ECONOMIC FINDING

International Trade and Earnings Inequality: A New Factor Content Approach

Rodrigo Adao, Assistant Professor of Economics, Chicago Booth; Paul Carrillo, Assistant Professor of Economics and International Affairs, George Washington University; Arnaud Costinot, Professor of Economics, MIT; Dave Donaldson, Professor of Economics, MIT; and Dina Pomeranz, Assistant Professor of Applied Economics, University of Zurich

International trade raises earnings inequality in Ecuador, especially in the upper half of the income distribution. However, the drop in inequality experienced by Ecuador over the last decade would have been less pronounced in the absence of trade.

This paper offers unique insights into the effect of trade on those who own, work for, or sell to the supply chains of global firms that export and import—and those who do not. The authors address questions relating to the impact of such differences in trade exposure on earnings inequality. For example, if a country’s exports and imports were suddenly to drop to zero because of some extreme policy or natural disaster, would its distribution of earnings become more or less equal? In the absence of trade, would the consequences of domestic shocks for inequality be magnified or dampened?

Informing the authors’ analysis is a unique administrative dataset from Ecuador that merges firm-to-firm transaction data, employer-employee matched data, owner-firm matched data, and firm-level customs transaction records. Together with economic theory, this information allowed the authors to measure the export and import exposures of individuals—whether workers or capital owners—across the income distribution and, in turn, to infer the overall incidence of trade on earnings inequality.

The authors’ main empirical finding is that international trade substantially raises earnings inequality in Ecuador, especially in the upper half of its income distribution. In the absence of trade, top-income individuals would be relatively poorer. However, their empirical analysis also implies that the drop in inequality that took place in Ecuador over the last decade would have been less pronounced if its economy had been subject to the same domestic shocks, but unable to trade with the rest of the world.

**Figure 1 · Trade and Earnings Inequality, Baseline Sample**

Trade Impact

Notes: Blue dots correspond to the total (including both labor and capital) income change for each individual, averaged within each percentile and normalized to zero at the median percentile, between 2012 and the counterfactual autarkic equilibrium. Positive numbers therefore reflect larger gains from trade than at the median. Red dots do the same but for labor income only. In both cases the line indicates a fitted 10th-order polynomial. Trade impact is the sum of the export and import channels.

Further, the authors find that the import channel is the dominant force linking trade to inequality in Ecuador, with gains from trade for individuals at the 90th percentile of the income distribution that are about 11% larger than the median—and up to 27% larger than the median for those at the top income percentile. However, these results also imply that the drop in inequality observed in Ecuador over the last decade would have been less pronounced in the absence of trade. The authors stress that some of these conclusions may not carry over to other contexts. The fact that export exposure is more pronounced in the bottom half of Ecuador’s income distribution, for instance, is more likely to hold in developing countries that, like Ecuador, specialize in low-skill-intensive goods, than in developed countries that do not.