Trade and Strategic Innovation: Competition and Multi-Stage Production Channels*

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Abstract

How does trade liberalization affect firms' incentives to innovate? Existing empirical studies have yielded ambiguous results, with import competition reported to have both positive and negative impacts on innovation. This paper seeks to explain this ambiguity by developing an open-economy Schumpeterian growth model that incorporates multi-stage production and oligopolistic competition. By distinguishing between trade costs in upstream (input) and downstream (output) markets, I demonstrate that trade liberalization can have opposing effects on innovation rates. This arises because downstream liberalization changes profit levels, whereas upstream liberalization alters the relative marginal costs between competitors. This process creates a "pseudo-neck-and-neck" state, where the industry with the highest innovation incentive shifts according to the upstream productivity gap. Numerical analysis further shows that while reducing trade costs in either market generally boosts aggregate economic growth, strong specialization in upstream production can dampen growth, contrary to the Ricardian intuition that international specialization brings benefits. These findings provide a theoretical foundation for the diverse firm-level responses to globalization and offer a new perspective on the dynamic effects of trade policy.

Keywords: Trade, innovation, Schumpeterian growth, oligopolistic competition, multi-stage production

JEL Codes: F12, F43, F60, O31, O41

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