

output.<sup>6</sup> Since goods can increasingly be produced more cheaply (i.e. more output for the same cost), producing at a larger scale becomes economically efficient. The reason why, at the extreme, economies do not rest on a single firm producing a single product is because consumers prefer to choose from different varieties for each product they buy rather than buy the same one each time. This is Krugman's "love of variety".<sup>7</sup> Consumers' love of variety favours the existence of many small firms, each producing a somewhat differentiated product, while the exploitation of economies of scale makes it worthwhile to organize production in larger firms.

Under this approach, each firm produces a product "variety" that is "differentiated" from the varieties produced by other firms. Thus, each firm has some leeway to set prices without fear that consumers will immediately switch to a competitor for the sake of a small difference in prices. However, while these varieties are not exactly the same, they are substitutes for one another, and each firm continues to face competition from other producers in the industry. So what happens if two countries, each with identical industry technologies and factor endowments, open up to trade? According to traditional models on country differences, no trade would occur. In contrast, with differentiated goods and increasing returns to scale, trade opening enables firms to serve a larger market (and reduce their average costs) and gives consumers access to an increased range

of product varieties. However, as consumers can choose among more varieties, they also become more sensitive to price. Hence, each firm can produce a larger quantity than before the trade opening (selling to both domestic and foreign markets), but each must sell their product at lower prices.

The gains from trade in such a scenario are threefold. Firms produce larger quantities and better exploit their economies of scale ("scale effect"). Consumers in both countries can choose from a wider variety of products in a given industry ("love-of-variety" effect). At the same time, in an integrated market, consumers pay lower prices (also known as a "precompetitive effect"). Because of these gains, it makes sense that similar countries trade with each other and export and import different varieties of the same good. However, while the "new" trade theory provides a framework explanation of why similar countries may find it beneficial to trade with each other, the usefulness of the theory can only be determined by the actual evidence of the predicted gains from liberalization. We thus turn to the economic literature for evidence on the various effects (e.g. scale, variety, and price), including the evidence for Canada.

### *Economies of scale results*

According to "new" trade theory, firms are able to expand production within the domestic economy and enjoy lower costs through economies of scale by specializing in a variety for which they have a competitive

6 This assumption may seem unrealistic; however, such situations are quite common. To start a business (or maintain operations), firms typically incur fixed costs, i.e. they pay for certain goods or services independently of how much they ultimately produce. Such costs typically include the rental or purchase of the production facilities (plant) and machinery and equipment and hiring staff. Firms also incur variable costs that rise in proportion to the level of output. For example, a worker can only produce a certain number of units per hour and any increase in production requires the hiring of additional workers at the set wage rate. Marginal costs, i.e. the costs of producing an additional unit of output, are therefore constant, but when the overall level of output rises, the fixed costs are distributed over a greater number of units, and the firm's average costs of production therefore decline.

7 Using the simple hamburger as an example, consumers prefer to choose from a selection of hamburgers across several restaurants to having only one type of hamburger available from one restaurant, with the restaurants competing against each other in hamburger features (i.e. toppings, single patty-multiple patty, etc.) and prices.