

Public defence to obtain the academic degree of DOCTOR IN ECONOMICS

by Renaat Van de Kerckhove

Public policy, employment and growth in open economies

Advisor: Prof. dr. Freddy Heylen

## Wednesday, 24 April 2013 at 18h

in 'Het Pand' (room 'Rector Blancquaert'), Onderbergen 1, 9000 Gent Please confirm your attendance no later than 16 April by email to Renaat.VandeKerckhove@UGent.be

## **EXAMINATION COMMITTEE**

Prof. dr. Marc De Clercq Dean-President, Ghent University

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## Abstract

Rising pressure on social security and pension systems due to ageing, as well as the risk of persistent output and job losses because of the recent financial and economic crisis, have strengthened in all OECD countries the need to develop effective employment and growth policies. The need to raise employment is particularly pressing among older and lower skilled workers, in most countries of the euro area. At the same time, the observation of (much) higher employment and higher growth in some other countries reveals that low employment and growth are not accidents from nature.

In our first paper "Fiscal policy, employment by age, and growth in OECD economies" we build and parameterize a general equilibrium overlapping generations model (OLG model) that explains hours of work of young, middle aged and older individuals, education of the young, the retirement decision of older workers, and aggregate growth, within one coherent framework. The composition of fiscal policy, i.e. the level and structure of taxes and government expenditures, plays a crucial role. We identify cuts in labor taxes and non-employment benefits as the main policy variables promoting employment. Productive expenditures, mainly for education and public infrastructure, are the most effective with respect to long-run output and growth. Furthermore, we observe that output and growth may benefit also from labor tax cuts targeted at older workers. A key policy implication of our results for Belgium and many other euro area countries would be to cut benefits for long-term non-employment and early retirement, and to reallocate these resources to labor tax cuts on older workers and to higher productive expenditures.

In the second paper "Heterogeneous abilities, and the effects of fiscal policies on employment and growth" we extend our OLG model by allowing heterogeneous abilities. In the basic paper we assume that everyone in the model is able to study and succeed at the tertiary level. Reality is different, however. Here we make the assumption that, within each generation, different ability groups exist. These groups differ both in the degree to which they assimilate existing knowledge and in their productivity of schooling when they spend time studying. One group has low ability and will never engage in tertiary education. A second group has medium ability, a third group high ability. We confirm the earlier results of our basic paper. A new result in this paper is that those fiscal policies that are optimal in the aggregate may imply clearly differential welfare effects between the ability groups. Current and near future low-ability individuals may experience welfare losses. We argue that a country that seeks to promote growth, employment, and welfare, and to reduce welfare inequality, should cut long-term non-employment benefits and early retirement benefits, and reallocate these resources to tax cuts on older workers, tax cuts on all the low-skilled, and higher productive expenditures.

In the third paper "Pension reform in an OLG model with heterogeneous abilities" we study the effects of pension reforms on employment, education, growth and welfare. This paper is an extension of the paper "Pension reform, employment by age, and long-run growth" (T. Buyse, F. Heylen, R. Van de Kerckhove), published in the Journal of Population Economics (2013). An advantage of realistically introducing heterogeneous abilities is that we will be able to study differential effects of pension reform on the income and welfare levels of individuals with different abilities and human capital. Particular attention goes to the income at old-age and the welfare level of the low-ability individuals. Our results prefer an 'intelligent' pay-as-you-go (PAYG) system. We find the strongest positive effects on employment, growth and aggregate welfare in a PAYG system when it includes a tight link between individual labor income and the pension, and when it attaches a high weight to labor income earned as an older worker to compute the pension assessment base. Our results confirm those of Buyse et al. (2013). However, we find that their preferred system, when uncorrected, implies a strong increase of welfare inequality. Best is to maintain the tight link between individual labor income and the pension also for low-ability individuals, but to significantly raise their replacement rate. This requires some solidarity from high-ability individuals.

## Curriculum vitae

Renaat Van de Kerckhove (1958, Eeklo) obtained the degree of Licentiate in Mathematics at Ghent University in 1980. Renaat has been working as computer analyst for more than 20 years, among others for Bekaert, Dupont de Nemours and Real Software. He returned to Ghent University and became a Graduate in the Complementary Studies in Economics and Business Administration in 2004. In 2008 he completed the Master of Science in Economics.

Renaat presented his research at the 15<sup>th</sup> International Conference Computing in Economics and Finance (2009, Sydney), the 25<sup>th</sup> Annual Congress of the European Economic Association (2010, Glasgow), The Overlapping Generations Days (2011, Vielsalm), the 16<sup>th</sup> World Congress of the International Economic Association (2011, Beijing), the Singapore Economic Review Conference, (2011, Singapore), the 7<sup>th</sup> Dynare Conference (2011, Atlanta) and the 22<sup>nd</sup> Conference of the European Society for Population Economics (2012, Bern). He is co-author of the paper "Pension reform, employment by age, and long-run growth" published in the Journal of Population Economics (2013). For his first paper he received an invitation to revise and resubmit at the BE Journal of Macroeconomics.