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Endogenous market structure and the growth and welfare effects of economic integration

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Abstract

This paper studies the growth and welfare effects of integration in a world economy populated by global oligopolists. In economies that move from autarky to trade, growth and welfare rise because exit of domestic firms is more than compensated by entry of foreign firms so that integration generates a larger, more competitive market where firms have access to a larger body of technological spillovers that support faster growth. The effects of a gradual reduction of tariffs are different because economies start out from a situation where all firms already serve all markets. In this case, the global number of firms falls so that the variety of consumption goods and the diversity of innovation paths fall. The surviving firms, on the other hand, are larger and exploit static and dynamic economies of scale to a larger degree. These *homogenization* and *rationalization* effects work in opposite directions. Under plausible conditions, the rationalization effect dominates and growth and welfare rise.

Keywords: Market structure; Growth; R&D; Integration

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1. Introduction

In the last 50 years the world has become more integrated as institutional and technological changes have lowered barriers to the mobility of goods, capital and

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people. This process of globalization affects individual economies through several mechanisms. A very powerful one is industrial restructuring, that is, the change in market structure that occurs as a result of entry/exit of firms. This paper discusses a model where industrial restructuring entails exit of domestic firms and asks whether such a change in market structure is beneficial for growth and welfare.[1]

There are two ways to approach this question. One can compare autarky to free trade or one can look at the effects of an incremental liberalization of world trade. The first question is about *gains from trade*, the second is about how changes in global tariffs affect the *exploitation of gains from trade at the margin*. This paper undertakes both exercises and thus provides a comprehensive characterization of the role of trade in the determination of growth and welfare in the global economy.

In economies that move from autarky to trade—free or restricted by tariffs—integration raises growth and welfare because exit of domestic firms is more than compensated by entry of foreign firms. In other words, the fact that domestic consumers and producers gain access to foreign goods and knowledge means that integration generates a larger, more competitive market where firms have access to a more diverse body of technological spillovers that supports faster growth. The growth effect is larger the less competitive the economy is before integration, while it is negligible for economies that are very competitive to begin with. The effects of a gradual reduction of barriers to trade—a global reduction in tariffs—are different because *economies start out from a situation where all firms already serve all markets*. Hence, the reduction of barriers to trade makes all markets more competitive, in the sense that in each country domestic producers are less protected, and thereby triggers a reduction in the global number of firms. In other words, in each country consumers see a reduction of the variety of available goods and producers see a reduction of the diversity of spillover sources. In this case, there is a tension between internal and external increasing returns. The reduction of the global number of firms means that the variety of consumption goods and the diversity of innovation paths fall. This is the *homogenization effect*. On the other hand, the surviving firms are larger and exploit static and dynamic economies of

[1] For a recent exposition of the view that this type of work is necessary to better understand the interactions of technology and trade, see Baldwin and Forslid (1998). One can look at industrial restructuring in two ways. In two-sector models of inter-industry trade, entry/exit is driven by a specialization effect: as a country specializes in one sector, there is entry of firms to that sector and exit from the other sector. In one-sector models of intra-industry trade, in contrast, entry/exit is driven purely by a scale effect: as a country trades with another, the market becomes larger and induces entry/exit of firms. Specialization and scale effects are not independent. In two-sector models of inter-industry trade, specialization affects market structure within each sector precisely because it changes the relative and absolute size of the two sectors and thereby triggers entry/exit within each sector. In one-sector models of intra-industry trade, the inter-industry specialization effect is absent and what is left is the pure scale effect based on market size. This paper takes this approach.