Simulating Heterogeneous Multinational Firms*

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Abstract:

This paper examines the extent to which a model of heterogeneous firms adapted from Eaton, Kortum, and Kramarz (2008) can explain the structure of heterogeneous multinational firms. We extend the EKK model of exporting firms by allowing them to serve foreign markets via local production. The model predicts that more productive firms are more likely than less productive firms to enter a larger number of markets, to penetrate less attractive markets, and to yield larger sales per each market. Using a micro data on Japanese manufacturing firms, we simulate individual multinational activities and estimate an optimal set of underlying parameters that govern the behavior of heterogeneous multinationals. We find that simulated multinationals fit considerably well with actual Japanese multinationals in terms of various moments used. As out-of-sample predictions are shown to be reasonable, our quantitative framework provides a useful tool to conduct counterfactual analysis on multinational activities.

Keywords: Multinational firm, FDI, Firm heterogeneity, Simulation

JEL Classification: F10, F23, L25, R12, R30

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