

Inter-temporal and Inter-Industry Effects of Population Ageing: A General Equilibrium Assessment for Canada

Nabil Annabi

Human Resources and Skills Development Canada (HRSDC)*

Maxime Fougère

Human Resources and Skills Development Canada (HRSDC)*

Simon Harvey

Human Resources and Skills Development Canada (HRSDC)*

July 2009

Abstract

The objective of this paper is to examine the inter-industry and labour market occupational effects of population ageing in Canada, using a computable general equilibrium overlapping-generations model. The model is calibrated along a balanced-growth path, taking into account labour-augmenting (Harrod-neutral) technical progress. It also accounts for heterogeneity at the household level, using 25 occupation-specific earnings profiles. In addition to the impact of slower labour force growth, the model captures the shift in sectoral composition of final demand. The latter is due to different consumption preferences of older individuals. Moreover, a wage curve is introduced to explore the impact of population ageing on the unemployment rate. The simulation results indicate that the growth in real GDP per capita could decline by nearly one percentage point between 2006 and 2050. Besides, the production of services, in percent of total GDP, is projected to increase in the long-run, although the analysis shows more modest changes in production shares than in previous studies. The results also suggest that the equilibrium unemployment rate is likely to decline by more than 2 percentage points in the long run. The impact also varies quite significantly at the occupational level.

JEL Classification: D58, J11, O40, O51

Keywords: Population ageing, growth, general equilibrium model, overlapping generations, Canada.

* Human Resources and Skills Development Canada (HRSDC), 140 Promenade du Portage, Phase IV Gatineau (QC) K1A 0J9. The views expressed in this paper are solely those of the authors and do not necessarily reflect the views of HRSDC, nor those of the Government of Canada.

Email addresses: N. Annabi: nabil.annabi@hrsdc-rhdsc.gc.ca ;

M. Fougère: maxime.fougere@hrsdc-rhdsc.gc.ca ; S. Harvey : simon.harvey@hrsdc-rhdsc.gc.ca