

studies within this literature, engagement in trade is just one characteristic of firms that must be controlled for in order to obtain good estimates of the above linkages. For trade analysis, of course, the role of engagement in trade is the key feature.

This body of research is concerned with self-selection issues but in this case with self-selection into innovative activities. Therrien and Hanel apply an extension of an OECD model based on an approach developed by Crépon, Duguet and Mairesse (1998). This approach involves a system of three stages with four recursive equations: the first stage models the firm's decision to engage in R&D and, given self-selection into this activity, the resources committed to this activity. The second stage estimates the impact of R&D inputs on innovation, measured as sales of innovative products, and the third stage estimates the impact of innovation on the firm's productivity. The role of trade is captured in the first stage as a factor that influences the decision to innovate and the resources to commit to this activity.

Consistent with other findings in the literature, exporters are found to be more likely to be innovators than non-exporters but, unlike earlier results with the OECD version of this model, Therrien and Hanel find that it is exporting to non-U.S. markets that is associated with a greater likelihood of Canadian firms being innovators. They suggest that this may reflect the more demanding nature of selling to these markets compared to the familiar U.S. market. Moreover, exporting is associated with greater innovation intensity—in this case, regardless of the market to which the firm exports. Therrien and Hanel do not attempt to disentangle the complex relationship between exporting and innovation; they note, however, that causation is likely to run both ways. Exporting is likely to increase innovation by exposing firms to knowledge spillovers in foreign markets, providing added incentives to innovate by extending firms' potential market size, and providing new competitive stimuli. On the other hand, successful innovation may be the foundation for firms' entry into export markets.

Other important results of this study bear on the issue of Canada's record on innovation and productivity. Therrien and