

Exporting, Global Sourcing, and Multinational Activity: Theory and Evidence from the United States

Based on BFI Working Paper 2023-104, “Exporting, Global Sourcing, and Multinational Activity: Theory and Evidence from the United States,” by Pol Antràs, Harvard University; Teresa C. Fort, Dartmouth College; Evgenii Fadeev, Duke University; Felix Tintelnot, University of Chicago

Multinational firms (MNEs) are more likely to trade not only with countries in which they have affiliates, but also with other countries within their affiliates’ region. These patterns point to firm-level scale economies that arise when the fixed costs to source from, or sell in, a market are shared across all the MNE’s plants.

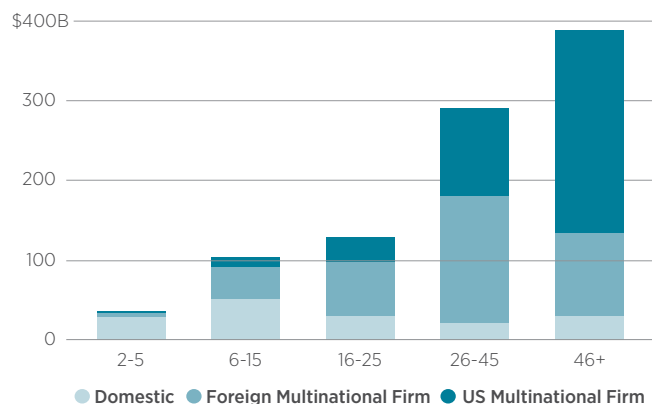
Among its many effects, the COVID-19 pandemic suddenly brought trade issues home for many households, with terms like “supply chain,” “logistics,” and “global value chains” (whereby production occurs in stages across countries), used to explain empty store shelves and other shortages. For domestic policymakers, the desire

to address product shortages and related issues was hampered by the interrelated nature of these global supply chains. There was no quick and easy fix.

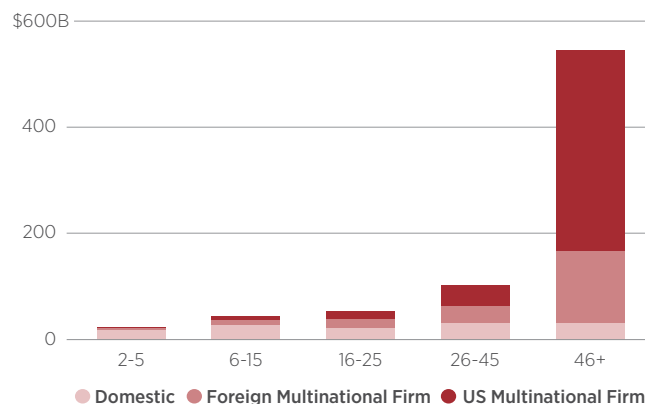
The same was true for economic researchers, whose existing trade models could not adequately capture

Figure 1 • US Exports and Imports by Traders’ Extensive Margin of Countries

A) Imports by Number of Source Countries



B) Exports by Number of Destination Countries



Note: Firms that import from over 25 countries account for 72% of imports, with 93% of those flows mediated by multinational firms (MNEs) - left panel. Exports are even more skewed: 84% are sold by firms that export to over 25 countries, with MNEs accounting for 90% of those flows. Please see working paper for more details.

the propagation of shocks that spread, domino-like, across countries. Take, for example, an earlier episode when the United States placed anti-dumping duties on washing machine imports from Korea in 2012. While standard trade models predict an increase in US washing machine prices, those prices actually fell as Korean manufacturers relocated production to China, thus increasing Chinese exports to the United States and countering the measures directed at Korea. Exports of washing machine parts from Korea to China also rose, highlighting the importance of multinational firms' use of imported inputs by their affiliates. Clearly, standard models were missing the big picture.

The authors address these and other theoretical and empirical gaps by studying the relationship between firms' foreign production locations and their international trade patterns. They construct a comprehensive new dataset that captures the domestic and foreign activities of all firms with US operations. They focus on firms that manufacture in the United States and define US multinational firms (MNEs) as those with majority-owned foreign manufacturing affiliates; foreign MNEs are majority owned by a foreign ultimate parent.

The authors also develop a multi-country model in which firms jointly decide the countries in which to produce final goods, source their inputs, and market their goods. The model features a new source of scale economies in which the fixed costs to source inputs from, or market goods in, a particular country are shared across all of the firm's plants. That is, this new model more closely reflects reality. The authors find the following:

- MNEs account for a disproportionate share of US international trade, with their trade dominance seemingly tied to the number of countries with which they trade. Firms that import from 26+ countries account for 71 percent of US manufacturers' imports, of which 93 percent are mediated by MNEs.
- Exports are even more skewed; 83 percent are mediated by firms that export to over 25 countries, with 90 percent of these flows sold by MNEs.

- US MNEs import from about 56 percent more countries than multi-country domestic importers, and export to about 64 percent more countries.
- The countries from which US MNEs import, and the markets to which they export, are systematically related to their foreign manufacturing locations. Not only are US MNEs more likely to trade with countries in which they have affiliates, they are also more likely to trade with countries that are proximate to their foreign manufacturing affiliates. For example, for US manufacturers, China is the number two import country with 8 percent of firms importing and 4 percent exporting. However, for firms that manufacture in the same region as China, these probabilities jump dramatically: 88 percent of firms with an affiliate in Eastern Asia (but no affiliate in China itself) import from China, while 86 percent export.
- To reinforce the point—proximity matters: US MNEs are 25 percentage points more likely to import from a country within 500 kilometers (km) of their affiliate, but just 4.1 points more likely to import from a country more than 4,000 km away.
- Policy also matters: Firms are more likely to trade with countries that share a free-trade agreement with their affiliate's countries. By contrast, US MNEs are no more likely to trade with countries that share a common language with their affiliates' countries, and only exporting is more likely for countries that share a legal origin.

Bottom line: MNEs trade with disproportionately more countries than domestic firms, and those countries are closer to their foreign production locations. The authors' new theoretical approach reflects how firms make sourcing and export decisions, with important implications for policy. For example, this work reveals that a bilateral trade agreement between two countries can generate third market effects, as firms in other countries have increased incentives to open plants there. Such positive indirect effects of trade policy on foreign direct investment undermine arguments for trade protection.

READ THE WORKING PAPER

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