The Geography of Trade and Multinational Production*

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Abstract

We introduce trade, multinational production (MP), and diffusion of ideas in a multi-country, Ricardian model that captures the strong positive correlation observed between trade and MP flows across countries. MP serves as a way for ideas to diffuse across countries when firms replicate their home technology by opening affiliates in foreign countries. Goods can be produced with three sets of ideas: national ideas specific to each country; MP ideas that started out being national and became available for MP, but remain specific to the country of origin; and global ideas that are available in any country. Firms in each country can either trade or do MP in each good. Both activities have country-pair specific “iceberg” costs. The model is flexible enough to incorporate “vertical” MP: firms from country n can serve consumers in country i by doing MP in a third country and export from there to the final destination. Further, we introduce explicitly complementarity between trade and MP: affiliate plants produce using a bundle of home and host country intermediate inputs where home inputs need to be imported.

We estimate the model using data on trade and MP flows, for OECD(19). Our estimates suggest that the observed correlation between trade and MP across countries is mainly due to a strong correlation between trade and MP costs, and to a lesser extent to complementarities between home and host country inputs in MP. Accordingly, welfare calculations show that gains from openness are lower than the sum of gains from trade, MP, and diffusion, separately, suggesting that these flows are mainly substituting each other.

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