ABSTRACT WORKING PAPER 4.28

Do spillovers matter? CDM model estimates for Spain using panel data

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This paper uses a structural model to analyse the impact of innovation activities and externalities on the productivity of Spanish firms. To the best of our knowledge, no previous paper has examined spillover effects by adopting such an approach. Here, therefore, we seek to determine the extent to which external knowledge may affect both firms’ behaviour (first stage of the model) and a firm’s performance (last stage). Additionally, firm’s technology level is taken into account in order to ascertain whether there are any differences in this regard between high-tech and low-tech firms both in industrial and service sectors. The database used is the Technological Innovation Panel (PITEC) which includes 9,042 firms for the period 2004-2010. We find that the firm’s decision whether to engage in R&D activities or not is influenced by what other firms do. In particular, the higher the number of firms undertaking R&D activities, the more likely to start R&D projects the firm is. Moreover, our results suggest that innovation carried out by other firms (intra- and inter-industry externalities) have a positive impact on firm’s productivity. Finally, regarding the technology level, no clear pattern has been found.