

Delayed Retirement or More Births? Short-Run Relief and Long-Run Sustainability of China’s Pension System

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Abstract

This paper constructs a heterogeneous-agent overlapping generations model that combines the Auerbach–Kotlikoff dynamic fiscal policy framework with Aiyagari-type incomplete markets, and applies it to assess the fiscal sustainability of China’s social security system under population aging. The model incorporates China’s “combined accounts” pension structure with urban–rural segmentation and solves for complete general equilibrium transition paths under two polar fiscal closure rules (payroll tax adjustment and government spending adjustment). We evaluate three reform instruments—delayed retirement, reduced pooling transfers, and replacement-level fertility—individually and in combination, computing cohort-specific welfare measures along each transition path. We find that delayed retirement is effective in the short run but limited in the long run, while pro-natalist policy offers the largest long-run fiscal dividend but provides little near-term relief due to the two-decade lag before new cohorts enter the labor force. Combining the two yields the most comprehensive fiscal improvement. To quantify the return to pro-natalist policy, we compute the fiscal value of birth—the present-discounted-value fiscal gain per additional birth—which gives the maximum per-birth subsidy the government could offer and still break even: a natural benchmark for evaluating the cost-effectiveness of birth subsidies.

Keywords: Heterogeneous Agent, Social Security, Sustainability, Population Aging, OLG Model

JEL Classification: E21, H55, J11, J26

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