Estimating Trade Elasticities from District-Level U.S. Import Data

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ABSTRACT

Trade elasticities quantify the responsiveness of international trade flows to price changes. Therefore, they are important inputs into models of the economic impacts of trade policy. Data on the geographic distribution of U.S. imports across port districts can contribute substantially to the econometric estimation of trade elasticities. District-level import data provide additional variation in international shipping costs and in relative import demands that helps to identify the Armington elasticity of substitution between products from different countries. The district-level import shares also determine aggregated (national) price elasticities of import demand for a given elasticity of substitution. For example, the cross-price elasticity of demand for imports from two different countries will depend in part on the geographic overlap of the countries' U.S. import districts. We develop a structural model of import demand with multiple consumer locations within the United States. The model provides the specification for an econometric estimation of industry-level trade elasticities for the U.S. manufacturing sector. More generally, the model provides a theory-based empirical framework for analyzing U.S. district-level import data.