Trade costs, infrastructure, and dynamics in a global economy *

Akihiko Yanase †
Graduate School of Economics, Nagoya University

Ngo Van Long
Department of Economics, McGill University

Abstract

This study develops a dynamic two-country model of intraindustry trade with trade costs, which can be reduced by public investment in infrastructure capital. Assuming trade is driven by monopolistic competition with variable markups and firm heterogeneity, each country's welfare is shown to depend on the trade costs, and the relationship between trade costs and welfare depends on the property of firms' cost distribution. Considering the relationship between trade costs and national welfare, the governments carry out a dynamic game of public investment. We show that depending on the parameter of cost distribution, multiple steady states may exist, and the dynamic equilibrium of the noncooperative policy game may exhibit history dependency; if the initial stock of infrastructure is smaller (larger) than a certain level, the infrastructure stock decreases (increases) over time, and the world economy will end up in autarky (achieve freer trade) in the long-run. We also compare the equilibrium outcomes with the solution under international cooperation. We show that international cooperation is desirable not only because it achieves higher steady-state stock of infrastructure but also it may enable the world economy to escape from a "low development trap."

Key Words: Trade costs, Infrastructure capital; Intraindustry trade; Firm heterogeneity; History-dependent dynamics

JEL classification: C61; C73; F12; H54; H87; O18

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†Correspondinf author. Graduate School of Economics, Nagoya University. Furo-cho, Chikusa-ku, Nagoya 464-8601, Japan. E-mail: yanase@soec.nagoya-u.ac.jp