

**Abstract**

**Population Ageing, Labour Supply and Economic Growth in China**

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Increasing life expectancy and rapid fertility decline since the 1970s have combined to create in China a very rapid rate of population ageing. These demographic developments are expected to result in an ageing workforce and a significant slow-down in the growth of the working age population. Since the participation rate of the elderly population is much lower than that of the prime-age labour force, ageing of the workforce will reduce the aggregate labour force participation rate (LFPR). Negative growth of the working age population combined with the declining aggregate LFPR will put downward pressure on labour supply. The contraction of available labour has potentially important adverse implications for sustainable economic growth in China.

This paper will use CGE (computable general equilibrium) modelling to explore the macroeconomic consequences of declining labour supply driven by population ageing over the period of 2005 to 2050. The second aim of the paper is policy analysis and evaluation. This involves an examination of the potential impact on sustainable economic growth of population control policy change.

The paper includes three parts: simulation exercises that project labour supply evolution; CGE-based forecasts of macroeconomic consequences of demographic change; and policy simulations.

In the first part, an attempt will be made to forecast the time path of labour supply in China (2005 to 2050). The analysis will focus on the effects of the changing age structure on labour force participation and, ultimately, on the labour supply. The analysis of the demographic effects on the aggregate participation will use a decomposition method based on a version of shift-share analysis. This decomposition methodology makes it possible to distinguish the contribution of changing demographic structure (demographic effect) from shifts in the participation of specific sub-groups (trend effect).

In the second part, the paper will utilize the simulated results of aggregate labour force participation to explore the macroeconomic consequences of population ageing and the induced labour supply effects. This investigation employs computable general equilibrium modelling.

The last part of the paper involves policy scenario simulations. It will examine whether population control policy changes can mitigate the effects of population ageing on labour force participation. The significance of this investigation is to assess whether major policy changes under current discussion offer effective strategies to sustain China's economic growth.