

Population, Pensions, and Endogenous Economic Growth

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# POPULATION, PENSIONS, AND ENDOGENOUS ECONOMIC GROWTH\*

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**Abstract:** We study the effect of a declining labor force on the incentives to engage in labor-saving technical change and ask how this effect is influenced by institutional characteristics of the pension scheme. When labor is scarcer it becomes more expensive and innovation investments that increase labor productivity are more profitable. We incorporate this channel in a new dynamic general equilibrium model with endogenous economic growth and heterogeneous overlapping generations. We calibrate the model for the US economy and obtain the following results. First, the effect of a decline in population growth on labor productivity growth is positive and quantitatively significant. In our benchmark, it is predicted to increase from an average annual growth rate of 1.74% over 1990-2000 to 2.41% in 2100. Second, institutional characteristics of the pension

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