

advantage, thereby creating the conditions for intra-industry trade between countries. By engaging in international trade, firms can further expand production by offering their differentiated products to consumers in other countries, thereby lowering average costs and prices. This “economies of scale” hypothesis has been tested in the economics literature, and the evidence is mixed.

Following the conclusion of the Canada-U.S. Free Trade Agreement (CUSFTA), almost all Canadian manufacturing industries exhibited substantial rationalization between 1988 and 1994. Head and Ries (1999) analyzed the impact of the CUSFTA on the size and scale of operations for 230 Canadian industries at the 4-digit SITC level. Trade liberalization was expected to have two opposing effects on the size of Canadian industries. On the one hand, a positive effect on the size of Canadian firms was expected as a result of the lowering of U.S. tariffs, due to enhanced opportunities to expand production by initiating or increasing exports to the U.S. market. In this respect, the study found that the average U.S. tariff reduction of 2.8 percent caused a 4.6-percent scale increase among Canadian industries. On the other hand, an opposing negative effect due to increased U.S. penetration of the Canadian market was also expected. The study found that the average 5.4-percent reduction in Canadian tariffs caused a 6.1-percent scale decline in Canadian industries. Thus, the evidence on balance did not support an increase in the size and scale of Canadian industries as a result of Canada-U.S. trade liberalization, nor did it constitute a factor to explain the observed gains from economies of scale and specialization in many Canadian industries during the period following the introduction of the CUSFTA.

Baldwin and Gu (2006) analysed the impact of trade liberalization (the Canada-US FTA and NAFTA) on exporters and non-exporters in Canadian manufacturing industries. The analysis incorporated plant scale and production-run length both essential to achieving benefits from economies of scale—as well as product diversification. The principal conclusions suggested that trade liberalization in the form of tariff cuts reduced product diversification and reduced plant scale of non-exporters, but had little effect on their production-run length. In contrast, exporting firms reduced their product diversification and increased production-run length and plant scale when compared to non-exporters, taking advantage of the tariff cuts for further expansion.

The economies of scale benefits may thus be overstated. The likely explanation is that economies of scale at the plant level for most manufacturing firms tend to be small relative to the size of the market because most plants have already attained their minimum efficient scale. Average costs therefore seem to be relatively unaffected by changes in output; in other words, a large increase in a firm’s output does not lead to lower costs, and a large reduction in output does not lead to higher costs. When faced with competition from imports, many firms are forced to reduce output but production costs rarely rise significantly.

Variety effects

The explanation for trade based on product differentiation suggests that many varieties of a product exist because producers attempt to distinguish their varieties from those of their competitors in order to win brand loyalty from consumers, or because consumers demand a