Editor's Overview

This third issue of the *International Productivity Monitor* produced by the Centre for the Study of Living Standards contains six articles that deal with a wide range of issues in the productivity area. Topics covered are: the contribution of the information and communications technology sector to productivity growth in Canada and the United States; the Irish economic boom and lessons for other countries; productivity trends in OECD countries; international comparisons of labour productivity levels in manufacturing; productivity trends in the construction sector in Canada; and a review of Angus Maddison's recent book on the world economy.

Readers are reminded that in addition to the hard-copy version of the *Monitor* published in English and French, all articles are available at www.csls.ca. The unabridged version of a number of the articles are also posted. Comments on articles are welcome.

The slower productivity growth in Canada relative to that experienced in the United States in the second half of the 1990s has been a matter of great concern to Canadians, with a wide variety of explanations put forward to account for this development. A key issue is whether this slower productivity growth is broadly-based, which would imply a societal-level explanation, or narrowly-based, which would point to industry-specific factors. In the first article in the issue, **Someshwar Rao** and **Jianmin Tang** of Industry Canada examine the contribution of information and communications technologies (ICTs) to productivity growth in Canada and the United States in the 1990s. They find that the productivity growth gap in the 1990s at both the total economy and manufacturing level can be entirely accounted for by the greater size and faster growth of the ICT sector in the United States relative to that in Canada. In addition, productivity improvements in ICT-using industries in the service sector were much smaller in Canada than in the United States. They note that the Canada-U.S. productivity gap could widen in the medium term given the more dynamic ICT sector in the United States.

The economic success story of the 1990s has been Ireland, with GDP per capita nearly doubling over the decade. In the second article **Pierre Fortin** from the Université du Québec à Montréal and the Canadian Institute for Advanced Research provides a detailed examination of the factors behind the Irish renaissance and discusses the lessons of this experience for other countries. He finds that Ireland has experienced a long-term productivity boom over the last 25 years and that the recent acceleration in per capita GDP reflects an acceleration in employment rate growth, not in productivity growth. The main policy recommendations that Fortin draws from the Irish economic miracle are: support free trade and investment; develop business-friendly industrial and tax policies; stick to free or low-cost secondary and post-secondary education; and ensure aggregate supply can accommodate non-inflationary aggregate demand expansion.

The Organization of Economic Cooperation and Development (OECD) has in recent years devoted considerable resources to the study of productivity trends in the OECD area. In the third article in this issue, **Dirk Pilat**, a senior economist at the OECD, provides an overview of the key results of this research effort. These include the finding that: the United States continues to have the highest level of GDP per capita in the OECD area; the gap between the aggregate productivity level in the United States and in other OECD countries increased in the 1990s after falling up to then, reflecting the rebound in U.S. productivity growth, a phenomenon not observed elsewhere; divergences in productivity growth performance are not due to different measurement techniques used in OECD countries; and differences in GDP per capita trends reflect differences in labour utilization, with the United States enjoying strong growth in both productivity and the employment rate while many European countries are experiencing limited employment growth.

International productivity level comparisons are complex, requiring comparable industry data and estimates of purchasing power at a detailed industry level. The International Comparisons of Output and Productivity (ICOP) project established at the University of Groningen in the Netherlands in 1983 has pioneered the development of international estimates of productivity levels by industry. In the fourth article **Bart van Ark** and **Marcel Timmer**, two economists from the University of Groningen, provide an overview of the ICOP manufacturing database. They note that the novelty of the ICOP approach is the derivation and use of industry-specific purchasing power parities based on producer output data instead of final expenditure information. A key finding that emerges from their research is the difference between labour productivity levels measured in terms of output per person employed and output per hour. By the former measure, the United States has by a wide margin the highest level of labour productivity in manufacturing. But when the more appropriate output per hour measure of productivity is used, the United States is no longer the manufacturing productivity leader, being surpassed by the Netherlands and Belgium.

The productivity performance of the construction sector in Canada over the last quarter century has been dismal, with output per hour significantly lower in 2000 than in the early 1980s. In the fifth article **Andrew Sharpe** from the Centre for the Study of Living Standards examines productivity trends in this sector and discusses possible factors behind this situation. He notes that two drivers of productivity growth, capital per worker and the skills level of the workforce as represented by educational attainment, have improved markedly in the construction sector in recent years. He explains the stagnation of labour productivity growth despite these favourable trends by a lack of technical progress in the construction sector and, to a lesser extent, measurement problems which underestimate productivity growth.

The final piece in this issue is a review article by **Andrew Sharpe** from the Centre for the Study of Living Standards of Angus Maddison's path-breaking new book *The World Economy: A Millennial Perspective*. The article summarizes Maddison's key findings in a number of areas, with particular emphasis on his estimates of population, real GDP, and real GDP per capita for very long periods, going back to 0 AD for all regions, to 1000 for most major countries, and to 1950 for literally all countries of the world. The article concludes that the book will be required reading for all economists interested in long-run economic growth trends and that Maddison's estimates, while by no means definitive, will stimulate debate for years to come.