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Adjusting to the fertility bust:

What is the best response to declining populations?

Timothy M. Smeeding

Department of Public Affairs and Economics, University of Wisconsin, Madison, WI 53706, USA

Fertility in the United States is at an all-time low, having reached a rate of 1.86 children per woman of child-bearing age in 2013 (1). Articles warn of the worldwide “low-fertility trap” (2), and the population of Europe is projected to decline in the next 25 years (3). Should we be worried? On page 229 of this issue, Lee *et al.* (4) argue that moderately low fertility and modest population decline favor a higher living standard. They are not alone in urging restraint to concerns about population aging (5) but have painstakingly assembled a new data set to make their point very clearly. Meanwhile, Gerland *et al.* contend on page 234 of this issue (6) that the world population will still grow substantially and is unlikely to stop growing in this century. However, almost all of the projected population increase by 2100 is confined to Sub-Saharan Africa, with almost all other continents and major countries experiencing population decline and rising ratios of elders to workers.

There was once a “demographic dividend” from high fertility that has now largely disappeared. Substantial reductions in child and infant mortality rates meant that women and families needed to have fewer children to reach their desired number of offspring. Falling child mortality led to a higher life expectancy and, at least initially, a larger working-age population. More workers led to higher fiscal balances in intergenerational transfer systems, such as most social retirement systems in rich countries. For a time there were more workers than elders, raising revenue per elder and benefitting one generation (the older one) at the expense of another.

The policy problem of an aging population is surely one to be recognized. The U.S. “baby boom” between 1946 and 1960 created a huge demographic dividend for the parents of these children, not to mention a larger number of offspring to care for these persons in old age. But then fertility declined rapidly, and the number of elders (now the early baby boomers) became large relative to the number of workers as lower fertility reduced the growth rate of the labor force. At the same time, continuing improvements in old-age mortality led to faster growth of the elderly population. This U.S. baby bust has led to projections of substantial long-term changes in federal spending priorities and shortages in trust funds for Social Security and Medicare (7).

In addition to this common policy problem, what else matters in aging populations (see the figure)? Well, in a word, behavior. First, savings, work, and both physical and human capital formation may change. Older generations, with an extended period of retirement and fewer workers to support them, can and often do save more and work longer. That saving will lead to faster economic growth if it increases physical productive capital. This growth dividend can produce a larger economic pie for all, especially if greater education investments are

made to increase human capital in the younger and smaller generation to complement the technological change that comes with physical capital growth. But this is not always the case; in fact, the United States may be losing the race between investments in human capital (education) and physical capital (technology) (8). And so we have a different worry: underinvestment in education.

Second, private transfers from the old to the young can offset many of these intergenerational imbalances. The generation who feels their living standards are highest—that is, current elders—may transfer more money and educational opportunity to those who are younger, as has been the case in many rich nations in recent decades. These transfers do, however, depend on the distribution of wealth among the older populations compared to younger ones. Growing wealth inequality (9) means that wealthy households are much more able to protect their generationally disadvantaged children—for example, through payments for college tuition and other “strategic transfers.” Less-well-off households have fewer resources to devote to their children, exacerbating inequality.

Third, immigration is both important and controversial in rich countries (10). In emigrant nations, a “good son” is one who leaves, at least temporarily, to earn more money and transfer it back to his family in the home country, a different type of intergenerational transfer. Both temporary and permanent immigrants from poorer to richer nations are usually the youngest and most productive, and those immigrants who stay usually have higher fertility rates than the native population. Of course, eventually these permanent migrants grow old, too. And so, we are back to investing in the productivity of the younger generation, but now a growing immigrant generation.

The United States faces this issue right now—with the aging white population being asked to invest in the education of a growing nonwhite child population, many of whom are the children of immigrants. These investments will be made all the harder at the state and local level by the diversion of state taxes into health insurance for the poor and the elderly. Similar issues may follow in Europe and other parts of the rich world as African populations grow and African migration increases.

And then there is fertility itself (1). Sometimes falling fertility is an unmitigated good thing. For instance, American fertility has reached its record low through falling birthrates among teens and women in their early 20s. This is good news for improving the upward mobility of children, keeping young women out of poverty, and bringing the U.S. teen pregnancy rate closer to that in other rich countries. But in other cases, falling fertility among older, more stable couples is exactly the baby bust that concerns demographers (2).

Finally, fertility decline is a direct product of greater rights and opportunities for women. But fertility can rise again with policy that encourages and supports family formation. Most young women want motherhood to be a part of their lives (11). But the deferral of child bearing to older ages, later marriages for the well-educated, and the reduction of births in rich nations is part and parcel of the higher educational attainment and career aspirations of young women. Fertility recently rebounded in Sweden and France. Both nations now have birth rates above those in the United States. Both nations provide subsidized day care for

children on a sliding scale based on family income. Paid parental leave and flexible work schedules also help support and nurture family growth. Indeed, there is a national family and parental leave policy in every rich country except the United States (12, 13). Gender equity is thus another policy issue to consider.

Lee *et al.* (4) conclude that the problem of population aging in rich and middle income countries is tractable: Low fertility can challenge government social retirement programs, but those programs can adjust by reducing benefits for the old or raising taxes on the young. And moderately low fertility and population decline favor the broader material standard of living for all. But as governments confront population aging, they must also address a number of related policy issues: immigration, inequality, education, and gender/family equity in the workplace (see the figure). Such considerations can enhance economic growth, raise fertility, dampen or reverse population decline, and produce a fairer and better world for all generations.

So what about Africa? Gerland *et al.* (6) acknowledge that greater investments in family planning programs and girls' education might cause a decline in population growth this century in Africa, just as it has in most of Asia in the 20th century. But just like population aging has its set of problems, the authors suggest that rapid population growth in high-fertility countries can create its own environmental, economic, and health-related challenges as public and private sector investments lag in health, education, and infrastructure.

The simple moral is that whether population increases or declines, adjustments will have to be made. Sub-Saharan Africa has a wide range of issues such as racism and genocide to contend with also, but the rest of the world will continue to experience population aging and, in some areas, continued population decline. The time to respond to these challenges is now.

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What is the most serious policy problem?

Low fertility, population aging, and dependency?

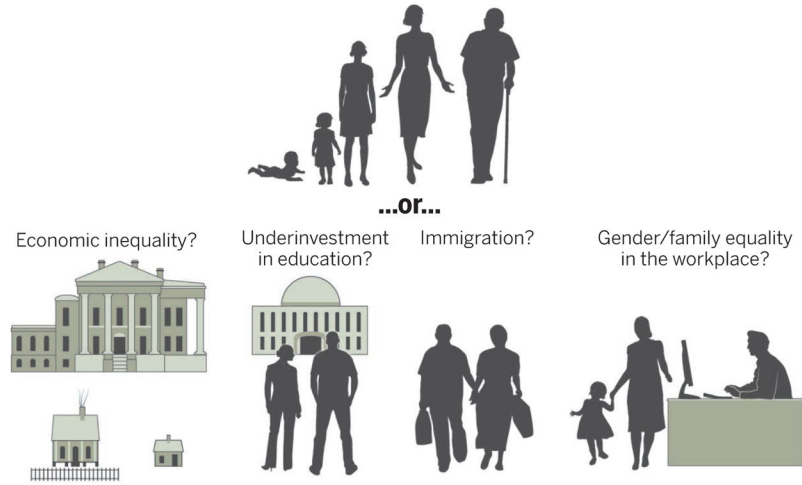


Figure 1. The consequences of falling fertility. As fertility falls and populations age in most parts of the world, numerous policy issues arise.