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Firms' internationalization and productivity growth ☆

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ABSTRACT

From a theoretical perspective it is well stated that firms involved in international markets should exhibit higher productivity levels. There is also empirical evidence that supports this result. This paper extends this relationship to a dynamic perspective. It provides evidence on how productivity evolves in more internationalized firms distinguishing different degrees of international involvement both in qualitative as well as in quantitative terms. The results show that productivity evolves differently in those firms that are doing international business, although without differences between large exporters and multinationals.

1. Introduction

There is a fruitful research line that analyzes firms' productivity according to the international activities they develop. The theoretical rationale for the highest productivity levels of those firms more involved in international markets includes a double explanation. On one hand, international markets suppose a more competitive situation, so firms stress their resources in order to be more productive. On the other hand, a self-selection mechanism may be present and only the most productive firms decide to start an internationalization strategy. The empirical literature has confirmed the higher productivity levels of exporters versus non-exporters (see ISGEP (2008) for a large international survey) as well as of multinational firms than domestic firms (see Ramondo, 2009; Barbosa and Louri, 2005).

Notwithstanding, the effect of the international activities over the productivity evolution (i.e. whether more internationalized firms increase their productivity at a higher pace than those that are domestically dedicated) has not been so widely studied. The aim of this paper is to contribute to fill this gap, analyzing the differences on the productivity evolution among different groups of firms that present different international involvement. For doing so, an analysis of the evolution of the productivity of Spanish manufacturing firms distinguishing domestic-oriented, exporters and multinationals is developed and presented.

The interest of the research of the productivity dynamics is twofold. On one hand, we find the reasons that justify the productivity–internationalization literature: it helps to understand the productivity level of an economy and highlights the existence of different groups of firms with problems to coexist in the long run. On the other hand, the analysis of the productivity evolution may help to understand if the differences we observe in a moment of time are to be held (so it seems that the reason is due to a self-selection), increased (then, being present in foreign markets is really moving firms to be more and more competitive) or decreased (the gap will tend to disappear).

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The paper is organized as follows. Next section summarizes the theoretical reasons that justify a higher productivity for internationalized firms. Section 3 discusses the methodological issues for the analyses presenting the database and the statistical analyses. Section 4 presents the results and the last one concludes.

2. Theoretical framework

On the basis of the internationalization model raised by the Uppsala School (see Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975) it is well stated in literature the existence of qualitatively different stages in the internationalization processes of firms. This model stresses the differences among domestic firms, exporters and those firms that have their own facilities abroad where they also produce their output. The reason that this model pose to explain the different international involvement that firms have lay in the knowledge and experience that is needed. Beyond this framework, it is widely supported by the literature the different nature and implications of the international activities of exporters and multinationals. While exporting implies serving a larger market (although with some differences from the home market) that may require some entry costs, becoming a multinational implies more risky investments as well as the possibility to reduce costs if inputs are cheaper or transportation costs reduce.

Theoretical literature has hypothesized that firms more involved in international markets will exhibit higher productivity levels. The reasons are twofold. On one hand, the self-selection hypothesis raised by different authors states that only the most productive firms will enter in foreign markets at the extent that some sunk entry costs exists (see Melitz (2003) for exporting or Helpman et al. (2004) for FDI). Helpman et al. (2004) depart from fixed costs and heterogeneity of productivity across firms. The productivity differentials (actually, their expected value, since the model is raised in stochastic terms) make it possible to compensate the entry fixed costs, so only the most productive firms will advance in the internationalization process, since it implies higher costs. It must be noted that this framework fits in the Uppsala model, where firm internationalization requires (and provides) knowledge to the firm. Most productive firms (and knowledge can be a source of such advantage, even more can be a form to label part of the higher productivity) will be the ones that advance more in their internationalization process.

On the other hand, the learning-by-exporting hypothesis raises being present in foreign markets may be a source of further productivity increases (see for example the results of Clerides et al. (1998) and Navaretti and Castellani (2004) for the cases of exporters and FDI respectively). Those increases can be channeled throughout different economic effects. As foreign markets are more competitive than domestic markets, firms find additional stimuli to increase their efficiency, making better use of slack resources, applying the best available technologies and managerial techniques. Besides, increasing the array of stakeholders (whether suppliers, clients, etc.) can become a source of spillovers through the embodied knowledge, experience, etc. that these relations may incorporate. So, firms with productive locations in different countries can not only benefit from cost advantages, but also from those spillovers that the foreign environment may generate. Meanwhile, exporters will have a more reduced set of foreign relationships than multinationals (basically their clients, but not providers, employees, etc.) so the source of spillovers that push the firm productivity will be more reduced.

Besides the productivity increase that the accumulation of knowledge may generate, it must be noted that servicing foreign markets allows the firm to increase their size. This possibility will become a source of additional productivity increases if the home market is not large enough to reach the size threshold where the scale economies are relevant.

Beyond the higher productivity levels that more internationalized firms are expected to have and that different empirical papers have stated (see Hayakawa et al. (2012) for a recent survey) a different evolution of their productivity can also be expected. The hypotheses that justify higher productivity for more internationalized firms can also be applied for a higher productivity growth. On the basis of the self-selection hypothesis, the most productive firms (whether it is due to a higher R&D effort, their technological/managerial capabilities, or just due to an initial productivity shock, etc.) are probably the ones that will have a basis to develop further improvements that lead to additional productivity gains. Besides, at the extent they are more productive they can get the financial resources for investments that will help them to become even more efficient. On its part, the learning-by-exporting hypothesis suggests that as firms are more deeply involved in international markets they will incorporate further knowledge and expertise that may generate additional productivity gains as well as will have to react to a more competitive environment.

3. Methodological issues

3.1. The database

To analyze the evolution of firms' productivity on the basis of their international activities, the Spanish Survey on Business Strategies has been used. This database covers a panel of about 1500 manufacturing firms each year and is carried on by the Spanish Ministry of Industry. For this analysis, the year 2000 has been chosen as the initial year and the last one has been 2007 in order to avoid any bias that the economic and financial crisis may introduce in the results.