

# Digital transformation and the regionalization of Global Value Chains in the European industries

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This paper examines how digital technologies (DT) diffusion influenced the regionalization of Global Value Chains (GVC) across European countries and sectors from 2005 to 2018. DT can affect trade patterns and regionalization mainly through two channels. They may facilitate coordination and transactions across geographically dispersed units, increasing globalization. On the other hand, DT may enhance complementarities and allow geographically close production units to perform several tasks together, pushing toward regionalization through the reshaping of comparative advantages. In sum, whether DT are associated with geographical dispersion or regionalization of GVC is ultimately an empirical question. To provide empirical evidence on the relationship between DT and GVC regionalization in European countries, we build a country-sector panel dataset combining data from OECD-TiVA and EUKLEMS and calculate a regionalization index distinguishing between intra-EU and extra-EU trade, also differentiating input sourcing and output destination. We employ a Bartik IV, using OECD data on AI- and ICT-related patents, and perform an econometric analysis to evaluate the contribution of DT to the GVC regionalization. Preliminary results show that the diffusion of DT positively affects the overall regionalization of trade flows, while differentiated effects are found looking at the input sourcing and output destination measures.