Market Integration and Industrial Specialization on a Monopolistic Competitive Market

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Abstract

This paper examines the relationship between market integration and product diversification in a Chamberlinian model of monopolistic competition. In the first version of the model, production of the firm is organised in activities producing either one or two horizontally differentiated product-variants. The cost functions show both scale and scope economies. Market integration is illustrated by an increase in the market size. For increasing market size, each firm shifts from producing two variants to producing one variant only at a certain threshold value of market size. Passing this threshold value the firm size measured by total output changes discontinuously leaving the effect on firm size ambiguous. For specific specification of the perceived demand of the individual firm hysteresis of the industrial structure may appear in the sense that the threshold value of the market size for shifting from two to one variant production exceeds that of the threshold value of market size of shifting from one to two variants. In the last part of the paper, the model is generalised to a continuum of variants and it is shown that an increase of the market size reduces the number of variants produced by each firm, whereas the hysteresis phenomenon disappears.

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• Key Words: Market Integration, Monopolistic Competition, Specialization, Hysteresis of Industrial Structure
I. Introduction

Adam Smith’s famous theorem about diversion of labour states that specialization is limited by the size of the market. A specialized production at the firm level is characterised by the use of a large number of inputs and a small number of processes of production.

In the last two decades the “new” growth theory has offered a formal relationship between market size and specialization with focus on the input side of production of final goods. Labour productivity in producing final goods depends positively on both the total stock of capital and the number of variants of capital goods (Romer, 1990, Rivera-Batiz and Romer, 1991, and Barro and Sala-i-Martin, 1995). However, as each capital good is based on sunk costs related to an initial R&D-activity, a large market offers a large number of variants of capital goods and this allows for more efficient production activities, i.e. a higher labour productivity.

Less theoretical attention has been devoted to the relationship between market size and specialization on the output side at the firm level. In international trade theory it has been advanced by Caves (1989) that removal of trade barriers prompts the individual firm to concentrate on fewer activities. This intra-firm restructuring may take place both horizontally where the firm reduces the number of products or product variants delivered to the market or vertically where the number of processes in the value added chain produced internally by the firm is reduced. Specifically the incentive to outsource part of the production processes in the firm has been stressed by Krugman (1995), who points to the improved possibilities to utilize spatial factor price differences, when trade costs are reduced. Venables (1999) further shows that decreasing transport costs for intermediate goods leads to spatial fragmentation of production in firms and hence vertical or horizontal multinational firms will emerge depending on the labour intensity of downstream and upstream activities. Scale economies may also be a reason for outsourcing of processes in the value added chain. This point has first been made in Stigler (1951), who argues that an increase of the market size may lead to entry of one or more firms producing intermediates, which previously had been produced internally in the firm. When market size is small the emergence of specialized producers of intermediates is inhibited because of scale economies. Since the derived demand for specialized inputs increases with market size, this permits the possible entry of new firms specialized in producing intermediates.