

Economies of Scale and International Business Cycles*

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Abstract

Most international business cycle models assume a linear cost function and disregard variations in cost structure across industries. This paper investigates the loss of generality implied by these choices. I develop a two-country two-industry dynamic stochastic general equilibrium model with monopolistic competition and heterogeneous firms where economies of scale arise from two sources: fixed costs and sloping marginal cost curves. First, the model reproduces observed international business cycle dynamics for narrowly defined industries: in industries with decreasing marginal costs, (i) output is more volatile, but exports and imports are less volatile, and (ii) aggregate variables and trade flows are more correlated with aggregate GDP than they are in industries with increasing marginal costs. Second, the quantity anomaly is mitigated: Allowing the slopes of marginal cost curves to vary across industries increases aggregate GDP comovements across countries. The model successfully generates GDP comovements across countries that are stronger than consumption comovements. I interpret these findings as evidence that non-linear cost functions and variations in cost structure across industries improve our understanding of the international business cycle.

Keywords: Cost structure, Economies of scale, International business cycle, Quantity anomaly, Within-firm market interdependence.

JEL Classification: D24, F41, F44.

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