

# Editor's Overview

THIS FIFTEENTH ISSUE OF THE *International Productivity Monitor* published by the Centre for the Study of Living Standard contains five articles. Topics covered are: product market regulation and productivity convergence in OECD countries and implications for Canada; the impact of interprovincial migration on productivity and output in Canada; the relationship between productivity and sustainable consumption in OECD countries; productivity growth in Chinese industries; and the measurement of intangible capital.

Economists are increasingly recognizing that product market regulations constraining competitive forces can act as a barrier to productivity growth. In the lead article, **Paul Conway** and **Giuseppe Nicoletti** from the OECD provide a detailed analysis of the relationship between product market regulation and labour productivity in OECD countries since 1980 and discuss implications for Canada. They find that the countries with the least restrictive product market regulations in the 1980-1995 period tended to enjoy the largest productivity growth acceleration after 1995.

The authors point out that, compared with the United States, regulations are more restrictive in Canada in electricity, air transport, retail distribution, and professional services. They conclude that annual labour productivity growth in Canada could be between 0.5 and 1.0 percentage points faster if Canada reformed the remaining areas of anti-competition regulation in product markets to that of the most liberal OECD countries in each sector. Given that annual labour productivity growth has averaged only 1 per cent since 2000, such a productivity improvement would be substantial.

Since 2003, interprovincial migration has increased 50 per cent in Canada. In the second article, **Andrew Sharpe**, **Jean-Francois Arsenault** and **Daniel Ershov** from the Centre for the Study of Living Standards develop a methodology to capture the impact of interprovincial

migration on output and productivity for the 1987-2006 period for Canada. The productivity gains from interprovincial migration arise largely from the reallocation of employed workers from provinces with lower productivity to provinces with higher productivity levels. In addition, increased employment from the movement of jobless persons in provinces with limited employment opportunities to provinces with attractive employment opportunities also boosts output.

The authors find that the contribution of interprovincial migration to both output and productivity growth, although small in absolute terms, has increased in recent years, fuelled by heavy migration to high productivity Alberta. In 2006, migration boosted GDP by \$883 million (1997 dollars) (or \$1,966 million in current dollars), up from \$100 million (1997 dollars) in 2003. This represented 0.074 per cent of GDP in 2006. About one half of the output gains arose from the reallocation of employed workers and the other half from increased employment. Over the 1987-2006 period, 0.02 percentage points or about 2 per cent of labour productivity growth could be attributed to interprovincial migration. For a number of reasons explored in the article, it is likely that these estimates underestimate the true impact of interprovincial migration on output in Canada.

It is well known that productivity growth is the basis of long-run increases in living standards. But there are a number of factors that

mediate the relationship between productivity and living standards or consumption, particularly in the short to medium term. In the third article, **Dean Baker** and **David Rosnick** of the Washington, DC-based Centre for Economic and Policy Research make four adjustments to the conventional measure of labour productivity growth to develop a measure of what they call “sustainable consumption.” They first calculate a measure of net productivity by adjusting gross productivity for changes in the share of depreciation in output. They then use the CPI to deflate net output to obtain a measure of consumption expressed in terms of purchasing power. They finally make adjustments for the effect on productivity of changes in the current account deficit and the net investment share of output.

The authors present estimates of growth rates for productivity and sustainable consumption measures for 14 OECD countries for the 1980-1995 and 1995-2005 periods. They find a large gap between conventionally measured labour productivity growth and sustainable consumption in the United States in both periods, due largely to the greater increase in the CPI relative to the GDP deflator. In contrast, in other OECD countries, the difference between productivity and sustainable consumption growth are, on average, minor.

The great economic success story of the last quarter century has been, without a doubt, China. Since 1980, real GDP growth has averaged 10 per cent per year, an amazing feat. In the fourth article, **Harry X. Wu** from Hong Kong Polytechnic University provides a detailed growth accounting analysis of China’s industrial productivity growth based on a comprehensive productivity database he developed.

The author finds that labour productivity growth in Chinese industries in the 1980s and 1990s was largely investment-driven and that total factor productivity growth was weak, if not negative, in most industries. But since 2000, both labour productivity growth and total factor productivity growth have literally taken off. Labour productivity growth has averaged 17.5 per cent per year and total factor productivity 12.9 per cent per year in the 2000-2005 period, compared to only 5.4 per cent and -0.1 per cent respectively in the 1980-2000 period. Wu attributes this extremely impressive productivity performance to less state intervention, exposure to international competition, and increased foreign investment, spurred in part by China’s accession to the WTO.

The definition of what economists define as assets, the boundary issue, is constantly evolving. For example, in the late 1990s, software expenditures were capitalized in the national accounts and R&D expenditures will soon follow. In the fifth and final article, **Paul Schreyer** from the OECD reviews a recent NBER volume entitled *Measuring Capital in the New Economy*, edited by Carol Corrado, John Haltiwanger, and Daniel Sichel. The author notes that the volume makes a major contribution to the field of capital measurement by developing the concept of intangible capital, defined as any use of resources that reduces current consumption in order to increase future consumption. Such a broad definition would include intellectual and human capital as well as organizational capital. Fixed business investment in intangibles was estimated to be in the order of \$12 trillion in the United States by the end of the 1990s. As such, inclusion of intangible capital as an input has important implications for productivity measurement.