Behavioral Characteristics of Applied General Equilibrium Models with Variable Elasticity of Substitution between Varieties from Different Sources[1]

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Abstract

Based on an intuition that additional varieties reduce distance between varieties filling in gaps between existing varieties, this study explores the behavioral characteristics of the Melitz-type heterogeneous and the Krugman-type homogeneous firm models endogenizing the substitution elasticity as an increasing function of the total number of varieties that are available in the destination country/region. Choosing the case of the U.S. President Donald Trump's anti-China tariff as an example, simulations with the 3-region, 3-sector applied general equilibrium model revealed the following results: the impact of the efficiency enhancing effect brought by international trade becomes larger for the Melitz-type than the Krugman case; and the efficiency enhancing effect works negative for the regional welfare as the value of the parameter that controls the influence of the total number of varieties to the substitution elasticity gets large.

Keywords: applied general equilibrium; variable elasticity of substitution; preference for variety; heterogeneous firms.

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

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