The Fiscal Impact of Population Change: Discussion

C. Eugene Steuerle*

It is now well established that world-wide demographic shifts are going to affect both the U.S. and world economies in ways that are not entirely predictable. What we can do—and what Ronald Lee and Ryan Edwards do so well—is to plot out for the future some of the fiscal implications under reasonable guesses about demographic, economic, and legal factors. These factors include what we know already from the past, such as the maximum number of people in the world of any age over 0 next year and over 10 in another ten years. A typical next step is to posit what in estimating circles is known as "current law" (defined partly by convention, not just law). Even if that law cannot possibly be maintained, some of its implications can be understood. Finally, one assumes some reasonable parameters, such as future fertility, mortality, and labor force participation, largely based on historical trends.

Some argue that long-term estimates should not be made because we know so little about the future. But this argument ignores what we do know, largely derived from demographic data. The more important point is that we must do long-term projections if government is going to make promises for the long term. It is the government (or private sector) contract that makes assumptions, largely implicit, about what is afford-able in the future. If making projections for 50, 75, or 100 years is relatively new in our history, so also is a government making promises about how future income growth in the economy will be spent in 50, 100, and 200 years. The analyst or economist or actuary is forced to derive the implications of contracts and to try to make them explicit. Many of the

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*Senior Fellow, The Urban Institute.

arguments against long-term estimates, therefore, are really arguments against long-term commitments that make the estimates necessary.

It is hard to find fault with the Lee/Edwards paper. Their way of presenting the numbers is often insightful and unique. What I would like to do, therefore, is to reflect on the fiscal impact they address but in some alternative ways. In a sense, I am simply examining the same building but from a different vantage point. I will speak briefly to three issues:

Aging. The picture of aging looks different if we separate the effects of living longer from lower fertility rates. When the two factors are combined, it gives a distorted view of total need and relative need in the population, and a misleading impression of how labor force participation rates change over time. I suggest that often we ought to use "age from death" rather than "age from birth" in performing different types of analyses.

Human Capital. An alternative model for projecting fiscal pressures is to examine what we are scheduling in the way of idle or wasted human capital. Closely related and largely ignored to date is how the soon-scheduled continual drop in adult employment rates may affect the macroeconomy.

Budget Trends beyond Aging. Finally, I believe that we should view fiscal pressures as arising as much from trying to stay on past trend lines—an impossibility by itself—as from any relative aging of the population. The rising costs of relative aging would be much more affordable if they were not reinforced by such factors as more years in retirement and the ways that public and private health insurance encourage the adoption of cost-increasing technology in health care.

Briefly now to each of these points.

AGING

Sometimes we are trapped by our own language. Aging is a term so commonly used that it goes undefined. Conventional use of the term for the individual refers to attaining a fixed age such as 65, and societal aging is commonly defined in similar terms, such as percentage of the population over age 65. This is highly misleading.

In fact, growth in the percentage of the population attaining a given age is derived from two very different factors—longer life expectancies and changes in fertility rates. Longer life expectancies generally mean that individuals are better off, by having more years to live, and there is increasing evidence that individuals are in better average health at any age.

By contrast, lower fertility rates mean that the percentage of the population in, say, the latter half or the last 10 percent of their lives will rise relative to the population as a whole. If people's health problems get worse and costs arise as they approach, say, the last five years of their

Figure 1
**Proportion of Social Security Benefits for Males Going to
Those with More Than 10 Years of Life Expectancy**

Percent
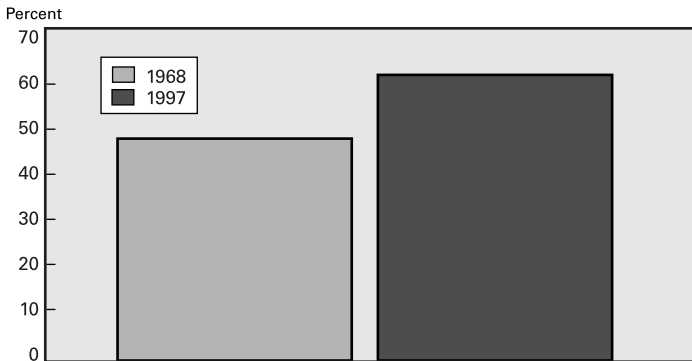
lives, then the relative needs of those with five years of life expectancy or less will go up in a society simply because a larger share of the population will have that short life expectancy.

Let me give three examples of how reporting on aging can affect our perceptions. First, much of the increased cost of Social Security over time is associated with its de-emphasis on putting money where needs are greatest. Thus, people now retire close to five years earlier than when the system was first established, and they are living about five years longer (these factors are not additive). In 1968, 48 percent of benefits to males were paid to those with life expectancies of ten years or more; today it is 62 percent and rising (Figure 1). Similarly, if we were measuring true needs, we would worry more about those periods when individuals are likely to have greater physical, medical, long-term care, and other real needs, that is, in the last years of life. The 2040 problem is more "real" in this sense than is the problem of 2020.

As a second example, I believe many of our estimates can be misleading and our regressions incorrectly specified. Take some of the elementary comparisons made at this conference—for example, measuring dependency ratios over time. The common method is take a group, say, those under age 18, and compare them not to those with, say, 18 years of life expectancy but with those who have attained age 65. Only when measuring fiscal promises that use a fixed age for benefit eligibility is this appropriate, not when measuring dependency as a need.

Finally, Figure 2 shows labor force participation rates as measured

Figure 2
Labor Force Participation Rates
**By Age as Measured from Birth and from Death**

Percent
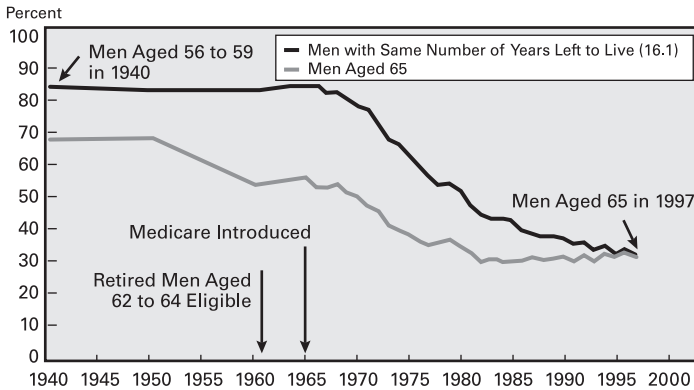
Source: The Urban Institute, 1999. Based on data from the U.S. Social Security Administration, the U.S. Census of Population, and the U.S. Bureau of Labor Statistics.

from both birth and death (chronological age and remaining life expectancy). Men aged 65 in 1997 had about 16 years of life expectancy. When we trace labor force participation rates of men at age 65, they decline fairly continually until very recently. However, when we examine past labor force participation rates of men with 16 years of life expectancy, we find that they remain fairly flat at high levels until just about the time that an early retirement age of 62 comes along and Medicare is made available. If one were to run a regression on labor force participation, he might obtain a very different result if he used age from death rather than chronological age. When chronological age is an independent variable, the implicit assumption is that a person aged 65 in 1950, all other things being equal, should be considered equivalent to a person aged 65 in 2000.

HUMAN CAPITAL

Since people now retire on public pension systems for about the last third of their adult lives, these systems must be considered middle-age as well as old-age retirement programs. One cannot ascertain the fiscal impact by looking merely at the effect on retirement benefits. The reduced output associated with more retirement years is a multiple of the benefits that are paid; dropping out of the workforce reduces the level of output in society, raises the level of lifetime needs of the retirees not covered out of their own income, and raises the level of general revenue per remaining worker that must be collected to pay for education, defense, and everything else.

Figure 3
Labor Force Participation Rates: Males Aged 55 and
**Older versus the Adult Population**
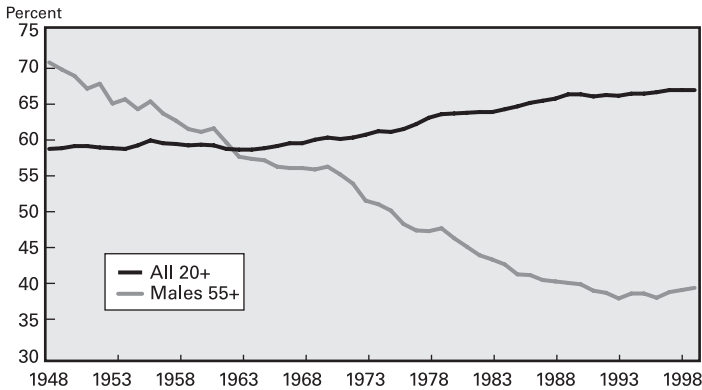
Source: Eugene Steuerle and Adam Carasso, The Urban Institute, 2001. Data obtained from the U.S. Bureau of Labor Statistics.

For the most part, we still live in a retirement system that treats human beings as suddenly becoming unproductive when they reach a certain number of years past birth. Largely a vision taken from nineteenth and early twentieth century industrial society, human capital is treated analogously to physical capital that depreciates like the "one-hoss shay," a buggy that needed few repairs until it suddenly fell apart and had to be replaced.

President Franklin Roosevelt argued that the increasing physical demands of an industrial society meant that people required more retirement years. If this was true, then the corresponding argument is that in an economy with decreasing reliance on physical labor and ever better health care, there is less need over time to retire at any given age.

Figure 3 highlights the human capital question in another way. One line shows the labor force participation rates of males aged 55 and over. It is this type of trend that is projected forward to forecast the future. That is, age-sex-specific labor force participation rates are projected forward in ways that tend to keep them relatively constant because they fell for several decades for older men. But the other line shows that throughout the post-World War II period, the adult labor force participation rate went up essentially in every non-recession year. Of course, women's increased participation was more than offsetting the rise in retirement years mainly for men. One interpretation is that this was primarily a sociological phenomenon related to greater civil rights for women,

Figure 4
Adult Non-Employment Rate
Unemployed or Not in the Labor Force, Ages 20 and Over

Percent
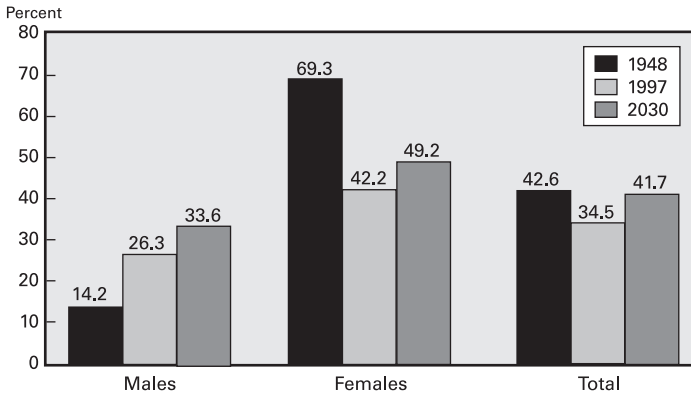
smaller families, and so forth. But what is left out is demand for labor, a demand that is driven by the consumption opportunities available to the public. If one projects on the basis of total labor force participation, one gets a very different perception of how much the labor supply of older workers would increase.

I conclude that most projections of labor supply into the future are basically partial equilibrium models and that a more general equilibrium approach would give greater recognition to the demand for labor and a more sanguine view of the future. What is hard to separate out, however, is the extent to which it is necessary to open the policy dams, that is, change government policy, to let flow the natural economic forces of private labor supply and demand.

If I am wrong, and current types of projections are right, they imply that the adult employment rate would fall by the equivalent of 0.3 or 0.4 percent of the labor force almost every year for twenty years or more running. (This can be seen in Figure 4, which measures the adult non-employment rate as a percent of a larger denominator, total adult population, over time under conventional assumptions for the future.) Macroeconomists are used to indicating that such a decline in the employment rate due to unemployment is often recessionary in its effect on the economy, but we in the United States have never had this type of continual negative impact on the employment rate. Moreover, the projection goes entirely contrary to the entire postwar experience of an

increased adult employment rate. The macroeconomic implications, I believe, need much further examination.
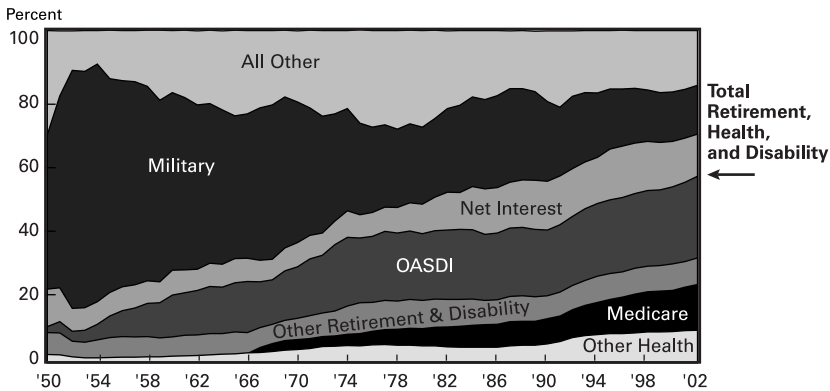
THE BUDGET

My final point is simply that much of the fiscal impact we are examining is not the effect of relative aging but is caused by other factors—in particular, other sources of built-in growth in programs largely devoted to the aged.

I show this briefly in a few figures. Figure 5 shows how federal spending on retirement and health has risen from about 10 percent of the U.S. budget in 1950 to over 50 percent today. And it is rising well before the baby boomers start retiring. A similar trend can be shown for all developed countries. Figure 6, based on current projections, shows this fiscal trend continuing—with Social Security, Medicare, and long-term care under Medicaid essentially absorbing almost all the growth in revenues over time. Figure 7 shows how rising levels of lifetime benefits in retirement are independent of any aging of the population due to relative aging or drops in fertility rates.

Finally, Figure 8 shows some of the ways that public and private health insurance has set up a health care market with the extraordinarily unusual and unsustainable tendency to be a growth sector that emphasizes cost-increasing technology. Quantity and price measures provided by the U.S. Bureau of Economic Analysis show that almost all other

Figure 5
Change in the Composition of the Federal Budget

Source: Eugene Steuerle and Adam Carasso, The Urban Institute, 2001. Based on the Budget of the United States Government, FY 2001.
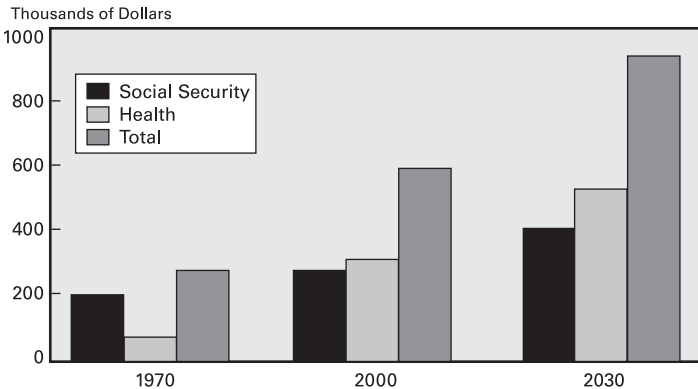
Figure 6
Total Federal Revenues versus
Long-Term Mandatory Spending
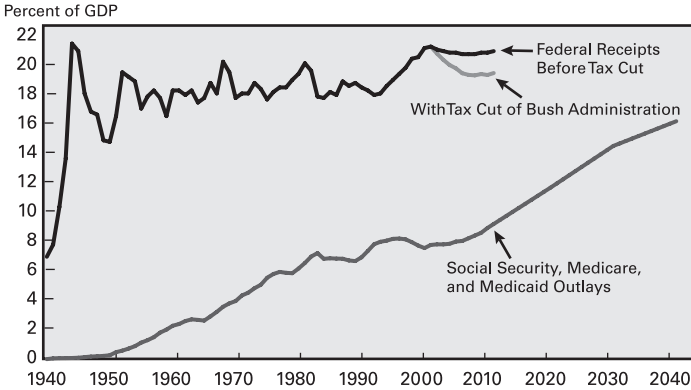
Source: Eugene Steuerle and Adam Carasso, The Urban Institute, 2001. Based on the Budget of the
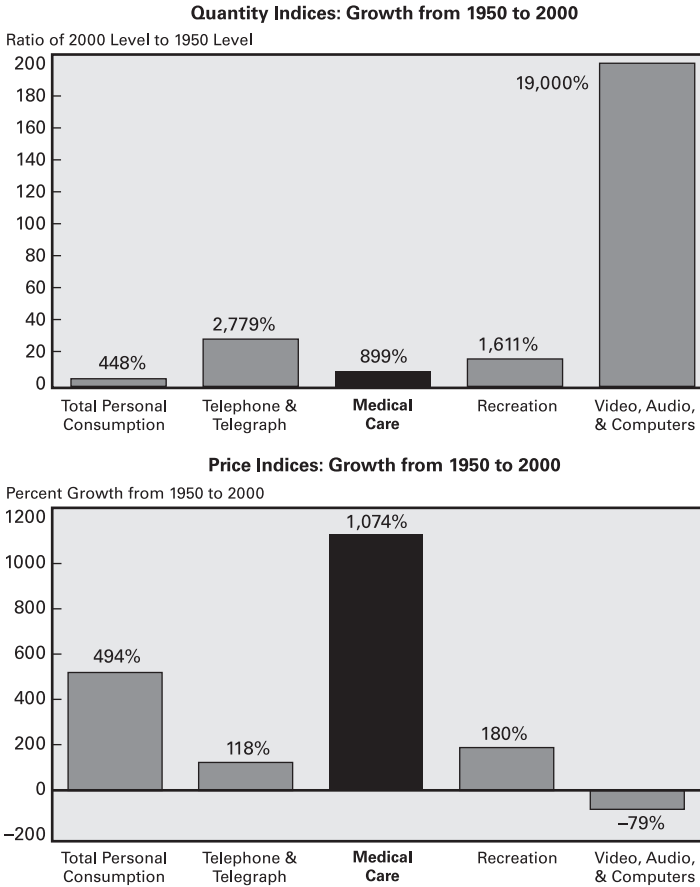U.S. Government, FY 2002 and "The Long-Term Budget Outlook," CBO, October 2000.

growth sectors have had price increases well below the average for the
economy, and that these relative price decreases have gone hand-in-hand
with technological improvement that should increase the depreciation
rate on old ways of doing things. Health care, by contrast, displays

Figure 7
Retirement-Related Benefits for an Average-Wage Couple

Figure 8
Quantity and Price Indices over Time:
Medical Care versus Other Consumption Categories

Quantity Indices: Growth from 1950 to 2000

Ratio of 2000 Level to 1950 Level

Price Indices: Growth from 1950 to 2000

Percent Growth from 1950 to 2000

Source: C. Eugene Steuerle and Adam Carasso, The Urban Institute, 2001. Data obtained from the U.S. Bureau of Economic Analysis, National Income and Product Account Tables, Table 7.2.

extraordinary growth in relative prices even while quantities are increasing at the same time. I realize the inherent difficulties in using these measures—not the least of which are problems with trying to measure quality increases and the inherent inconsistencies in price and quantity indices over time—but the numbers are revealing nonetheless. (Their problems, by the way, also carry over to other measures such as gross domestic product, inflation, and productivity of the economy as a whole.)

CONCLUSION

In summary, Lee and Edwards have done us a service in measuring the fiscal impact of existing policy under a reasonable set of assumptions. But other important steps are required: (1) We need to be careful to distinguish those individual needs and behavioral patterns that arise from the relative aging of the population. (2) We need to pay attention to the micro and macro impacts associated with the significant jump now scheduled in the share of human capital that will be wasted. (3) We should continually examine those fiscal or budgetary problems that are caused by rising costs independent of any increase over time in the share of the population with a fixed remaining life span.