

Knowledge Spillovers through International Supply Chains

Topic: Global Value Chain Analysis

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Understanding how knowledge flows across countries and whether supply chains play a role in the process is important. If knowledge is transferred internationally through supply chains, then adopting policies to attract vertical FDI or establish supplier development programmes may be justifiable. Economic literature generally suggests that international supply chains matter for knowledge transfer. Nevertheless, empirical evidence has so far been limited by data availability. Using industry-level R&D and patent data for a sample of 29 countries for the period 2000-2008, we study the importance of international supply linkages for knowledge spillovers. In order to construct measures of international supply linkages we use the WIOD database and focus on several progressively restrictive definitions of supply chains trade. Our results support the view that supply chains are a channel of international knowledge spillovers. Countries participating in supply chains do not only benefit from the technology lending from the investor to the host country, but also acquire part of the knowledge of the sending country and increase their domestic R&D productivity. We find a significant and robust knowledge-spillovers effect only for the narrower definitions of supply chains linkages between two countries, that is the case when a country offshores the production of certain components to re-import them. We also find that knowledge spillovers occur not only from the north to the south, but also in south-south production networks. We also find that the evidence that knowledge flows along the supply chains is more robust than the traditional finding that knowledge spillovers depend on geographical distance or trade flows.