Investment Uncertainty, Capacity Constraint, and International Trade: Putty-Clay in a Ricardian Model

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Abstract

This paper considers a role of investment and its idiosyncratic uncertainty on the pattern of international trade. Capital goods are heterogenous due to investment uncertainty and capacity constraint. In a two-country, two-good, two-factor model, trade pattern is generally described by Ricardian comparative advantage. However, I find a new source of comparative advantage: the variance of investment uncertainty (or its consequence, "heterogeneity in capital goods"). Namely, a country specializes in an industry with relatively larger idiosyncratic uncertainty. With trade cost, the model describes a sorting situation in which the most productive production units export, the medium productive units serve domestic market, and the least productive units do not operate. The gains from trade are the combination and interactive results of the reallocation across industries by exploiting the comparative advantage, and of the reallocation across production units within an industry.

Keywords: Ricardian trade model; Putty-clay technology; Vintage capital; Investment uncertainty; Capacity constraint.
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