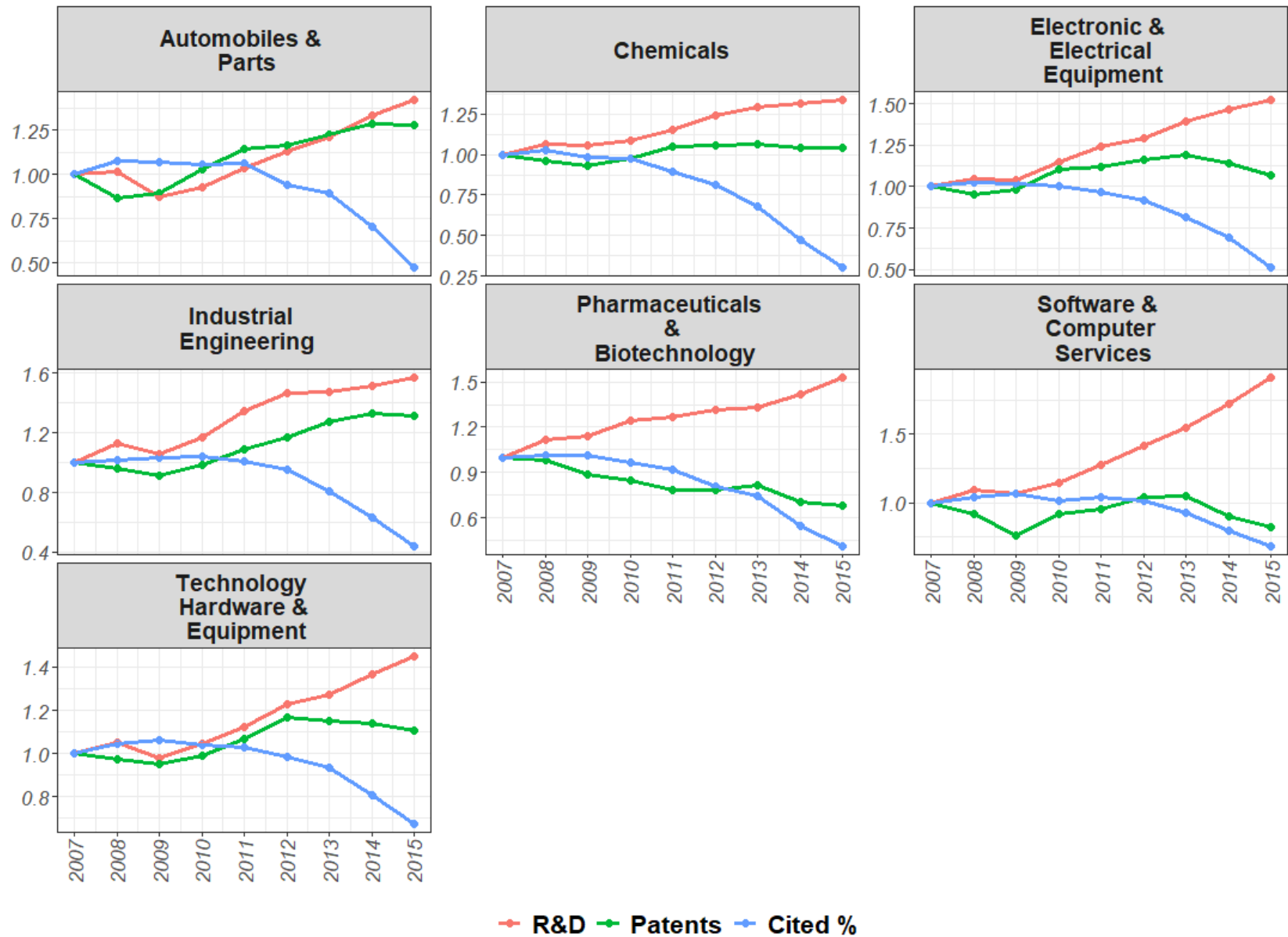
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# R&D, patents applications and share of cited patents by ICB sector.

Notes: plotted trend lines are normalised to take value 1 in 2007. Hence, each point represents a percentage change relative to the starting value.

Cefis, Grassano, Tubiana, 2024



# References

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- \* Cefis, E., Coad, A., Lucini Paioni, A. (2023), [Landmarks as lighthouses: firms' innovation and modes of exit during the business cycle](#), *Research Policy*, 52(8), 104778
- \* Cefis, E., O. Marsili, D. Rigamonti (2020), [In and Out of Balance: Industry Relatedness, Learning Capabilities and Post-Acquisition Innovative Performance](#), *Journal of Management Studies*, 57(2), 210 – 245
- \* Cefis, E., & O. Marsili (2019), [Good Times, Bad Times: Innovation and Survival over the Business Cycle](#), *Industrial and Corporate Change*, 28(3), 565-587
- \* Cefis, E., & O. Marsili (2012), [Going, going, gone. Exit forms and the innovative capabilities of firms](#), *Research Policy*, 41(5), 795–807
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