Editor's Overview

THIS 26TH ISSUE OF THE *International Productivity Monitor* features articles on the following topics: the role of weak demand in explaining slower productivity growth; the sectoral productivity performance of Ontario industries; the sensitivity of multifactor productivity growth in Canada and the United States to alternative methodologies and assumptions; the role of measurement issues in explaining the Canada-U.S. ICT investment gap; the potential contribution of firm-level data to productivity analysis; and policies to improve government productivity performance.

Both output and productivity growth have been weaker in Canada since 2000 than in earlier decades. In the lead article, **Someshwar Rao** from S. Rao Consulting Inc. and **Jiang Li** from the University of Victoria find that this weaker output growth, reflecting weaker demand growth, was in fact largely responsible for slower productivity growth. Their econometric analysis shows that weaker demand reduces labour productivity growth through a number of channels, including fewer economies of scale and scope, weaker investment, and slower human capital formation.

The results of this analysis are relevant for the current policy debate on productivity for two reasons. First, they highlight the importance of robust demand for productivity growth. Policies that restrict demand growth, such as cuts in government spending, can have negative implications for productivity. Second, in the long term the expected slower population growth in Canada and weaker growth in our trading partners bode poorly for demand growth and hence productivity growth in this country.

Canada's poor productivity performance in the 2000s has been particularly acute in Ontario, which has experienced no labour productivity growth since 2005. In the second article, **Peter Spiro** from the University of Toronto provides a detailed sectoral analysis of productivity developments in Ontario. He reaches a similar conclusion to Rao and Li—demand matters for productivity. Using an instrumental variable approach, his econometric results show that the fall in productivity growth in manufacturing was due to a fall in output growth, reflecting falls in demand due to the appreciation of the Canadian dollar and the economic crisis in the United States.

Estimates of multifactor productivity (MFP) growth are sensitive to the methodologies and assumptions upon which these estimates are based. The symposium on multifactor productivity in Canada published in the Fall 2012 issue of the *International Productivity Monitor* highlighted this reality. In the third article in this issue, **Jiang Li** from the University of Victoria and **Larry Shute** and **Jianmin Tang** from Industry Canada make a further contribution to this debate by examining the sensitivity of MFP growth in Canada and the United States to alternative methodologies related to depreciation rates (Statistics Canada assumption versus Bureau of Economic Analysis assumption); rates of return (nominal versus real); and aggregation approaches (bottom-up versus top-down). They conclude that MFP growth estimates are fairly robust within both countries to the alternative methodologies and assumptions, with no effect on the MFP growth gap between the countries.

It is well known that Canadian firms invest much less in information and communication technologies (ICT) than their American counterparts and that this shortfall is an important

factor explaining the Canada-U.S. productivity gap. But the reasons for this shortfall are not fully understood. An obvious explanation is that ICT investment is measured differently by the statistical agencies in the two countries. In the fourth article, **Vikram Rai** and **Andrew Sharpe** from the Centre for the Study of Living Standards find that measurement issues play only a small role in accounting for the gap. They find that almost all of the gap is in software and is concentrated in a relatively small number of sectors, especially information and cultural industries, and professional, scientific and technical services.

Productivity analysis has largely been conducted at the aggregate and industry levels. The increasing availability and accessibility of firm-level data from Statistics Canada now allows a greater number of productivity researchers to conduct their analysis at a more micro level. In the fifth article, **Don Drummond** from Queen's University, **Annette Ryan** from Employment and Social Development Canada and **Michael Veall** from McMaster University make the case that more firm-level productivity research is needed. They argue that this type of research can potentially shed much light on Canada's puzzle of weak productivity growth despite the adoption of market-friendly economic policies. To foster this type of research, they have established the Network to Study Productivity in Canada from a Firm-Level Perspective.

Productivity analysis is largely confined to business sector industries because of measurement problems in the non-business sector. This can lead to the neglect of the productivity issue in the public sector, where productivity improvement is equally important. In the sixth and final article, **Aled ab Iorwerth** from the Council of Canadian Academies contributes a review article on the new book *Growing the Productivity of Government Services* by Patrick Dunleavy and Leandro Carrera. Based on detailed case studies in the UK public sector, the authors of the book argue that the use of the latest information technology, combined with strong management skills, promise potential for considerable productivity advance in the public sector. However, quantifying these productivity gains requires better reporting on the various types of output governments produce.