

Market Integration and Technological Leadership in Europe

by René Belderbos, Leo Sleuwaegen and Reinhilde Veugelers
(Vlerick Leuven Gent Management School)

The process of EU market integration and the integration of the EU in the global economy continues to change the relevant markets on which firms compete, forces firms to optimize their configuration of activities and to build competitiveness based on innovation and technology development. The present study traces and analyses those changes in firm and industry structure.

The study built further on results from a previously developed “EU Market Share Matrix” (MSM) methodology. The MSM for the EU is a firm-level database covering production by location for all “leading firms” in EU manufacturing sectors. The EU market share matrix is capable of generating estimates of various key structural variables: sectoral diversification, geographic diversification (multinationality) at the firm level, and producer concentration within industries. In this study we extended the MSM database to cover the year 2007 and make comparisons possible with the latest previous exercise of 2000. Second, we extended the matrix with a technology dimension: we complemented production data with data on the portfolio of patents in various technologies of all leading firms and the location of inventions. Third, we explored to what extent the MSM approach can be extended to the services sectors, through case studies of ICT related services, telecom services, and the food retailing sector.

The exercise provided a wealth of interesting results. As the main focus of this project was on the relationship between technology and market leadership in a context of increasing competition in an integrated internal market, we highlight some of the results from this part of the analysis. The MSM data and multivariate analysis provides strong support for a positive relationship between technology and product market leadership. Nevertheless, for incumbent leading firms technological leadership is less important, particularly in low or medium tech sectors. For new leading firms, in contrast, technological leadership is very important to build up a sizeable production share. This holds in all sectors, but particularly in highly concentrated sectors, where new leading firm entry is more difficult and incumbency gives a greater advantage in terms of production share. In addition, new entrants are broader in technology scope, suggesting that they leverage their technology position from other sectors to effectuate entry. In high tech sectors, and particularly for technology leading firms, there is an increasing trend of internationalization of R&D with firms locating R&D activities outside the EU. EU leading firms with a stronger location of R&D outside the EU, achieve greater production dominance in the EU, indicating the possible importance and effectiveness of such global technology sourcing strategies for EU competitiveness. For non-EU leading firms, the

location of inventive activities in the EU is highly correlated with their location of production activities.

The findings suggest a number of implications for EU policy, of which a few are highlighted here. Since technological strength and breadth are important for leading firms to build and sustain product market positions in the EU, innovation policy instruments geared towards improving firms' technological position, are rightly emphasized as an important component of a policy agenda for Growth and Jobs. As this holds particularly for new leading firms in concentrated sectors, barriers to build broad and deep technology portfolios should be eliminated as much as possible. As these barriers might be structural, as well as strategically erected, this involves, beyond innovation policy instruments, also competition policy instruments. And finally, policies aimed at increasing the attractiveness of EU product markets, are an integral part of a policy aimed at making the EU more attractive for R&D activities.