This doctoral dissertation studies the effect of economic integration on the performance of firms. The ongoing process of global economic integration has been characterized by dismantling of trade barriers and openness to foreign direct investments (FDI). These changes have not only brought opportunities to firms in terms of market access and the possibility to learn about foreign technologies brought in by foreign counterparts. The new economic environment has also posed new challenges through a greater competitive pressure urging firms to continuously align their production patterns to more efficient business practices. The agility of firms to adjust to external shocks, and hence the potential of countries to benefit from economic integration, does presumably not only depend on the internal assets of firms but may also be influenced by government policies and national institutional settings. This conceptual background constitutes the storyline of the doctoral dissertation.

Chapter 1 of the dissertation is a step forward in understanding the externalities of foreign direct investments on the economic performance of domestic firms. During the late eighties and early nineties, Spain saw an upswing in foreign direct investments that placed the economic at the top of FDI recipients in Europe. To provide fresh insights into the firm-level responses to FDI, Chapter 1 investigates the effects of foreign direct investment on the productivity of domestic firms within the same sector of activity as foreign firms, and whether FDI externalities differ depending on their level of technology. To investigate these hypotheses I employ a Neo-Schumpeterian model of growth and survey data for Spanish firms containing detailed information on foreign ownership across manufacturing industries. The empirical results show that foreign presence had an overall positive effect on the productivity growth of domestic firms. The gains were not, however, evenly distributed across firms. Firms closer to the frontier benefited more from FDI than firms far from the technology frontier.

A further integration of the world economy with new economic actors, like China and India, has highlighted the need for European firms to climb the quality ladder and shift towards high value added products and greater flexibility in delivering new products in order to survive new competitive threats. Chapter 2 is a theoretical and empirical examination of the role of innovation for the export activities of firms. The underlying idea is that by innovating firms may enhance their access to foreign markets by improving their cost competitiveness and product quality. To formalize this idea I build on the recent trade literature, notably on the work of Bustos (2010), to develop a trade model in which firms differ in their propensity to innovate and export based on their underlying productivity. I test the theory using data for a representative panel of Spanish manufacturing firms containing unique detailed information on firm innovation and trade activities. Consistent with the intuition from the theoretical model, the econometric results suggest a positive effect of firm innovation on the probability of participation in export markets. The results further uncover the heterogeneous effects of different types of innovations on firm export participation. In particular, product upgrading appears to give a larger boost to firm export participation than the introduction of cost-saving innovations. To the extent that the main destination market for Spanish exports is Europe, which boosts a relatively high level of product quality and standards, this evidence suggests that for Spanish firms’ product differentiation seems to be a superior strategy to penetrate new export markets than cost saving innovations. The empirical results, in line with the theoretical model, suggest a positive effect of innovation on the probability of participation in export markets.

The innovative activities of firms may not only depend on their internal assets, but presumably also on their relations with other actors in the national innovation systems. To understand better the role of firms’ relations with the science sector, Chapter 3 turns to one of the major producers of knowledge –universities– and investigates the factors that contribute to the successful transfer of knowledge from universities to the
A better understanding of the drivers of university technology transfer has important implications, not only for the efficient design of university technology transfer policies, but also for national innovation policies that put an increasing emphasis on industry-science relations. The major barrier to address this research question is information. There is very little systematic data on university technology transfer activities. During the last five years, with the help of Spanish university technology transfer network, I have put together an original university-level panel dataset to investigate the performance of Spanish universities in the production of three main outputs: research and development contracts, licensing and the creation of spin-offs.

The results from Chapter 3 show that universities with established technology transfer policies and procedures perform better. Universities with large and experienced technology transfer offices (TTOs) generate higher volumes of contract research. But the characteristics of the TTO office appear to matter less for university performance in terms of licensing and the creation of spin-offs, which may be due to the little experience Spanish universities have in these fields. The results further show that universities with a science-park perform better than those without one, which suggests that the agglomeration of knowledge close to universities has a positive effect on universities’ technology transfer performance.

Firm adjustments to external shocks and the likely benefits from economy integration through access to new markets may depend on a country institutional setting. The recent financial crisis and the collapse in world trade have brought back to the forefront the importance of financial markets for aggregate trade and countries’ competitiveness. In Chapter 4, which is joint work with Philippe Askenazy (Paris School of Economics), Guillaume Gaulier (Banque de France) and Delphine Irac (Banque de France), we analyze how credit market imperfections affect the expansion and survival of firms in foreign markets. For that purpose we develop a theoretical model to study the effect of credit constraints on the number of firm newly served export destinations and firm exits from the export market. The model predicts that financial constraints act as a barrier to firm export expansion by decreasing the firm ability to finance entry costs into export markets. Additionally, lower access to external finance, or reduced internal liquidity, hampers the firm ability to finance the recurrent fixed costs to serve foreign markets and decreases firm survival in foreign markets. To empirically investigate these questions we use a unique dataset on French firms that contains information on export destinations of individual firms and allows us to construct firm-level measures of financial constraints. We obtain two main results that confirm the theoretical predictions. First, credit constraints have a negative effect on the number of newly created export relations. Second, higher probability of exit from the export market is associated with higher credit constraints. These findings suggest that access to credit has an important effect on the number of firms that export, and therefore on countries’ aggregate exports.

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\(^2\) Chapter 3 is published as “Performance of Spanish Universities in Technology Transfer: An Empirical Analysis” (2010), Research Policy, In Press.