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Global Value Chains and Domestic Innovation*

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Abstract

This paper explores how changes in both position and participation in Global Value Chain networks affect firm innovation. The analysis combines matched patent-firm data for Japan with measures of GVC network centrality and GVC participation utilizing the OECD Inter-Country Input-Output Tables for the period 1995 to 2011. We find that Japan's position in the GVCs has shifted from being at the core of Asian value chains towards the periphery relative to other countries in the network, i.e. becoming less "central". We use China's WTO accession as an instrumental variable for changes in Japanese centrality. Our analysis shows that increases in forward centrality – as a key supplier - tends to be positively associated with increasing firm patent applications. Firms in key hubs within GVCs, more specifically as key suppliers, appear to benefit from knowledge spillovers from various customers and downstream markets.

Keywords: network centrality, global value chains, patent portfolio, productivity, micro data, Japan
JEL classification: D24, F14, F61, L25, O33, O53

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