

# **Analysis of Demographic Trends on International Interdependence**

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## **Abstract**

This paper develops a two-country overlapping generations neoclassical growth model including a realistic demographic structure for the purpose of analyzing the impact of country-level asymmetries in demographic and structural characteristics on cross-country interdependence. I develop two modeling frameworks, with and without a pay-as-you-go social security system and a mandatory retirement age. I find that an increase in the relative life expectancy of a population will produce a positive per-capita net foreign asset position. This is generated by the fact that the country will be comprised of individuals who save relatively more in order to smooth consumption over their extended lifetimes. Additionally, changes in the population growth rate will exert significant pressures on the per-capita dynamics of the net foreign asset position. A relative increase in the population growth rate will exacerbate a decline in the modeled net foreign asset position. Furthermore, I demonstrate how cross-country differences in the rate of time preference will augment the net foreign asset position generated by the demographic transition. Lastly, I calculate a measure of inequality associated with the accumulation of assets over the life cycle. I find that a fall in the population growth rate causes a significant decrease in wealth inequality.

**Keywords:** Demographic transition, Net foreign assets, International capital flows

**JEL Classification:** D91, F21, F41, H55, J11