

from one of how to deal with, if not prevent, offshoring and outsourcing, to one of how to make Canada an attractive location for high-valued activities and thus ensuring that the activities moving into Canada contribute to maintaining and improving the standards of living of Canadians. Some encouraging evidence is presented that Canada may be an attractive location for a number of high-valued activities. Research and development (R&D) activities are examined in some detail and shows that Canada appears to have a comparative advantage in performing R&D, a finding that is somewhat surprising considering Canada's relatively low R&D performance.

In terms of the drivers of offshoring and outsourcing, Boileau and Sydor report that push factors (those that drive activity out of Canada) are not particularly important, rather it is the pull factors of quickly growing markets and the opportunity to lower costs that are exerting a pull on some activities. As for barriers to offshoring and outsourcing, a number are identified that can be influenced by policy. Tariffs, for example, are identified by manufacturers as an important barrier which supports the need for continued tariff reductions. A number of the leading barriers though, deal with identifying potential suppliers, dealing with cultural and legal barriers and other factors that are expected when dealing with unfamiliar countries. These are areas where trade promotion programs, such as the Trade Commissioner Service (TCS) in Canada can play a role. Interestingly these factors of unfamiliarity show up as being more important for offshoring and outsourcing than they do for exporting for which export promotion programs were originally designed.

### **High Valued Activities**

Most discussions of global value chains eventually lead to discussions about how to "move up the value chain". The preceding discussion of the theory underpinning GVCs made clear that activities will locate and grow in those locations that have a comparative advantage in those activities. That section also suggested that when trade is at a more granular level, small policy differences may also be more important. Thus it becomes increasingly important to understand what drives the location decision of the high-valued activities that are critical to maintaining and improving standards of living.

Research and development (R&D) is often viewed as among the most attractive and sought-after 'high valued' activities. Not only do R&D activities employ some of the most knowledge-intensive workers in an economy and provide high-paying jobs, R&D is also seen as having strong agglomeration economies (thus once you get some others might follow and it is more difficult to displace) as well as having significant spillovers (that is benefits beyond those that can be captured by the company performing the R&D). It is thus with great concern that policymakers in rich countries such as Canada see their share of global R&D falling and are concerned about their country's attractiveness as a location for performing this increasingly internationally footloose and highly desirable activity. But in "The Internationalization of R&D" Bronwyn Hall points out that it is actually rare that R&D activities are moved as there are large fixed costs in doing so and as already pointed out there are strong forces of agglomeration in R&D. Rather, for R&D activities, new facilities generally add to the R&D capacity rather than supplanting existing capacity. The statistics support this view - Canada along with most advanced countries are seeing their share of global R&D fall simply due to a growing share of R&D being performed in fast growing emerging economies. She does note, however, that in Canada a relatively high share of R&D is funded externally and the growth in that segment has been particularly slow since 2000. Although it is not clear what has been the cause of this stagnation, Hall finds it unlikely that there was a sufficiently important policy change over that period that