

R&D and Product Dynamics

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Abstract

In endogenous growth models and mid-term business cycles such as Romer (1987) and Comin and Gertler (2006), the positive effects of R&D expenditures on product variety are assumed. Using product-firm level data, we examine these effects empirically. From Census of Manufacturers, Survey on R&D Expenditures, and Basic Survey of Japanese Business Structure and Activities, we construct a database including number of products, R&D expenditures and the data on firm performances. We find that number of products in R&D firms are more than that in non-R&D firms and R&D firms are more sensitive non-R&D firms for product dynamics. We also find the positive effects of R&D activities on product dynamics in empirical studies. As the increase in product variety contributes to productivity growth, our empirical results support government's policies for enhancing R&D activities.

Keywords: endogenous growth theory, medium term business cycles, R&D, product variety

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