

## DEMOGRAPHIC SHOCKS AND GLOBAL FACTOR FLOWS: DISCUSSION

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In this intriguing paper, Jeffrey Williamson emphasizes that changes in the age distribution of the population (especially the share of young adults, the dependency ratio, and the like) are often much more important than changes in population growth rates in explaining the magnitude and direction of global factor flows. He also stresses that the transition period that follows a demographic change (such as lower fertility or lower mortality) is usually very long: a century or even longer.

Consider first migration. A sharp decline in mortality, especially infant and child mortality (which may or may not induce parents to reduce their fertility later on), changes not only the growth rate of the population, but also its age composition. When the children in the transitional cohort grow old enough to enter the labor market, the excess supply of labor will depress wages and other working conditions. Later on, when these children retire, wages will start to creep up. Young adults are particularly prone to emigrate because they have the most to gain in terms of lifetime income and other benefits. This explains why young adults from emerging nations in the middle of their demographic transitions tend to flee to the advanced nations that have completed their demographic transitions.

Williamson offers two examples that fit this parable: the European mass emigrations (60 million people) to the New World prior to 1914 and the contemporary African emigrations. In the first case, demographic changes sharply increased the share of young adults in the population in the source countries in Europe. "The young adult boom produced a labor supply glut at home which put pressure on land and other domestic

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resources, thus lowering living standards and pushing out emigrants" (Williamson 2001). These trends eased off as the demographic transition ran its course. According to Williamson, more than half of the European mass emigrations prior to World War I were driven by demographic factors.

However, I find the second story (of the African emigrations) much less convincing in practice. Suppose hypothetically that the demographic characteristics of the African countries were similar to the demographic characteristics of the richer OECD countries. Would that have caused the intense pressure for emigration from Africa to Europe, North America, and Australia to ease off completely? Would it ease enough so as to render restrictions on immigration in high-wage OECD countries superfluous? As Williamson points out, "the wage gaps favoring Europe over Africa today are more than double the gaps that favored the New World over poor Europe in the nineteenth century." Furthermore, one has to add to these gaps the various "goodies" such as health care and education offered by the welfare states in Europe (I will come back to this point later). I very much doubt whether these huge economic advantages for living in Europe rather than in Africa are going to dissipate as the African demographic shocks run their course. It seems that administrative barriers to immigration from Africa to the richer OECD countries are here to stay.

Williamson goes on to study financial flows and global capital markets. But before following him in my discussion, I would like to draw attention to a fundamental distinction between labor mobility and capital mobility. As explained in Razin and Sadka (2001), factor mobility may wear two guises. First is the mobility of the factor of production itself, without the owner changing his or her national residence. Second, one can look at the mobility of the owner with his or her factor of production. The first kind of mobility is typical for capital. The phenomenon of guest workers can also be viewed as a factor mobility of the first kind. Guest workers are typically not eligible for all the amenities (especially in the area of social insurance) of the host country. The second type of mobility typically characterizes labor and is usually termed migration. It raises a host of issues and considerations associated with the welfare state that are not relevant for factor mobility of the first kind: unemployment insurance, pensions, health insurance and care, education, and so on. Also, whereas we do after all care about the welfare of human beings (the immigrants), we pay no attention to the "welfare" of capital.

Migration is intertwined with welfare issues. The incentives for emigration are shaped by the various ingredients of the welfare state beyond the economic return (that is, the marginal product) of labor as a factor of production, which Williamson emphasizes. Pension contributions and benefits, unemployment and disability benefits, public education for children, health care, and the like, are all part and parcel of the

incentives for emigration. These elements may be equally as important as the return to labor in the form of wages in generating the pull-and-push factors of emigration. The size of the aforementioned payments and benefits, the scope and the composition of the income redistribution embodied in them, and the degree of eligibility of immigrants to benefit from them determine not only the incentives to emigrate, but also the effect of immigration on the well-being of the native-born population and, consequently, the attitude of this population towards migration.

What are the welfare implications of migration? Evidently, by their revealed preferences, the emigrants are better off in their new homes. Presumably, "those left-behind" in the source countries are worse off. Do the receiving countries benefit from immigration? It depends. Certainly one area in which the receiving countries may gain is old-age security.

It is commonly agreed that the old-age security system is heavily burdened in most countries and is in need of reform. For instance, Gruber and Wise (1999) state that "the population in all industrialized countries is aging rapidly, and individual life expectancies are increasing. Yet older workers are leaving the labor force at younger and younger ages . . . . Together these trends have put enormous pressure on the financial solvency of social security systems around the world."

Migration can help restore the financial soundness of an old-age security system. *The Economist* went as far as to say: "Demography and economics together suggest that Europe might do better to open wider its doors. Europeans now live longer and have fewer babies than they used to. The burden of a growing host of elderly people is shifting on to a dwindling number of young shoulders" (February 15, 1992).

However, when all the ingredients of the welfare state are taken into account, the overall picture is quite gloomy. For instance, the U.S. National Research Council of the National Academy of Sciences recently sponsored a comprehensive study on the overall fiscal impact of the "New Americans"; see Smith and Edmonston (1997). The study looked carefully at all layers of government (federal, state, and local), all programs (benefits), and all types of taxes. It was estimated that the overall net fiscal contribution of immigrants with at least high school education who arrived in the United States between ages 20 and 35 was approximately \$150,000 over their own lifetime; but immigrants with less than high school education, aged 20 to 40 years on arrival, impose an overall net fiscal burden of \$60,000 to \$150,000 over their own lifetime.

In overlapping-generations settings, some of this fiscal burden may be postponed into the indefinite future under certain circumstances, so that the receiving countries may benefit from immigration; see Razin and Sadka (2001). But even when the receiving country gains *on average* from low-skill immigration, it is hardly conceivable that such immigration is a Pareto-improving change; it is quite unlikely that low-skill, native-born people will gain from low-skill immigration. Similarly, native-born

professionals, for instance, in the receiving countries, will probably lose from immigration of professionals. Presumably, most immigrants from the African countries are relatively (to the native-born population) unskilled. Hence, the receiving countries do not stand to gain from this kind of immigration, and are likely to administratively restrict it.

Now, let me turn to the discussion of capital flows. Williamson refers to the hypothesis proposed by Coale and Hoover (1958): Rapid population growth generated by a decline in child and infant mortality and/or rising fertility boosts consumption (to satisfy the needs of the newborn children) and shrinks saving; as these children grow to adulthood, their savings rise, and then savings fall again close to and after retirement. A similar inverse U-shaped curve is followed by investment demand, as the entry of the grown-up children into the labor market "implies the need for more investment in infrastructure to get the new entrants to work, to equip them while at work, and to house them as they leave their parents and form their own families." Furthermore, Higgins and Williamson (1997) conclude that early in life saving is dominated by domestic investment, thereby generating a current account deficit; see Williamson's Figure 3. Later on, the decline in investment dominates the decline in saving, thereby turning the current account deficit into a surplus. Thus, demographically young nations tend to be net capital importers and demographically old nations capital exporters.

Williamson then offers three examples that fit into this parable: the flow of capital prior to World War I from demographically old Europe (especially Britain) to demographically young Argentina, Australia, and the United States; the switch of Korea and many other East Asian countries from net importing of capital to net exporting of capital along their demographic transitions during the years 1950 to 1992; and the switch from low to high, then back to low, growth rates of GDP per capita in many of these countries during that period and beyond, as they move along their transitions from high youth dependency ratios to high shares of working-age adults, and then to high shares of elderly people.

The last example is of particular interest, as regression coefficients are estimated for the effects of the growth rates of the working-age population and of the whole population on the growth rate of GDP per capita. As expected, the first coefficient is positive and significant, whereas the second coefficient is negative and significant. Using these coefficients and United Nations demographic projections up to the year 2025, Williamson concludes that demographic forces will significantly retard economic growth in East Asia. But is there not a reverse causality from per capita growth of GDP to demographic changes through migration? For high rates of growth of GDP per capita may attract young immigrants. In this case, how accurate are the estimated coefficients and the projections of GDP per capita growth rates that are based on these coefficients?

Finally, Williamson's analysis of the behavior of savings and invest-

ment along a demographic transition path may offer some explanation for the Feldstein-Horioka puzzle (1980). They demonstrated that long-term averages of national savings are highly correlated with the same averages of domestic investments in the OECD countries, despite the presumed financial openness of these countries. (Recall that free capital mobility allows foreign funds to finance domestic investment, thereby eliminating the closed-economy tight identity between savings and investment.) There are some attempts in the literature to reconcile this puzzle by resorting to some informational home-bias asymmetry (between foreign and domestic investors) that makes domestic savings favor domestic investments; see Razin and Sadka (2001) for more details. But I think that Williamson offers an alternative explanation: As can be clearly seen from his Figure 3, savings and domestic investment are positively correlated because they both follow, more or less, the same inverse U-shaped curve along the demographic transition path.

Of course, one should not interpret Williamson's work as implying that capital import and export can be fully or solely explained by a country's location along its demographic transition path. Other factors count too, among them international rate of return differentials, "tax havens," income shifting within multinationals to take advantage of tax rate differentials, and so on. But to conclude, after reading Williamson's paper, I am left with no doubt that "demographic shocks rival economic shocks as determinants of factor flows, especially in a world where policy is pro-global."

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