

The Impact of Trade on Resource Reallocations with Production Networks

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Abstract

This paper considers a model of international trade with a domestic interfirm production network, which gives rise to the emergence of indirect exporters. These indirect exporters do not export but supplies goods and services to exporters, and hence, their value-added is exported indirectly. Trade-induced resource reallocations, first proposed by Melitz (2003), are driven by the relative advantage of exporters compared to non-exporters. Incorporating production networks and indirect exporters dampens the Melitz effect since many non-exporters are now classified as indirect exporters. Yet, if the matching function exhibits complementarity, production networks amplify the heterogeneity of core productivity. Using firm-to-firm transaction networks and firm-level export data in Japan, we investigate the interplay between production networks, trade liberalization and resource reallocations. In the data, more than half of firms are connected to foreign markets within two transaction links, and manufacturing and wholesale sectors account for the largest shares of both direct and indirect exporters. A strict ordering of many variables such as sales or employment exists in direct, 1st-degree indirect, 2nd-degree indirect, and non-exporters. This suggests the importance tracing indirect value-added exporters when considering the effect of trade liberalizations on firm size distributions or industry dynamics.

Keywords: production networks, indirect exporters, value-added trade, resource reallocations

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