

Panel Discussion: Demographic Change and International Capital Flows, Long-term Interest Rate

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August 3, 2023

For presentation at the ESRI International Conference
2023: Demographic Change and Economic Growth

Trends in Population Aging

Population aging is occurring throughout the world, but there are enormous differences across countries and regions in the timing of population aging.

The share of the population aged 65 or older in the total population was 10% in the world as a whole in 2022, but it was only 3% in low-income countries, 9% in medium-income countries, 19% in high-income countries, and 30% in Japan, which is by far the most aged country in the world.

Data source: United Nations Population Division, *World Population Projections*, 2022 revision.

Trends in Saving Rates (1)

According to the life-cycle hypothesis, people work, earn income, and save when they are young and retire and draw down their previously accumulated saving when they are old. Thus, a country's overall saving rate will generally decline as its population ages and the share of the elderly population increases.

In fact, Japan's household saving rate was in excess of 24% in the mid-1970s, making it one of the highest in the world, and this was primarily because Japan's population was, at the time, the youngest in the developed world.

Trends in Saving Rates (2)

However, Japan's household saving rate declined sharply after that, falling to the -1.3 to 3.6% range after 2010 until the Covid-19 pandemic hit in 2011. (Note, however, that an increase in corporate saving has largely offset the decline in household saving.) According to my research findings, this sharp decline in Japan's household saving rate was due largely to the rapid aging of its population. Japan's household saving rate increased sharply during the pandemic but this was just a temporary phenomenon, and I predict that Japan's household saving rate come back down shortly.

Trends in Saving Rates (3)

Saving rates are influenced by many factors, but *ceteris paribus*, we can expect to see similar declines in the saving rates of the other high-income countries as their populations age rapidly,

By contrast, *ceteris paribus*, we can expect the saving rates of low- and medium-income countries with relatively young populations to remain relatively high for the foreseeable future.

Thus, the world as a whole will not necessarily face a saving shortage because low saving rates in countries with aged populations will be offset by high saving rates in countries with young populations.

Saving Shortages Not a Problem?

And if the saving of high-saving countries with young populations cannot entirely be absorbed domestically and if capital is mobile internationally, part of the saving of high-saving countries with young populations will flow to low-saving countries with aged populations, thereby alleviating saving shortages in these countries.

Thus, capital will be allocated efficiently across countries and there is nothing to worry about.

But this presupposes that capital is, indeed, mobile internationally.

Since the 1970s, financial markets have rapidly become liberalized, globalized, and integrated, so we would have expected capital to become more mobile internationally.

The Feldstein-Horioka Puzzle

However, a paper I wrote in 1980 with Martin Feldstein found that saving and investment are highly correlated across countries and that increases in saving are largely invested in the country of origin rather than flowing abroad.

Feldstein, Martin S., and Horioka, Charles Yuji, “Domestic Saving and International Capital Flows,” *Economic Journal*, vol. 90, no. 358 (June 1980), pp. 314-329.

The Explanation of the Feldstein-Horioka Puzzle

This finding came to be called the “Feldstein-Horioka Puzzle” or the “Feldstein-Horioka Paradox” because it seemed to contradict our intuition that capital should have become more mobile in recent years as a result of the rapid liberalization, integration, and globalization of financial markets.

My co-author Nicholas Ford and I as well as Maurice Obstfeld and Kenneth Rogoff explained this puzzle by pointing out that, even if frictions in financial markets have become totally eliminated, a country as a whole will not be able to transfer capital abroad if there are frictions in goods markets (also called “trade frictions”).

A Concrete Example (1)

Let us assume that there are no frictions in either financial markets or goods markets.

Let us further assume that there is a Japanese investor named Ms. Watanabe who wants to purchase U.S. government bonds. She will find someone (say Mr. Smith) who is willing to sell her U.S. dollars in exchange for her yen, and she will use those U.S. dollars to purchase U.S. government bonds.

Let us assume that this Mr. Smith is an American comic book fan who uses the yen he buys from Ms. Watanabe to buy Japanese *manga* comics and ship them back to the U.S.

A Concrete Example (2)

In this example, Ms. Watanabe has been able to transfer her capital from Japan to the U.S. and Japan as a whole has also been able to transfer its capital to the U.S. because Ms. Watanabe's transfer of capital from Japan to the U.S. has not been offset by a transfer of capital in the opposite direction.

Let us now assume that the U.S. imposes prohibitive tariffs on all Japanese goods, leading Mr. Smith to abandon his plans to import Japanese *manga* comics to the U.S. However, since Mr. Smith has already purchased Japanese yen from Ms. Watanabe, he may settle for using his Japanese yen to purchase Japanese government bonds.

A Concrete Example (3)

In this case, Mr. Smith will have transferred his capital from the U.S. to Japan, and this transfer of capital will exactly offset Ms. Watanabe's transfer of capital from Japan to the U.S., meaning that Japan as a whole will not have been able to transfer its capital abroad even though there are no frictions in financial markets because there are frictions in goods markets.

Policy Recommendation (1)

This simple illustration has shown that countries will not be able to transfer their capital abroad even if there are no frictions in financial markets as long as there are frictions in goods markets.

This means that countries with young populations and high-saving rates may not be able to transfer their excess saving to countries with aged populations and low-saving rates, leading to higher interest rates in countries with saving shortages and lower interest rates in countries with saving surpluses.

Policy Recommendation (2)

Thus, in order to achieve an efficient allocation of capital in the world as a whole, we need to eliminate frictions not only in financial markets but also in goods markets.

To put it another way, removing frictions in goods markets such as tariffs and other trade barriers will enable us to kill two birds with one stone, leading to a more efficient allocation of goods as well as of a more efficient allocation of capital in the world as a whole.

Policy Recommendation (3)

In recent years, there have been a number of instances of trade disputes and trade sanctions, which means a heightening of frictions in goods markets

Hopefully, we will be able to reverse this trend and reduce frictions in goods markets so that countries will be able to transfer their capital freely abroad so as to eliminate shortages or surpluses of saving in their domestic economies.

Thank you very much for your kind attention.

Questions and comments to

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