

# Inside Innovation Persistence: New Evidence from Italian Micro-data

## **Cristiano Antonelli**

Dipartimento di Economia, Università di Torino

BRICK (Bureau of Research in Innovation, Complexity, Knowledge), Collegio Carlo Alberto.

## **Francesco Crespi**

Dipartimento di Economia, Università Roma Tre

BRICK (Bureau of Research in Innovation, Complexity, Knowledge), Collegio Carlo Alberto.

## **Giuseppe Scellato**

DISPEA - Politecnico di Torino

BRICK (Bureau of Research in Innovation, Complexity, Knowledge), Collegio Carlo Alberto.

This paper contributes the analysis of the persistence of innovation activities, as measured by different innovation indicators and explores its past and path dependent characteristics. The study provides new insights on the role of R&D investments in innovation persistence and analyses differentiated patterns of persistence across product and process innovation, by accounting for complementarity effects between the two types of innovative behaviour. The empirical analysis is based on a sample of 451 Italian manufacturing companies observed during the years 1998-2006, and exploits both descriptive techniques such as Transition Probability Matrix and econometric methods based on dynamic probit models. Results highlight the relevance of innovation persistence. The highest level of persistence is found for R&D-based innovation activities, witnessing the actual presence of significant entry and exit barriers. Moreover, we obtain more robust evidence of persistence for product innovation than for process innovation when complementarity effects between the two types of innovation are accounted for.