

## Alan Greenspan: Economic implications of population aging

Opening remarks by Mr Alan Greenspan, Chairman of the Board of Governors of the US Federal Reserve System, at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, 27 August 2004.

\* \* \*

I am pleased to be here this morning to discuss the economic implications of population aging and to provide a general overview of some of the issues that will be covered in much greater detail over the next two days.

The so-called elderly dependency ratio - the ratio of older adults to younger adults - has been rising in the industrialized world for at least 150 years. The pace of increase slowed greatly with the birth of the baby-boom generation after World War II. But elderly dependency will almost certainly rise more rapidly as that generation reaches retirement age.

The changes projected for the United States are not as dramatic as those projected for other areas - particularly Europe and Japan - but they nonetheless present substantial challenges. The growth rate of the working-age population in the United States is anticipated to slow from about 1 percent per year today to about 1/4 percent per year by 2035. At the same time, the percentage of the population that is over 65 is poised to rise markedly - from about 12 percent today to perhaps 20 percent by 2035.

These anticipated changes in the age structure of the population and workforces of developed countries are largely a consequence of the decline in fertility that occurred after the birth of the baby-boom generation. The fertility rate in the United States, after peaking in 1957 at about 3-1/2 births over a woman's lifetime, fell to less than 2 by the early 1970s and then rose to about 2.1 by 1990.<sup>1</sup> Since then, the fertility rate has remained close to 2.1, the so-called replacement rate - that is, the level of the fertility rate required to hold the population constant in the absence of immigration or changes in longevity.

Fertility rates in Europe, on the whole, and in Japan have fallen far short of the replacement rate. The decrease in the number of children per family since the end of the baby boom, coupled with increases in life expectancy, has inevitably led to a projected increase in the ratio of elderly to working-age population throughout the developed world.

The populations in most developing countries likewise are expected to have a rising median age but to remain significantly younger and doubtless will grow faster than the populations of the developed countries over the foreseeable future. Eventually, declines in fertility rates and increases in longevity may lead to similar issues with aging populations in what is currently the developing world but likely only well after the demographic transition in the United States and other developed nations.

\* \* \*

The aging of the population in the United States will significantly affect our fiscal situation. Most observers expect Social Security, under existing law, to be in chronic deficit over the long haul; however, the program is largely defined benefit, and so the scale of the necessary adjustments is limited. The shortfalls in the Medicare program, however, will almost surely be much larger and much more difficult to eliminate. Medicare faces financial pressure not only from the changing composition of the population but also from continually increased per recipient demand for medical services. The combination of rapidly advancing medical technologies and our current system of subsidized third-party payments suggests continued rapid growth in demand, though future Medicare costs are admittedly very difficult to forecast.

Although the sustainability of fiscal initiatives is generally evaluated for convenience in financial terms, sustainability rests, at root, on the level of real resources available to an economy. The resources available to fund the sum of future retirement benefits and the real incomes of the employed will

---

<sup>1</sup> The fertility rate used here is the total fertility rate. It is measured as the average number of children who would be born to a woman over her lifetime if she experienced the birth rates by age observed in any given year.

depend, of course, on the growth rate of labor employed plus the growth rate of the productivity of that labor.

The growth rate of the U.S. working-age population is expected to decline substantially over the next two decades and to remain low thereafter. But the fraction of that population that is employed will almost surely be affected by changes in the economic returns to working and, especially for older workers, improvements in health.

Americans are not only living longer but also generally living healthier. Rates of disability for those over 65 years of age have been declining even as the average age of the above-65 population is increasing. This decline in disability rates reflects both improvements in health and changes in technology that accommodate the physical impairments associated with aging. In addition, work is becoming less physically strenuous but more demanding intellectually, continuing a century-long trend toward a more-conceptual and less-physical economic output. For example, in 1900, agricultural and manual laborers composed about three-quarters of the workforce. By 1950, those types of workers accounted for one-half of the workforce, and though still critical to a significant part of our economic value-added, today compose only about one-quarter of our workforce.

To date, however, despite the improving feasibility of work at older ages, Americans have been retiring at younger ages. But rising pressures on retirement incomes and a growing scarcity of experienced labor could eventually reverse that trend.

Of course, immigration, if we choose to expand it, could also lessen the decline of labor force growth in the United States. As the influx of foreign workers that occurred in response to the tight labor markets of the 1990s demonstrated, U.S. immigration does respond to evolving economic conditions. But to fully offset the effects of the decline in fertility, immigration would have to be much larger than almost all current projections assume.

\* \* \*

It is thus heightened growth of output per worker that offers the greatest potential for boosting U.S. gross domestic product to a level that would enable future retirees to maintain their expected standard of living without unduly burdening future workers. Productivity gains in the United States have been exceptional in recent years. But, for a country already on the cutting edge of technology to maintain this pace for a protracted period into the future would be without modern precedent. One policy that could enhance the odds of sustaining high levels of productivity growth is to engage in a long overdue upgrading of primary and secondary school education in the United States.

We obviously cannot attribute recent productivity trends to a high level of national saving. Rather, the effectiveness with which we have invested both domestic saving and funds attracted from abroad is the apparent source of our decade-long rise in productivity growth. As I have noted previously, the bipartisan policies of recent decades directed at deregulation and increasing globalization and the innovation that those policies have spurred have markedly improved our ability to channel saving to its most productive uses, and as a byproduct increased the flexibility and the resiliency of the U.S. economy.

It is, of course, difficult to separate rates of return based on the innovations embedded in new equipment from the enhanced returns made available by productive ideas of how to rearrange existing facilities. From an accounting perspective, efficiency gains, broadly defined as multifactor productivity, have accounted for roughly half the growth in labor productivity in recent years. Capital deepening accounts for most of the remainder.

All else being equal, domestic investment would raise future labor productivity and thereby help provide for our aging population. But the incremental benefit of additional investment may itself be affected by aging. With slowed labor force growth, the amount of new equipment that can be used productively could be more limited, and the return to capital investment could decline as a consequence. Yet it is possible that the return to certain types of capital - particularly those embodying new labor-saving technologies - could increase.

Although domestic investment has accounted for only half our recent productivity gains, its contribution has historically been much larger. Should the pace of efficiency gains slow, it would fall to the level of investment to again become the major contributor to productivity gains. Investment, however, cannot occur without saving. But maintaining even a lower rate of capital investment growth will likely require an increased rate of domestic saving because it is difficult to imagine that we can continue indefinitely to borrow saving from abroad at a rate equivalent to 5 percent of U.S. gross domestic product.

A key component of domestic saving in the United States in future decades will be the path of the personal saving rate. That rate will depend on a number of factors, especially the behavior of the members of the baby-boom cohort during their retirement years. Over the post-World War II period, the elderly in the United States, contrary to conventional wisdom, seem to have drawn down their accumulated wealth only modestly. Apparently retirees spend at a lesser rate and save more than is implicit in the notion that savings are built up during the working years to meet retirement needs. Perhaps, people mis-estimate longevity or desire a large cushion of precautionary savings. Moreover, often people bequeath a significant proportion of their savings to their children or others rather than spend it during retirement. If the baby-boom generation continues this pattern, achieving a higher private domestic saving rate is not out of reach. Even so, critical to national saving will be the level of government, specifically federal government, saving.

\* \* \*

A doubling of the over-65 population by 2035 will substantially augment unified budget deficits and, accordingly, reduce federal saving unless actions are taken. But *how* these deficit trends are addressed can have profound economic effects. For example, aside from suppressing economic growth and the tax base, financing expected future shortfalls in entitlement trust funds solely through increased payroll taxes would likely exacerbate the problem of reductions in labor supply by diminishing the returns to work. By contrast, policies promoting longer working life could ameliorate some of the potential demographic stresses.

Changes to the age for receiving full retirement benefits or initiatives to slow the growth of Medicare spending could affect retirement decisions, the size of the labor force, and saving behavior. In choosing among the various tax and spending options, policymakers will need to pay careful attention to the likely economic effects.

\* \* \*

The relative aging of the population is bound to bring with it many changes to the economy of the United States - some foreseeable, many probably not. Inevitably it will again require making difficult policy choices to balance competing claims. The decade-long acceleration in productivity and economic growth has seemingly muted the necessity of making such choices. But, as I noted earlier, history discourages the notion that the pace of growth will continue to increase. Though the challenges of prospective increasingly stark choices for the United States seem great, the necessary adjustments will likely be smaller than those required in most other developed countries. But how and when we adjust will also matter.

Early initiatives to address the economic effects of baby-boom retirements could smooth the transition to a new balance between workers and retirees. As a nation, we owe it to our retirees to promise only the benefits that can be delivered. If we have promised more than our economy has the ability to deliver to retirees without unduly diminishing real income gains of workers, as I fear we may have, we must recalibrate our public programs so that pending retirees have time to adjust through other channels. If we delay, the adjustments could be abrupt and painful. Because curbing benefits once bestowed has proved so difficult in the past, fiscal policymakers must be especially vigilant to create new benefits only when their sustainability under the most adverse projections is virtually ensured.

\* \* \*

Responding to the pending dramatic rise in dependency ratios will be exceptionally challenging for the policymakers in developed countries. While I do not underestimate the difficulties that we face in the United States, I believe that, given the political will, we are better positioned than most others to make the necessary adjustments.

Aside from the comparatively lesser depth of required adjustment, our open labor markets should respond more easily to the changing needs and abilities of our population; our capital markets should allow for the creation and rapid adoption of new labor-saving technologies, and our open society should be receptive to immigrants. These supports should help us adjust to the inexorabilities of an aging population. Nonetheless, tough policy choices lie ahead.