
Abstract

Abstract of thesis entitled "Forecasting the Growth Effect of Population Aging in Macao: an Overlapping Generation Model Approach", submitted by Wu Xinyang (M-A8-6807-9) for the degree of Master of Social Sciences at the University of Macau in June 2010.

This study measures the economic impact of aging. By using a general equilibrium OLG model, we forecast income growth of Macao over the period 2002 to 2062. Following Croix. (2002), we allow for life uncertainty, link taxes and public expenditures to aging by generational accounting and take the interaction between education and work experience into account.

The analysis shows that the economic performance appears to be very sensitive to the demographic transition. In the baseline forecast, we measure the pure aging effect where other economic shocks are neglected. The simulation results show that there will be positive growth in GDP per capita in the next four decades though aging brings adverse impact to the economy. The income growth was weakened to be lower than the TFP growth. The national saving will also experience a sharp reduction. Moreover, the financial burden of public pensions will become so high that the wage income tax rate should be sharply increased to reach the government budget balance. If this aging trend continues, there will be heavy burden on future working aged

people.

Some policy experiments are conducted to examine the economic performances. The results showed that these policies can indeed stimulate the economic growth, although the gains are not large enough to completely offset the original slowing pace.

We consider a policy of raising the retirement age to 67 and a policy concerning adjusting the pension systems. It showed that the effect of the first policy reform is bigger than the second one.

Keywords: Aging, Forecast, Growth, OLG, Macao