

Product Cycles and Growth Cycles*

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Abstract

This paper explores the equilibrium path in a product cycle overlapping generations model with international knowledge spillovers. We show that an increase in imitation in the South reduces the stock values of Northern firms, and this directs a larger proportion of saving to research and development (R&D) in the North. However, this results in turn in an increase in the stock values of Northern firms, thereby crowding out Northern R&D in the next period. Because of this process, the equilibrium path of this North–South two-country economy exhibits perpetual fluctuation, including period-2 cycle, even if the preference and production settings are conventional, e.g. utility of a Cobb–Douglas form. Importantly, when the equilibrium path exhibits perpetual fluctuation, the growth rate continues to fluctuate, though the economy grows. This finding suggests that the product cycle can be a source of endogenous economic fluctuation.

Keywords: Product cycles; Imitation; Innovation; Endogenous cycles

JEL classification: E32, O31, O34, O40

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