

Behavioral Characteristics of MRIO-Based Global AGE Models with Variable Elasticity of Substitution between Varieties*

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Abstract

This study explores the behavioral characteristics of an applied general equilibrium model with the Melitz-type heterogeneous and Krugman-type homogeneous firms, which endogenizes substitution elasticity as an increasing function of the total number of varieties with the assumption of agent-specific sourcing of imported and domestically produced commodities. Simulation experiments with the model revealed that inter-sector and international spillovers of the effects of smoother substitution through intermediate transactions among countries/regions amplify the efficiency-enhancing effect of international trade to bring significantly large welfare gains to all countries in the global economy. The production sector, which is assumed in the model to differentiate outputs under monopolistic competition, plays an important role as the key agent that effectively transmits the favorable effect to the global economy.

Keywords: variable elasticity of substitution, monopolistic competition, firm heterogeneity, applied general equilibrium, multi-regional input-output

JEL Classification Numbers: C68, D58, F12, L11.

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