The effect of trade liberalization on multinational production: a quantitative trade general equilibrium model with multinational production and input-output linkages

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Abstract

This study quantifies how the change in trade costs affects multinational production through foreign direct investment (FDI) that is motivated to avoid trade costs (horizontal FDI) and procurement costs of intermediate goods (vertical FDI). To quantify this, we construct a quantitative general equilibrium model that considers both horizontal FDI and vertical FDI by introducing the setting of input-output linkages between industries into the model in which firms locate their production bases abroad. Using the data for eight european countries and six manufacturing industries in 2016, we first conduct counterfactual analyses that quantifies the change in multinational production by foreign firms in Ireland when import costs in Ireland decrease. We also analyze the impact on horizontal and vertical FDI by comparing the results of a full model, which considers both horizontal and vertical FDI, with those of a model that excludes the setting of input-output linkages, which only considers horizontal FDI. The results suggest that when import costs in Ireland decrease, foreign firms will be less likely to locate their production bases in Ireland, while the output of remaining firms will conversely increase because it will be easier to procure intermediate goods from abroad.

Keywords: multinational production; input-output linkage; quantitative trade model.

JEL Classification: F13; F17; F23.

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