

**Box A12.3. Human capital and converging incomes across Canada's provinces**

Many OECD economies exhibit marked geographic concentrations in economic well-being, labour market performance and key social desiderata. Reducing regional economic and social disparities is a policy priority for a number of OECD governments. In Canada, since the early 1950s, incomes and productivity have tended to converge, albeit gradually, across the country's provinces. Recent research has examined this process of convergence using a growth model that incorporates human capital. It was found that for the period 1951 to 1996, across Canada's provinces, roughly 50% of the differences in the growth of per capita income, and more than 80% of the relative income levels, can be explained in terms of convergence in the stocks of human capital. In this openeconomy model, with perfect capital mobility, changes in the stock of human capital are seen to drive the accumulation of physical capital across provinces. The measure of human capital used is an index, based on census data, of the share of the population that has achieved given benchmark levels of education (growth and income effects were seen to be particularly sensitive to an indicator of advanced education). Some of the difficulties of using proxies for human capital are avoided in this work by taking relative measures of the human capital stock in a context of more or less homogeneous educational systems operating across subnational regions.

As noted by the authors, the explanatory power of the study might have been increased with the use of data on immigration and inter-regional redistribution. Nevertheless, this research provides insights into why economic convergence can be slow, even within a national economy possessing integrated financial markets and no formal barriers to capital mobility. Because physical and human capital complement each other, regions lacking physical capital might face difficulties in attracting additional physical capital if their human-capital base is relatively underdeveloped. As older individuals have less of an incentive to invest in education than young people, regional convergence is slowed on account of the large numbers of less-educated older individuals who remain in poorer provinces. The authors estimate that convergence would have been up to two to three times faster had all persons invested in education at the same rate at which the young are making these investments. This work also affords an analytical framework for assessing the effects of redistributing public resources – from wealthy to less wealthy provinces – for the purpose of financing education.

*Source:* Coulombe, S. and J-F. Tremblay (2001), "Human Capital and Regional Convergence in Canada", *Journal of Economic Studies*, Vol. 28, No. 3, pp. 154-180.