FIRM PERFORMANCES, INTERNATIONAL ACTIVITIES AND INNOVATION. A MICRO LEVEL ANALYSIS ON ITALIAN FIRMS.

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Curriculum: Economia del settore pubblico

XXIX Ciclo

Abstract

The aim of this dissertation is to contribute to the debate on the relationship between innovation and internationalization. After providing in Chapter 1 a comprehensive overview of the theoretical and empirical debate on this relationship, we investigate in chapter 2 the impact of being involved in international market on innovation disentangling different strategies of foreign activity in order to add empirical evidence to the branch of the literature on learning-to-innovate-by-internationalization (LIBI) (Chapter 2). Finally, in Chapter 3, we examine the role of persistency in both innovation and export activity to see if the long-lasting involvements ensure higher returns on productivity. We will go through these different steps using data on Italian manufacturing firms covering an eight year time-span (1998-2006), drawn from three waves (VIII, IX, X) of the AIDA Capitalia Survey of Manufacturing firms.

Going more in detail, in Chapter 1 we go through the debate going on in the literature in recent decades analyzing the change in theoretical perspective from an industry level approach that was in the vogue up to the end of '90s, to the growing importance of firms' heterogeneity that has been introduced at start of the century. This change in perspective has been reflected in the empirical literature and we will see the different branches and the main contributions to them.

The contribution to the literature we want to give in Chapter 2 is not only focused on exports as in the majority of the works in this field (see for surveys Wagner 2007, 2012; and, for Italy, Gattai, 2015) but the novelty of our approach is to consider different level of involvements in international activities: export, FDI and outsourcing. Moreover, we measure the impact of these strategies on different kinds of innovation: first of all, we will see if and how each strategy influences innovation performance as a whole, then we distinguish between product and process innovation. Our estimation models have been carried out through complementary methodologies: starting, first of all,

with probit estimation, then moving to propensity score matching estimation to cope with endogeneity issues, and finally also using Heckman correction to control for any selection bias due to unobservable. What comes out from our results is that: 1) both exports and FDIs have a positive impact on innovation and the latter strategy has also an higher impact on the probability of introducing innovation if we consider any type of innovation; 2) when we consider product innovation, exporting and investing abroad raise the probability of introducing such kind of innovation; 3) outsourcing, instead, shows positive and significant coefficient when we consider process innovation suggesting that firms contracting out to other partners some stages of the production may introduce some innovation to optimize the whole process.
Then, since destination of international activities may influence the outcome, we also distinguish countries of destination in three different classes (EU15, Industrialized non-European countries and non-industrialized non-European countries) and we find, that exporters and FDI makers have higher probability to introduce innovation if they undertake their activities in countries outside the Europe, but, in particular and somehow surprisingly, exporting towards non-European and less developed countries raise the probability of introducing product innovation since firms have to face greater consumer heterogeneity in less-developed countries than in more developed ones, since Italian customers have more similar tastes to customers from developed countries so firms have to modify their products to meet foreign tastes.

In Chapter 3 we change our perspective considering both innovation and internationalization strategies jointly and changing the variable of interest analyzing how the persistence in innovation activity influences the performance of the firm (measured through the total factor productivity à la Levinsohn and Petrin) and if this relationship changes if firms export persistently or do not. Using OLS and then a two step system Arellano-Bond GMM, we at first consider the effects of these strategies separately, and then, we consider them jointly. What we find is that when we consider the strategies separately they do not seem to allow firms to gain productivity. Our estimation results are in favour of the hypotheses of learning-by-exporting and learning-by-doing: persistent innovation efforts must be associated with a permanent presence on foreign markets since firms that persistently innovate *and* persistently export have better results in terms of productivity than persistently exporting firms that do not innovate persistently and than firms that do not export persistently.