The Birth Dearth, Aging, and the Economy:
Where Have We Been and Where Are We Going?

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In his recent volume, *The Birth Dearth*, Benjamin Wattenberg sees the American economy, fettered by low fertility and an aging population, as grinding to a virtual halt over the next century. Wattenberg writes for a popular audience in a self-styled "speculative and provocative" fashion. But his work forms the tip of a substantial iceberg of recent scholarly opinion offering similar and even wider-ranging arguments about the longer-term economic prospects of the United States and other advanced industrial economies. In a nutshell, recent low rates of childbearing, "the birth dearth," by causing low or negative population growth and population aging, are seen as exerting a serious drag on the economy. This happens because of slower growth of markets, decreased productivity growth, and an increased burden of dependency.

These arguments are typically long on speculation but short on facts, especially with regard to history. I propose here to offer a corrective. First, I recapitulate briefly the theoretical arguments and note some counterarguments that have been advanced. Then I turn to the historical facts and assess the arguments in the light of actual experience, both that of the United States and of advanced western and northern European countries. If population growth plays such an important role in determining economic growth, then one would expect to find that population growth and economic growth go together. Is this, in fact, the case? And how do prospective rates of population growth compare with past experience—are they, for example, far lower than what has gone before? What of the outlook for the dependency burden? Does this involve magnitudes that appear unprecedented? How
has economic growth varied with the dependency burden in the past? How serious is the prospective aging of the labor supply, as distinct from population? What are the implications of aging for the educational attainment of the labor supply?

In discussing these questions, I take as given (as do Wattenberg and others) the current projections of population stagnation here and abroad. Typically these projections come in three variants—high, middle, and low—with the middle projection being most favored. But even the high-fertility projection assumes only a modest eventual increase in rates of childbearing, to an average of around 2.1 births per woman. This magnitude of 2.1 is called replacement-level fertility, because it is the rate of childbearing per woman needed to maintain population size constant over the long run.

These projections—whether low, middle, or high—of future low fertility are critical to the forecasts of stagnating population and rising old-age dependency. But how much confidence can we place in projections that seek to peer a half century or more into the future? Does the history of population forecasting, and particularly of projections of rates of childbearing, argue for accepting these forecasts? If not, would alternative forecasts substantially alter the outlook for population aging? In the concluding section, I address these questions—in short, the prospective continuation of the "birth dearth" itself.

**Effects of Population on the Economy: Theoretical Arguments**

The theoretical arguments are of two general types—one relating to the impact of population change on the demand for goods, the other relating to the impact on the supply or production capabilities of the economy (for specific references, see Easterlin 1991).

The demand argument focuses on the effect of a declining rate of population growth. The growth rate of population, it is said, governs the growth rate of markets, and thus of the demand for consumer goods and also capital goods such as housing, factories, and machinery. Declining population growth discourages business, causing markets to expand less rapidly or cease to grow altogether.
The arguments about supply-side effects stress the impact of population aging. The population is seen as comprising three parts—young, middle-aged, and older—with the older segment growing relative to the other two. Now assume that for any given attribute affecting production capabilities, say, physical strength, the older group is relatively low. Other things being constant, if the elderly’s share of the population grows, then the average degree of physical strength in the population as a whole will decline. Aging of the population would thus reduce production capacity by lowering the physical capacity of the population.

The specific attributes to which this argument is applied are numerous. The older population is supposed to be less well educated, and thus less skilled. The older population is assumed to be less likely to save and thereby to finance capital accumulation. The older population is said to be more fixed in its ways, less innovative and creative, and thus an obstacle to technological progress. The older population is claimed to be less geographically and occupationally mobile, and therefore less able to take advantage of new opportunities essential to economic progress. In combination, these arguments assert that, in general, aging of the population will retard the growth of production capabilities by lowering the quality of the labor supply, reducing the rate of capital accumulation, and lessening the rate of technical progress.

In addition, the older population is said to be different in the type of dependency burden it presents. Per capita public expenditures on retirement and health are greater for the older population. Hence, as the proportion of elderly grows, so too will the proportion of taxes to income needed to finance public retirement and health spending. Thus the "burden of old-age dependency" raises the specter of an insupportable tax burden on the working-age population, lowering the motivation of workers to work and save.

Although this is a formidable set of arguments, it has not gone without challenge. Regarding the demand argument, it is pointed out that markets depend on total spending, not number of spenders. Even with the number of spenders constant, spending per person and thus total spending will continue to rise as per capita income grows. On the supply side, it is pointed out that arguments about physical strength are of dubious relevance to a labor force dominated by white-collar and ser-
vice workers. Whether older workers are less educated depends on the historical nature of educational progress. Moreover, age stands for experience, and an older labor force is a more experienced labor force. Nor is it clear that the older population saves less; older persons, it is said, may be hesitant to spend down their assets because of uncertainty about health costs and the timing of death, as well as the desire to leave an inheritance.

As always, such “on the one hand,” “on the other” arguments leave one in a sea of uncertainty. Hence the need for historical facts, to which we now turn.

The Evidence

As we examine the facts, we look at the United States and at ten European nations in the forefront of the demographic changes that have caused concern. The population projections used are the same as those underlying the present gloomy forecasts of long-term economic stagnation.

What Has Been the Historical Relation Between Population Growth and Economic Growth?

If population growth were a major factor influencing economic growth, then one might expect to find that higher population growth and higher economic growth go together. Is this, in fact, the case?

Figure 1 presents growth rates since 1870 of population and real per capita income for each of the eleven countries. Average growth rates over four long periods are given. The periods are those identified by Angus Maddison in his book, Phases of Capitalist Development (1982), as development “phases” common to these countries, except that the most recent period in his study, 1973–1979, has been updated to cover 1973–1986.

Studying the figure, one notes that fluctuations in the two series go together in most countries. Conceivably, one might seize on this to argue that declines in population growth cause declines in per capita income growth, but this is to argue that the tail wags the dog. Note that
Figure 1. Rate of Growth of GDP Per Capita (solid line) and Population (dotted line), Specified Country and Period 1870–1986 (percent per year)

in all countries the swings in population growth rates are quite small compared with those in per capita income growth.

Even more doubt about the importance of population growth in determining economic growth arises when one compares long-term trends in the two series. While population growth has trended downward in most of these countries over the last century, real per capita income growth has trended upward. Typically the two post-1950 observations on real GDP per capita in figure 1, including even that for the recent relatively depressed period, 1973–1986, lie above those for the two earlier periods. In contrast, the post-1950 rates of population growth are about the same as or lower than the pre-1950 rates. This inverse association between trends in economic growth and population growth is contrary to what one would have expected if declining population growth were exerting a serious drag on the economy.

How Sizable are Projected Declines in Population Growth Compared With Past Experience?

The population growth rates projected for these countries in the next century are, in fact, not a great deal different from their current rates. The average annual growth rate of population in 1973–1986 was only 0.3 percent; the projected growth rate, at its lowest for the period 2030–2050 averages -0.3 percent (United Nations 1988b). The prospective decline in population growth rates is thus, on average, 0.6 percentage points over an interval of six decades, or a tenth of a percentage point per decade. As we have just seen, per capita income growth has trended upward in these countries, while population growth has trended downward. It is hard to believe that such a modest further decline in the rate of population growth would in itself produce a dramatic adverse departure from the historic pattern of secularly rising per capita income growth.

How Sizable Are Projected Increases in the Overall Dependency Burden Compared With Past Experience?

The dependency burden is sometimes discussed as though it comprises elderly dependents alone, but it is obvious that the burden of dependency on the working-age population involves infants and chil-
The Birth Dearth, Aging, and the Economy 17

dren as well as older dependents. Thus, to put dependency changes in proper perspective, one needs to look at the size of the entire dependent population, young and old, relative to the working age population. To this end, figure 2 presents, for the same eleven countries since 1880, the ratio to the working age population aged 15–64 of the sum of the two dependent age groups, persons under age 15 and over age 64. Subsequently, we will consider the two age groups separately. The vertical broken line in each panel is at 1990, separating actual experience from projected. The horizontal line in each panel, about which most of the curves fluctuate, is at a value of 0.6, indicating that, on average in this period, there were about 0.6 dependents per member of the working-age population.

How sizable is the prospective increase in dependency when viewed in historical perspective? Figure 2 shows a projected peak in dependency for all of the countries in 2040, half a century hence. How does the height of this peak compare with the highest level reached in the past century? In three countries (France, Germany, and Switzerland) the projected peak is clearly higher; in three others (Norway, the United Kingdom, and the United States), clearly lower; and in the rest, it is about the same. On average, the total dependency rate in these advanced industrial countries will about match its historic high in the period since 1880. The projected levels in 2040 are clearly higher than those prevailing at the current time, and it is this contrast that gives rise to much of the current concern. But extending the period of comparison backward a full century, one finds that in only three of the countries is projected dependency higher than in the past. Moreover, in no case does the projected high fall outside of the past century’s experience of these countries taken as a whole—the highest projected ratios are somewhat less than 0.8, as was true of the highest ratios in the late nineteenth century.

Thus, the outlook for the total dependency burden, when viewed against the experience of the past century, is not unprecedented. This conclusion holds under a variety of sensitivity tests. Varying the concept of dependency—for example, instead of population ratios, using nonworkers to workers—does not alter the picture. Nor does focusing on the “highly” dependent population, that is, old-old plus young-young. Neither do changes in the source used for the projections—OECD, UN, IMF, etc. Nor does allowance for wide variation in immi-
Figure 2. Total Dependency Ratio, Actual and Projected, Specified Country, 1880–2050 (ratio of persons aged 0–14 and 65+ to those aged 15–64)

Austria

Belgium

Denmark

France

Germany/FRG

Netherlands

Norway

Sweden

Switzerland

United Kingdom

United States

The Birth Dearth, Aging, and the Economy 19

Migration. Among current projections, the only case in which total dependency would rise to levels unprecedented in the past century is that which assumes a mortality revolution at the oldest ages. Although this possibility cannot be wholly ruled out, it is not this projection that underlies current gloomy accounts of the economic impact of population aging. Rather, such accounts are based on the more moderate mortality projections on which the projections used in figure 2 are based.

**What Has Been the Historical Relation Between the Dependency Burden and the Rate of Economic Growth?**

Figure 3 bears on the relation between the dependency burden and the rate of economic growth. It is designed to assess whether increases in the dependency rate have been associated with decreases in the rate of economic growth. The four time periods used in figure 1 are again used here, 1870–1913 through 1973–1986.

As can be seen, although growth of total output (GDP) per capita (the solid line) has varied markedly from one period of economic growth to another, the total dependency rate (the dotted line) has not. In most of the countries, the dependency rate is highest in the period 1870–1913, thereafter it is fairly stable (figure 3). In the post-World War II period the contrast is dramatic. Growth rates of real per capita income in the period 1950–1973 were almost double those from 1973 to 1986, averaging 3.5 versus 1.9 percent. In contrast, in almost all of the countries, the dependency rate was nearly the same in the two periods, and the eleven-country average was, in fact, virtually identical, .55 versus .54. One would be hard put to argue that dependency had much to do with the dramatic post-1973 drop in economic growth rates, and not surprisingly, it is never mentioned in scholarly attempts to explain this decline.

**What Does the Prospective Rise in Old-Age Dependency Imply for the Tax Burden on the Working-Age Population?**

Although overall dependency will not be so much different, the prospective age composition of dependency will be. As shown in figure 4, youth dependency is trending downward and old-age dependency upward. Seen in conjunction with the total dependency trend, this shift
Figure 3. Rate of Growth of GDP Per Capita (solid line, right scale) and Average Total Dependency Ratio (dotted line, left scale), Specified Country and Period, 1870–1986

Austria
Belgium
Denmark
France
Germany/FRG
Netherlands
Norway
Sweden
Switzerland
United Kingdom
United States

Figure 4. Youth and Elderly Dependency Ratio, Specified Country, 1880–2020 (solid line = ratio 65+ to 15–64, broken line = ratio 0–14 to 15–64)

puts in a rather different light the issue of the prospective burden on the working population of rising old-age dependency. Clearly, a declining burden of young dependents compensates for a growing burden of older dependents. Analysts of government spending sometimes recognize this by noting the offset to rising government retirement and health spending provided by declining education expenditures (Holzmann 1988; OECD 1988). But the relevant comparison must go beyond this to consider the full economic costs per dependent, that is, the private as well as public costs of supporting infants and children compared with the elderly. If the working-age population needs to spend less out of its income to support children, then more funds are potentially available for supporting older dependents (United Nations 1988a).

It is one thing to count heads and compare the number of younger versus older dependents. It is another to assess the full economic costs of supporting an average younger versus older dependent. Clearly, the standard of support for both children and older dependents is socially, not physiologically, determined. Moreover, there is the need to consider nonmarket production and consumption of the two groups. Indeed, it is because of the ambiguity regarding costs of dependents that it is important to have a clear picture of the numbers of younger versus older dependents, as in figure 4.

The amount of empirical work that has actually been done on relative costs of the two groups is small, but what has been done suggests that economic costs per dependent (private plus public) are, in fact, not much different for older and younger dependents (Easterlin 1991). If this is so, then the economic burden of dependency on the working-age population is unlikely to be noticeably higher in the first half of the twenty-first century than in the twentieth century, since the increased cost of supporting a larger proportion of older dependents will be offset by the decreased cost of supporting a smaller proportion of younger dependents. This implies that the real issue to be faced is largely political, namely, how to capture via taxation the savings of households from supporting fewer younger dependents, so that these funds can be used to meet the rise in public expenditures needed to support older dependents. The question of political feasibility is a serious one, but it does not seem insurmountable, given that the workers to be taxed would themselves eventually be beneficiaries of such taxation. In any
event, the issue is clearly different from that suggested by the view that the prospective economic burden on workers of support of dependents will somehow be unprecedented. This does not seem to be the case.

But what about the implications for the prospective tax burden on the working-age population? Clearly, if public expenditures grow relative to GNP over the long run, so too will taxes. For one thing, as was noted, increased public spending on retirement and health care would be partly offset by decreased public spending for schooling. Hence, the net increase in public spending and thus in taxes would be less than the increase in retirement and health spending. Moreover, as shown in table 1, projections to 2040 by OECD for most of the countries covered here, using the present demographic scenario, indicate that a quite modest average annual growth rate of real earnings (between 0.3 to 0.8 percent) would suffice to keep the tax burden per head of the working-age population in 2040 at the same level as in 1980. This growth rate of earnings is well below that experienced in the past. This projection assumes no change in benefit levels for the older population, but it also fails to allow for the fact that the taxable capacity of the working-age population would be enhanced by fewer younger dependents per worker and by higher labor force participation of females. Nor is there any allowance for a possible “peace dividend” due to the end of the cold war. Thus, it seems unlikely that there would be adverse incentive effects because of an undue tax burden associated with population aging.

**How Sizable is the Prospective Aging of the Labor Supply, and What Does It Imply for the Overall Educational Level of the Labor Supply?**

What is the outlook for the age composition of the working-age population itself? Will there be, as some have argued, a disproportionate number of older workers and a consequent possible decline in innovation, mobility, and thus productivity growth? To assess this question, figure 5 presents data from 1880 through 2025 for the ratio of the population aged 20–34 to that aged 35–64, that is, the younger working-age population relative to the older. The trend in this ratio is clearly downward; there will be relatively fewer younger and more older workers. In most countries, however, the projected level around 2025
is not much below that around 1960. World Bank projections (Bulatao et al. 1990), which have ratios for 2025 much like those shown here, imply an increase to 2050 in the proportion of the young in all of the countries, ranging from 2 to 10 percentage points, as lower birth rate cohorts replace higher birth rate cohorts at ages 35–64. Thus, while a relative scarcity of younger workers (or surplus of older workers) is in prospect for the first quarter of the next century, it is not greatly out of line with the degree of scarcity experienced three decades ago, and it is projected to lessen between 2025 and 2050.

Table 1. Average Annual Growth Rate of Real Earnings Per Worker Required to Maintain Tax Burden Per Worker Constant, 1980–2040, and Actual Growth Rate of Earnings, Eight Countries, 1965–1987 (percent per year)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>0.3</td>
<td>4.1&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.4</td>
<td>2.2</td>
</tr>
<tr>
<td>France</td>
<td>0.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Germany (FRG)</td>
<td>0.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.6</td>
<td>2.9&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.3</td>
<td>2.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.2</td>
<td>2.4</td>
</tr>
<tr>
<td>United States</td>
<td>0.5</td>
<td>1.3&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

**SOURCES** Column 1. Calculated from OECD (1988, p 41). The OECD projection is based on the demographic projections underlying figure 2 and an assumption of constant age-sex specific labor force participation rates. Column 2. Compensation per employee in the business sector as reported in OECD (1990), adjusted by the consumer price index (OECD, various dates). The period used for the actual growth rates is the longest for which historical OECD data are available, United States data are since 1948.

<sup>a</sup> 1970–1987  
<sup>b</sup> 1948–1987

What about the impact of labor supply aging on the educational attainment of the labor force? In considering this, one should note that in a number of these countries, the educational level of the older working-age population will improve substantially over the next thirty years, as those who benefited from the pre-1970s upsurge of schooling
Figure 5. Ratio of Persons Aged 20–34 to 35–64, Actual and Projected, Specified Country, 1880–2025

SOURCE United Nations 1956, 1987
reach older ages. Table 2 shows the prospective changes in educational attainment of older workers implied by recent census data. If schooling of the young continues to stagnate as it did in the 1970s (OECD 1983, 1984), the average level of education of the labor force as a whole would, nonetheless, be higher, as less-educated older cohorts are replaced by better-educated ones. If schooling of the young resumes its prior uptrend, then the average education of the labor force will rise even more. In either event, the favorable trend in educational attainment at older ages will offset the supposed adverse effect of aging on education of the labor supply.

Table 2. Actual and Projected Percentage of Those Aged 55–64 Completing Secondary Level Education or Higher, Specified Country

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>21</td>
<td>53</td>
</tr>
<tr>
<td>Denmark</td>
<td>42</td>
<td>58</td>
</tr>
<tr>
<td>France</td>
<td>13</td>
<td>28</td>
</tr>
<tr>
<td>Germany (FRG)</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Norway</td>
<td>37</td>
<td>63</td>
</tr>
<tr>
<td>Sweden</td>
<td>25</td>
<td>46</td>
</tr>
<tr>
<td>United States</td>
<td>57</td>
<td>84</td>
</tr>
</tbody>
</table>

a The age group for Denmark and Norway is 45–64, for Sweden, 55 and over. For Sweden, the percentage is for those with some secondary level education or higher.

There is a tendency to think of the older population in terms of the low educational levels that prevailed in the past. It is time to recognize that in many countries older workers will be much better educated than heretofore, and not much different in educational level from younger workers. In the future the generally higher educational level of older workers (and possible younger workers as well) should be an important factor, along with the greater experience of older workers, compensating for a negative effect, if any, of aging on innovation and mobility.
The Outlook for the Birth Dearth

So far the analysis has accepted without question the view embodied in current population projections that fertility will remain quite low, perhaps declining further or rising to near-replacement levels at most. But how good are these projections? To answer this, one might reasonably ask: did population forecasters foresee either the enormous post-World War II baby boom or subsequent baby bust? The answer is no. While the baby boom was taking off in the late 1940s, population forecasters were still predicting a continuation of the low fertility rates of the 1930s. Eventually, in the 1950s, with the baby boom at full throttle, forecasters abandoned their low fertility projections for high fertility forecasts only to be caught by surprise once again as fertility started to plunge in the 1960s. In the last two decades, as fertility rates plummeted to new lows in advanced industrial countries, forecasters have switched back to low fertility assumptions, as in the forecasts we have just been examining.

How much faith can we put in the current projections? Not much. Rather than predicting the future, fertility projections basically track the recent past. Instead of admitting this, however, forecasters typically try to buttress their projections with supporting judgments. The latest United States Census Bureau high fertility projection foresees an eventual rate of childbearing only slightly above replacement, about 2.2 births per woman. In commenting on this, the Bureau assures us: “it is clearly possible that fertility might eventually surpass [this level]...but that does not seem likely given the social, economic, and demographic trends of the last two decades” (U.S. Bureau of the Census 1989, p. 21). Similarly, in a recent volume, authoritatively entitled Future Demographic Trends in Europe and North America, the United Nations’ 1988 high projection of the total fertility rate (which also reaches an eventual mean value of about 2.2 for industrialized countries) is dismissed as “too high and not very probable.” Instead, the author opts for fertility rates considerably below replacement levels as more probable, an average of about 1.6 to 1.9 births per woman (Klinger 1991, p. 159).

Such statements have a familiar ring. Over four decades ago, in 1948, the then leading American scholarly demographic publication
opined regarding future fertility rates that "...the range of uncertainty is between rates somewhat below replacement and rates slightly above such replacement" (Population Index 1948). Needless to say, this statement was made after the post-World War II American baby boom was underway, when fertility soared far above replacement levels.

A similar fate may be in store for the more recent statements quoted above. As shown in table 3, in a number of advanced industrial economies, the total fertility rate in 1990 was noticeably above its 1980s trough, and in none was it below. The U.S. Census Bureau’s high projection of total births in 1990, published in 1989, was over 5 percent below actual experience. Even allowing for the fact that work on the projection was completed in 1987, how could the high projection fall so far short in only three years? Indeed, although the latest recession has put the usual damper on fertility, total births in 1991 were again above the high projection of the Census Bureau, by almost 4 percent. Compared with the medium projection, that used in the forecasts here, births in 1990 and 1991 averaged almost 12 percent higher than projected.

### Table 3. Current Total Fertility Rate (TFR) Compared With That at Most Recent “Baby Bust” Trough, Twelve Countries, 1980–Present

<table>
<thead>
<tr>
<th>Country</th>
<th>Baby bust trough</th>
<th>Current (preliminary)</th>
<th>Percent change in TFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>1987</td>
<td>1.43</td>
<td>1990</td>
</tr>
<tr>
<td>Belgium</td>
<td>1985</td>
<td>1.50</td>
<td>1990</td>
</tr>
<tr>
<td>Canada</td>
<td>1987</td>
<td>1.66</td>
<td>1990</td>
</tr>
<tr>
<td>Denmark</td>
<td>1983</td>
<td>1.38</td>
<td>1990</td>
</tr>
<tr>
<td>France</td>
<td>1983</td>
<td>1.79</td>
<td>1990</td>
</tr>
<tr>
<td>Germany (FRG)</td>
<td>1985</td>
<td>1.28</td>
<td>1990</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1983</td>
<td>1.47</td>
<td>1990</td>
</tr>
<tr>
<td>Norway</td>
<td>1983</td>
<td>1.66</td>
<td>1989</td>
</tr>
<tr>
<td>Sweden</td>
<td>1983</td>
<td>1.61</td>
<td>1990</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1985</td>
<td>1.51</td>
<td>1989</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1983-4</td>
<td>1.77</td>
<td>1990</td>
</tr>
<tr>
<td>United States</td>
<td>1986</td>
<td>1.77</td>
<td>1990</td>
</tr>
</tbody>
</table>

Clearly, the fertility experience of the past few years here and abroad hints at the possibility of a new fertility upswing. Historical experience does provide a basis for projecting an upturn in fertility. If we extend our historical perspective beyond the past two decades, we find that over the past century there has been a long-term swing in fertility rates in almost all advanced industrial countries. This is illustrated by estimates of completed fertility presented in table 4. Typically, the initial trough occurs among women born near the beginning of the century and the subsequent peak among those born in the early 1930s. Although completed fertility for most women born in the two decades after World War II is not yet exactly known, the projected figures for women born in 1950, who are now very close to the end of their childbearing, are very similar to those of the cohorts born at the beginning of the century. A new upswing would extend this pattern nicely. Although the historical record does not prove that fertility will increase as in the past, recent experience hints at this. Certainly, the historical record suggests that an increase in fertility is a possibility that forecasters ought at least to recognize.

This possibility finds further support when we consider the prospective labor market for young adults in the coming decade. The numbers of those who will be reaching the childbearing ages will be unusually low, an echo of the recent baby bust. Also, immigration from low-income countries in Europe is likely to be increasingly restricted. Other things constant, this scarcity of younger workers will make for a favorable labor market for adults in the family formation ages, a reversal of the situation experienced by their predecessors, the baby boom cohorts. The biggest conjectural factor is the growth rate of aggregate demand. The prospective reduction in military outlays and consequent easing of spending pressures on government budgets give some basis for thinking there may be a return to the expansive monetary-fiscal policies of the earlier post-World War II era. Moreover, smaller numbers at the younger end of the labor market should make for more vigorous expansion of aggregate demand by the monetary-fiscal authorities by lowering the unemployment rate corresponding to full employment. If aggregate demand is expanded more rapidly, then demand-side conditions will also take a turn more favorable to young adults. Although the outlook is uncertain, it hardly warrants dismissing the possibility of a
strong labor market for young people that would induce a fertility upswing.

Table 4. Swings in Completed Fertility Since Around 1990

<table>
<thead>
<tr>
<th>Country</th>
<th>Initial trough</th>
<th>Peak</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Birth cohort</td>
<td>Children</td>
<td>Birth cohort</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
<td>per woman</td>
<td>(3)</td>
</tr>
<tr>
<td>Austria</td>
<td>n.a.</td>
<td>n.a.</td>
<td>1934</td>
</tr>
<tr>
<td>Belgium</td>
<td>1905</td>
<td>2.01</td>
<td>1931</td>
</tr>
<tr>
<td>Canada</td>
<td>1911</td>
<td>2.70</td>
<td>1930</td>
</tr>
<tr>
<td>Denmark</td>
<td>1904</td>
<td>2.15</td>
<td>1933</td>
</tr>
<tr>
<td>England &amp; Wales</td>
<td>1906</td>
<td>1.81</td>
<td>1934</td>
</tr>
<tr>
<td>France</td>
<td>1896</td>
<td>1.98</td>
<td>1930</td>
</tr>
<tr>
<td>Germany (FRG)</td>
<td>1901</td>
<td>2.08</td>
<td>1933</td>
</tr>
<tr>
<td>Norway</td>
<td>1906</td>
<td>2.01</td>
<td>1933</td>
</tr>
<tr>
<td>Sweden</td>
<td>1905</td>
<td>1.81</td>
<td>1934</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1907</td>
<td>1.97</td>
<td>1933</td>
</tr>
<tr>
<td>United States</td>
<td>1908</td>
<td>2.27</td>
<td>1933</td>
</tr>
</tbody>
</table>

SOURCE Calot (1988) The Netherlands is omitted because it does not have a swing in fertility. Compared with the other countries here, it starts at a much higher initial level (around 3 children per woman) and trends downward. n.a. = not available.

Ongoing rates of childbearing, historical fertility experience, and the prospective labor demand-supply conditions for young adults thus suggest as a serious possibility a prospective upswing in fertility. If this possibility were introduced into projections it would, of course, substantially alter the outlook for population growth and dependency rates. Over the next decade or two, population growth and dependency would be higher than now projected as the population under 18 grew more rapidly than expected. (No doubt, there would also be a renewed upsurge of fears about excessive population growth.) But in the period when dependency is currently expected to reach projected highs, after 2025, there would be a tendency for the dependency ratio to decline as the newest baby boom cohorts reached adulthood and expanded the numbers in working ages.
While all of this is conjectural, it is hardly any more so than the prevailing consensus of a continued birth dearth. This consensus rests solely on a projection six decades hence of experience merely of the last two decades. It is hard to see why projections sixty years down the road should not be based on historical experience of at least comparable length. The possibility of a substantial fertility upswing would seem to deserve more weight in assessments of population prospects than is given to it currently.

Summary

The central question at issue here is whether the demographic patterns projected for the future—low or negative population growth and population aging—are likely to have important adverse effects on future economic growth, that is, whether the projected patterns of population growth imply secular stagnation on the economic side. To answer this, we have focused particularly on the record of the last century.

As it turns out, historical experience raises serious doubt about this secular stagnation thesis. In the past, growth rates of real per capita income have trended upward despite a downward trend in population growth. This is hardly what one would expect if population growth were exerting a serious drag on the economy. Also, in the post-World War II period, economic growth rates have differed sharply between periods with little or no differences in dependency. Nor are projected demographic changes markedly out of line with past experience. Future declines projected for the rate of population growth are quite small; hence it is hard to see why a substantial new negative effect on economic growth should emerge. Projections of aging of the labor force itself do not yield magnitudes out of line with previous experience. Moreover, there will be a sharp increase in the educational attainment of older workers. Negative effects, if any, of labor force aging on innovation and mobility are likely to be offset by a markedly higher educational level of the older population, as well as the greater experience of older workers.
Similarly, the outlook for the total dependency burden on workers, when viewed in historical perspective, is not unprecedented. Projected total dependency rates are, on average, about the same as in the late nineteenth century, since rising old-age dependency is projected to be offset by declining youth dependency. An assessment of the projected change in tax burden per worker suggests that this is not likely to be so great as to have serious adverse incentive effects.

Indeed, the longer-term historical record raises doubt about fertility leveling off below replacement levels, as currently projected. Completed fertility in this century shows a long-term swing of about fifty years duration, and labor market conditions are now emerging that favor a new upswing. In all of the countries considered here, the current total fertility rate is above its 1980s trough, and in a number of them the increase is sizable. If a new baby boom were to occur, it would change the dependency outlook in a more favorable direction in the period after 2025, the period when current projections place the dependency burden at its highest. It is hard to understand why the possibility of a new baby boom is so blandly dismissed in demographic projections.

In the literature on less developed countries, recent years have seen a growing skepticism that population growth has important adverse effects on long-term economic growth (see, e.g., Kelley 1986, 1991; U.S. National Research Council 1986). It seems likely that a similar fate is in store for the current literature foreseeing dire consequences for economic growth in the demographic outlook of developed countries.
References


