

# WORKING PAPER

## *Executive Summary*

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## DEMOGRAPHIC INFLUENCES ON SAVING-INVESTMENT BALANCES IN DEVELOPING AND DEVELOPED ECONOMIES

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Transfers of savings across geographical borders, reflecting imbalances between the flows of investment and saving within regions or nations, have significant influences on economic development. Macroeconomic outcomes are affected by multiple types of cross-border transmission. But differing demographic evolutions across nations can be especially important, causing major effects on exchange rates, saving-investment imbalances, and hence net capital flows.

Virtually every part of the world in recent decades has been gradually moving from a state of short life spans and high fertility rates to one of longer lives and lower fertility rates. These demographic transitions have been altering the age structures of populations. Eventually, the entire world is expected to be characterized by few births per woman, long life expectancies, and population structures with large proportions of elderly individuals and smaller proportions of children.

The timing and speed of demographic changes, although pervasive, have been highly asymmetric across regions. The largest asymmetries in the world today exist between lower-income, less-developed countries (the “South”) and higher-income developed countries (the “North”). Heterogeneous demographic transitions are important in determining whether and how North-South transfers of savings take place.

My earlier research on the global dimensions of demographic change concentrated on macroeconomic interactions among developed nations, typified by two identically structured economies. This paper focuses on the consequences of the broad demographic differences between developed and developing economies.

The paper contains background sections that discuss cross-border flows of savings in today’s world economy, issues affecting the growth of Southern economies and their import of foreign savings, and possible influences of demographic trends on capital flows from North to South. For a representative sample of individual countries, it also provides a graphical overview of demographic transitions. The paper then describes the analytical framework used in this research, identifies key analytical characteristics of Southern and Northern economies, and reports simulation analyses of the effects of demographic forces on saving-investment balances and key external-sector variables.

A relatively optimistic view of heterogeneous demographic transitions suggests that the North can run a current-account surplus sizable in relation to the Northern economy, thereby transferring large net amounts of financial capital to the South. Such an outcome could be mutually beneficial for the South and the North, simultaneously promoting Southern economic development and permitting asset owners in the North to earn higher returns on their savings than would otherwise be possible.

The analysis here argues that this view is a plausible summary of what happened in the world economy in the historical period between 1950 and the mid-1970s. For historical decades after the 1970s and for the initial decades of the 21st century, however, a less optimistic perspective is appropriate. Demographic forces by themselves are likely to diminish rather than augment the flow of Northern saving to the South as a fraction of the Southern economy. Alternatively stated, demographic factors for several decades into the medium-run future will cause Northern saving to fall relative to Northern investment while Southern saving rises relative to Southern investment.

The fundamental causes of these effects are shifts in relative demographics between the South and the North. Relative shifts in the age compositions of the populations, and in particular relative shifts in the numbers of active workers in the labor forces and their efficiencies, differentially affect regions' flows of savings and investments. Savings, determined in a modified life-cycle framework, are relatively high (low) in a region in which the active labor force rises (declines) in relation to the total population. Investments relative to savings are high (low) when youth and elderly dependents constitute a large (small) fraction of the population. Both savings and investment are of course higher (lower) in a region growing strongly (sluggishly). But the balance between savings and investment for a single region — and even more so net changes through time in the savings-investment imbalances of regions interacting with each other — depend critically on the relative demographics. Other things equal, for example, financial capital tends net to flow away from a region whose active ratio (effective labor force to total population) rises relative to the active ratio abroad; the shift in relative demographics pushes up savings relative to investment in that region, with the savings-investment balance abroad influenced in the opposite direction. In the period between 1950 and the mid-1970s, the South experienced a marked fall in its active ratio; simultaneously, the active ratio in the North was rising strongly. After the 1970s, the South's active ratio was reversing its earlier decline and rising strongly while the increase in the Northern ratio was decelerating and, by the first decade of the 21st century, beginning to decline. The marked shifts in relative demographics explain the prominent reversal in the pattern of current-balance ratios before and after the 1970s.

The preceding generalizations refer to composite aggregations of developing Southern economies and of more advanced Northern economies. Disaggregated analyses would find significant differences among both groups of economies, for example between China, India, and Brazil and between the United States, Europe, and Japan. One must thus be cautious in applying the analysis to the economies of actual individual countries or regions.

Numerous sensitivity experiments were conducted to test the robustness of the analysis and in particular the conclusions about the direction of North-South capital flows. Sample results from three sets of these experiments are described in the paper. One set focuses on alternative demographic projections, examining whether outcomes would change substantially if the South experienced a faster or slower demographic transition. A second set examines alternative assumptions about the growth of Southern total factor productivity. The third studies the consequences of varying the degree of cross-border goods substitutability. The general appraisal emerging from the sensitivity tests is that the qualitative analysis is robust to the assumptions tested. Regardless of whether the demographic transition in Southern economies is somewhat faster and sooner or somewhat slower and delayed, regardless of whether Southern TFP growth is vigorous or weak, and regardless of whether cross-border goods substitutability is modest or strong, demographic forces considered by themselves are likely in future decades to diminish rather than augment the flow of Northern saving to the South as a fraction of the Southern economy.

Public policy in higher-income Northern nations should recognize that demographic asymmetries with lower-income Southern economies are unlikely, by themselves, to ease resolution of Northern macroeconomic difficulties caused by population aging. In fact, the demographic asymmetries between South and North are likely to work in the “wrong” direction, reducing rather than increasing the relative degree to which Southern nations rely on Northern savings to facilitate their own development.

Neither Northern nor Southern governments have much of a policy handle to intervene directly to influence demographic developments. The pace and nature of demographic transitions in all nations is uncertain. Moreover, they are largely outside the control of public policy. Southern governments aspiring to foster their nations’ development should instead concentrate on mitigating the domestic obstacles that inhibit the faster growth of their economies. Improvements are needed in infrastructure capacity, education and training, macroeconomic management, prudential supervision and regulation of financial intermediaries and financial markets, the enforcement of contracts and the protection of property rights, the nurturing of social infrastructure and norms, and more broadly still in the quality and stability of many different private and public institutions. All such improvements will contribute, directly or indirectly, to raising the level or growth rate of Southern nations’ total factor productivity. Merely identifying a catalogue of such improvements is of no practical help to Southern governments. But it at least points the development of policy recommendations toward the most promising areas. Much the surest recipe for improving Southern welfare, as suggested by the analysis in this paper, is to find feasible ways of lifting the level or growth rate of Southern total factor productivity.

As the 21st century proceeds, Northern governments will likely experience heightened pressure, from both their own citizens and foreigners, to alleviate economic inequality across the nations and individuals of the world. And they should experience such pressure. Even from a selfish — and of course from a compassionate — perspective, no thoughtful person can justify the extreme disparities in income and wealth in the world.

How can Northern governments and international organizations best help to mitigate the disparities? The most promising course of action is to provide supportive assistance to Southern governments and to nongovernmental organizations who themselves are seeking to achieve the fundamental improvements that need to be made within Southern economies. Northern governments and international organizations should not espouse direct subsidies aimed merely at increasing flows of financial capital to Southern economies. Such intervention is likely to have poorer results than supportive assistance intended to mitigate the deeper domestic obstacles that impede growth and development.

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