# Working papers economics - Macroeconomic and fiscal impact of demographic change

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Population ageing constitutes a structural challenge that requires a coherent, comprehensive, and timely response. Incorporating demographic dynamics into fiscal planning, strengthening human capital, expanding labor force participation, and modernizing social protection systems are fundamental to ensuring fiscal sustainability and economic growth over the coming decades.

Publication Date: Wednesday, 8 of April 2026 **Approach**
Colombia is undergoing a demographic transformation characterized by a marked decline in fertility rates and a sustained increase in life expectancy. Within a few decades, the country has shifted from having a predominantly young population to facing a rapid ageing process. This transition implies that, progressively, the share of people of working age will fall while the population of older adults will rise, leading to higher demand for pensions, health services, and long-term care. This demographic shift poses a structural challenge for the economy and public finances. A lower growth rate of the labor force may affect economic growth and the capacity to generate tax revenues, while ageing-related spending pressures will continue to build up.

**Contribution**
This study provides a comprehensive assessment of the macroeconomic and fiscal effects of demographic change in Colombia. To this end, it uses a Computable General Equilibrium Model that makes it possible to analyze, in an integrated way, the interactions among households, firms, the government, and the external sector. This approach incorporates within a single analytical framework the pension system, the health sector, education, the labor market, and government revenues, capturing both the direct effects and the indirect transmission mechanisms throughout the economy. The analysis is developed under three alternative demographic scenarios, allowing for the evaluation of the sensitivity of the results to different trajectories of fertility and population growth. The study also examines policy measures aimed at mitigating the adverse effects of ageing, including productivity improvements, higher labor force participation—particularly among women—greater efficiency in the health system, and the strengthening of human capital.

**Results**
The results show that population ageing poses a challenge for fiscal sustainability and longterm economic growth. In the baseline scenario, public expenditure increases persistently, mainly due to higher pension and health-related obligations. At the same time, the slowdown in the growth of the workingage population reduces

economic growth and limits the expansion of tax revenues. As a result, the primary fiscal deficit widens steadily over the projection horizon, and public debt follows an upward trajectory that could reach significantly high levels by 2070, with implications for sovereign financing costs and macroeconomic stability. The analysis also shows that policies aimed at strengthening productivity, increasing labor force participation, and improving human capital can partially mitigate these pressures and contribute to a more sustainable fiscal path.

Fuente: https://d1b4gd4m8561gs.cloudfront.net/en/publications-research/working-papers-economics/macroeconomic-fiscal-impact-demographic