The Labor Market and Economic Growth

2003 Washington Legislative Update Conference
International Foundation of Employee Benefit Plans
Washington, D.C.
May 19, 2003

My purpose today is to look ahead to the longer-run performance of the U.S. economy. Many aspects of our future society depend on how high the growth rate of GDP turns out to be. The profitability of firms, and therefore trends in stock prices, will depend in good part on the U.S. growth rate. So also will the average tax rate we pay; given that many government outlays are somewhat fixed in real terms, such as requirements for national defense, the higher the growth rate of GDP, the lower will be the average tax rate on the economy to yield the revenue required to service these commitments. Lower tax rates create more incentives for work and investment, both of which promote higher economic growth. Economic growth itself generates growth in government revenues that can yield budget surpluses that raise national saving and therefore national investment in productivity enhancing capital.

So, my subject today is long-run growth. My framework is a simple one. GDP growth depends on the growth of hours of labor input and the growth of output per hour—what we call "labor productivity." I'll talk briefly about productivity growth, but will concentrate most of my remarks on trends with regard to labor hours. This choice of topic reflects my view that the subject of labor hours has received insufficient attention; the topic of productivity growth has garnered most of the attention.

Before proceeding, I want to emphasize that the views I express here are mine and do not necessarily reflect official positions of the Federal Reserve System. I thank my colleagues at the Federal Reserve Bank of St. Louis—especially Robert Rasche, senior vice president and director of Research—for their assistance and comments, but I retain full responsibility for errors.

THE NEW ECONOMY

Many observers, economists and others, have devoted considerable attention and analysis to the phenomenon known as the "New Economy" and its implications for growth. This discussion has focused on the resurgence of growth in labor productivity in the second half of the 1990s and the sustained high productivity growth through the economic slowdown of 2001. One important question, not satisfactorily resolved as yet, is why productivity growth surged after the low productivity years from roughly 1974 to 1994. Whatever the reason, the productivity surge does seem real; looking forward, the question is whether the U.S. Economy has truly entered a period of sustained rapid productivity growth.

This question is fundamental to the future economic wellbeing of our society, since the rate of growth of labor productivity is what sustains the growth of our standard of living, which we measure as the average consumption per person. The question is also central to assessments of the likely future performance of the financial markets. Unfortunately, because no one appears to have produced a convincing analysis of the causes of the 20-year slowdown in productivity, it is necessary to exercise caution with respect to prognostications about sustained high productivity growth in the future. Such forecasts are necessarily imprecise.

Discussions of productivity and economic growth most often concentrate on invention and

innovation, and those are obviously important. The functioning of the labor market is also extremely important; for one thing, a labor market that fails to place the right workers in the right jobs will fail to obtain the full benefits of workers' skills and aptitudes that create high productivity growth.

Moreover, to make clear an obvious point, if over time people work fewer hours per week and retire at increasingly younger ages, labor input to the economy will grow more slowly, or even shrink. Declining labor input can easily cancel out improvements in productivity growth, leaving GDP growth unchanged, or even lower than before. I'm going to concentrate the rest of my remarks on what is happening on this front but will not discuss in any detail policy issues relating to such issues as hours of work or the retirement age.

ANALYTICAL FRAMEWORK

Growth of consumption per capita depends on a number of factors, each of which can be analyzed separately to a degree. The amount of total consumption depends on the level of total output, or real GDP, less the amount of GDP devoted to investment and government spending on goods and services. Although there are many interesting and important issues concerning private investment and the choices governments make, what I want to focus on is the growth of total GDP and the role of the labor market in advancing, or retarding, that growth.

Over the long run, hours of labor input are determined primarily by the growth of the total population. Given population growth, productivity growth is the source of sustained increases in the standard of living in a society. Nevertheless, over periods that can be decades long, other factors can and do affect the level of per capita consumption—that is, these other factors can generate increases or decreases in the growth rate of our standard of living for a period of some years. Such factors include, first, the fraction of the output of our economy that we choose to consume (or viewed from the flip side of the coin, the fraction of total output that we choose to save); second, the average number of hours each employed person in the economy works per year; and, third, the fraction of the total population actively employed.

In the short run, the per capita consumption of a society can be increased by increasing the share of total output that is consumed. Societies sometimes pursue policies deliberately designed to shift output from investment to consumption, precisely to obtain the short-run advantage of larger consumption. From a longer-run perspective, such policies are counterproductive, because the share of output that is available for investment in physical capital is correspondingly reduced. Hence over time the capital-labor ratio in the economy falls (the reverse of "capital deepening") and per capita output is reduced. Economies, and individuals, that do not save and invest reduce their future output and therefore deprive themselves of future consumption.

The average number of hours that employees work per year is also a choice variable for society. Over the past century, as the standard of living in our economy has increased, workers have chosen to substitute more leisure for other consumption opportunities. They have done so through shorter workweeks and longer vacation periods. Six-day workweeks are long gone. Interestingly, though, in the United States, average hours per workweek stopped falling in about 1940.

In other societies, the decline in average hours has gone much further than in the United States. Workers in these societies enjoy more paid holidays, longer vacation allotments and, in some cases, shorter workweeks than here. In some places, notably continental European societies, the trend toward greater consumption of leisure has been legislated. This trend, apparent in many countries over the past half century, has reduced the standard of living as measured by the average level of consumption per person relative to what it would have been without the reduction in work hours.

LONG-TERM TRENDS IN THE EMPLOYMENT/POPULATION RATIO IN THE UNITED STATES

Let's consider trends in the employed fraction of the population and some implications of those trends for the growth potential of our economy. Too few people seem to realize just how different the situation in the United States is in this regard from many other countries.

I will focus primarily on the 20-to-64 year age group. This is not the conventional measure that is usually employed in such discussions. The data that are commonly cited refer either to the "working age" population—currently defined as 16 years of age and older in the United States, or the "prime working age" population—16 through 64 years of age.

My exclusion of the teenage population from this discussion is deliberate. First, the choice of age 16 in our employment statistics is an arbitrary convention. Before 1967 the employment statistics compiled by the Bureau of Labor Statistics were based on ages 14 and older. The decision to redefine the statistics presumably reflected the idea that as our society became less agrarian and a higher percentage of jobs required more skilled labor, the principal activity of 14 to16 year olds had become full-time school rather than in full-time employment.

The skill requirements of our labor market have continued to increase, perhaps at an accelerating rate, over the years since the labor force was redefined. Today, employment prospects and standards of living are bleak for the person lacking a high school education. Income differentials between high school and college graduates have increased substantially over the past decade. Consequently, an increasingly large fraction of those in the 16 to 19 age group are in school, and it makes sense to concentrate labor force analysis on those age 20 and above.

Over the past 40 years in the United States there has been a steady upward trend in the employment/population ratio of those 20 to 64 years old. Starting from about 64 percent in 1960, the employed share of this population group increased to about 76 percent in 2001. This trend persisted—indeed was most prominent—during the slow productivity growth period from the mid-70s to the mid-90s. From 1974 to 1994, the employment ratio rose from 68 to 75 percent, thereby supporting the growth of the average standard of living in the United States during this period.

A principal source of the rising employment ratio during the 1970s and 1980s was the remarkable rate of integration of female workers into employment. Starting from only 40 percent in 1960, the employed fraction of females aged 20 to 64 increased to 69 percent by 1997, after which it leveled off. In contrast, the employment/population ratio for males aged 20 to 64, which was 89 percent in 1960, declined from the mid-1970s through the mid-1980s to the low 80 percent level, around which it has fluctuated without trend ever since. Much of the decline in the male employment ratio was a consequence of earlier retirement.

Incidentally, when I was teaching I used to enjoy telling my beginning economics students that the social revolution that so dramatically increased the fraction of women at work made possible the early retirement of men. That line rarely got even an embarrassed giggle. But it really is true that without the production gains from the rising fraction of women at work our society could not have afforded increasingly early retirement for men.

The net result of these trends is that the employment/population ratio for the entire population aged 20 to 64 increased from 64 percent in 1960 to 76 percent in 2001. This experience contradicts a popular hypothesis that there is only a fixed amount of work opportunities available in the economy. From that perspective, public policies should discourage or exclude certain groups of individuals from employment in order to "make room" for other groups of workers, particularly younger workers. An alternative hypothesis is that well designed public policies that promote maximum sustainable economic growth will provide an ample supply of employment opportunities for the entire available popu-

lation of skilled workers. Certainly, my view is that government should pursue policies that create employment opportunities for everyone willing and able to work.

I've hinted that early retirement is a disturbing characteristic of employment trends over the last several decades. Indeed, the decline in the employment/population ratio of males was heavily concentrated in the 55-to-64 age group. In the 1960s, the employment ratio of these individuals was over 80 percent, less than 10 percentage points lower than that of the entire male population ages 20 to 64. By 2001, the employment ratio of this group was only 65 percent, almost 20 percentage points less than the employment ratio for the entire male population ages 20 to 64.

I find the substantial increase in early retirement disturbing for several reasons. Individuals in this age group have considerable work experience and likely have accumulated substantial skills. The improved health status of the population and increased life expectancy might be expected to yield longer rather than shorter working lives. In the years to come, as the baby-boom generation reaches normal retirement age, the fraction of the total population at work to support those who are retired will fall. The burden of the dependent population—both the young and those retired—on the working population will grow. In my opinion, we will have to consider whether the government should adopt policies to increase incentives for older workers to remain employed, perhaps in part-time employment if that is preferred. In any event, U.S. GDP growth will depend in part on whether the trend to earlier retirement continues.

At the upper age definition of the labor force, I confess that I am not altogether comfortable with excluding individuals 65 years of age and older. On a personal level, this definition suggests that I should gracefully move aside, a prospect that does not appeal to me in the immediate future. Some individuals choose to participate in the labor force well beyond age 65—Chairman Greenspan, for example. Clearly, as seniors age, relatively fewer individuals will choose to continue employment. It is unlikely that many nonagenarians will be enticed to work regularly as greeters at Wal-Mart!

In spite of age-discrimination laws, the abolition of mandatory retirement provisions, and increasing longevity, the fraction of individuals 65 and over employed has declined from around 17 percent in the mid-1960s to under 13 percent in 2001. This trend primarily reflects a decline in the employment/population ratio of males 65 years of age and older from over 25 percent in the mid-1960s to the 15 to 17 percent range since the mid-1980s. The employment/population ratio of females 65 years and older has been trendless at under 10 percent during the last 40 years.

You may recall that the last occupation to be freed from mandatory requirement provisions was tenured college professors—my previous occupational experience. University administrators expressed considerable apprehension at the prospect of doddering professors refusing to retire to make room in the tenure ranks for new, younger blood. Such concerns proved baseless. Relatively few academics have chosen to pursue full-time teaching much beyond age 70.

Small as the employed fraction of the older age groups is in the United States, we will see later that it is substantial compared with the situation in many other economies. This fact is significant in a period of generally aging populations. With increasing longevity, stable employment ratios for relatively young age groups imply an increasing dependency ratio: the ratio of the population not employed to that employed. With low or declining employment ratios for younger persons remaining in school longer, the dependency ratio is even larger. High dependency ratios cause significant problems for the solvency of pay-as-you-go government benefit programs for the senior population, such as Social Security and Medicare in the United States.

As the dependency ratio in a society increases, ever-higher taxes on the employed fraction of the population are required to maintain the solvency of such programs. Higher marginal tax rates on the working fraction of the population in turn can reduce participation in employment and generate even higher dependency ratios. Such situations

are not stable environments. We are witnessing this kind of problem in a number of economies today, where there is an active debate on whether various government programs that benefit seniors can be maintained at existing levels, or how the cost of such programs can be significantly contained.

INTERNATIONAL COMPARISONS

There are striking differences across countries in the utilization of the labor resources available. I will focus first on the senior age group—those 65 and older. The Japanese economy has the highest utilization of these workers. OECD data for Japan start in 1968, at which time the employment ratios for Japanese males and females 65 and over were 52 percent and 19 percent, respectively, more than twice the corresponding employment ratios in the United States at the same time. These ratios in Japan trended downward over the last third of the 20th century, reaching lows of 31 percent and 14 percent for males and females, respectively, in 2001. While the negative trends in Japan were stronger than in the United States, the overall employment ratio for the senior population in Japan remains about two-thirds higher than in the United States.

Canadian data are available only for the period since 1976. At that time, the employment ratios for males and females 65 and over were 15 percent and 4 percent, respectively. These fractions are fairly comparable to those in the United States at that same time: 19 percent and 8 percent, respectively. As of 2001, the overall employment ratio for those 65 and over is only 6 percent in Canada, less than half that in the United States.

Since the mid-1980s, the employment ratios for seniors in many countries have been extremely low; 5 percent or less. For practical purposes, individuals of this age do not participate in employment in these countries. In Italy, this environment has prevailed since at least 1970. In the United Kingdom, data for previous years are not available. In two countries, France and Germany, there were strong negative trends in the employment ratios of seniors, starting from substantially higher employment/population ratios in the early 1970s.

For those 64 and younger, in 2001 the employment ratios are remarkably similar for the United States, Canada, Japan, and the United Kingdom. For all these countries, the ratio of employment to total population is approximately 75 percent. The distribution of employment between males and females in 2001 is roughly the same in the United States, Canada, and the United Kingdom—in the range of 79 to 83 percent for males and 67 to 69 percent for females. In Japan, male employment ratios are substantially higher, (87 percent) and female employment ratios are substantially lower (at 61 percent) than in the other three countries.

Employment ratios for those 64 and younger in Germany and France are 69 percent and 67 percent, respectively, while for Italy the overall ratio is only 58 percent. In Italy there has been no trend in these statistics over the period since 1980.

In France and Germany the overall employment ratio in 1980 was virtually identical to that in the United States. This fact is particularly interesting because in the 1960s and 1970s European countries were cited as examples of "low unemployment economies" that some regarded as the envy of countries—in particular the United States—said to be mired in chronically high unemployment. Yet in 1980, regardless of the reported unemployment numbers, the employed "younger workers" in the three countries is the same fraction of the population. In recent years, the perspective on the unemployment situation has reversed: Germany and France are considered high unemployment economies, with reported unemployment rates at or near double-digit levels, while reported unemployment in the United States has only recently crept up to 6 percent.

Comparisons of employment ratios provide important information on how well countries utilize their labor forces. Also important are comparisons across countries on average hours worked per worker per year. Available data need to be interpreted cautiously because of different statistical sources in different countries. Nevertheless,

the numbers of hours worked per worker per year appear to differ substantially in different countries. According to OECD data, average annual hours in 2001 in the United States were 1,821. Corresponding data for some other countries were 1,532 for France, 1,467 for Germany and 1,346 for the Netherlands. Data for 2001 are not available for Canada and Japan, but data for 2000 indicate that average annual hours in those two countries are roughly the same as in the United States.

Over the past 20 years, average annual hours have changed little in the United States and Canada, but have declined significantly in the other countries I've mentioned in this context. To gain a feel for the quantitative importance of the decline in average annual hours, for France the decline between 1979 and 2001 amounted to 0.75 percent per year. That decline is significant for an economy with a trend rate of growth in the neighborhood of 2 percent per year. When we consider both the decline in average annual hours and the decline in the fraction of the population employed, the two effects taken together add up to a significant decline in labor input over time. For many countries, the decline in labor input is every bit as important, and in many cases more important, than any decline in labor productivity growth.

RECENT AND PROSPECTIVE CHANGES IN THE EMPLOYMENT/POPULATION RATIO IN THE UNITED STATES

Employment/population ratios in the United States peaked prior to the most recent business cycle peak in March 2001. The employment ratio for males ages 20 to 64 declined from 84.7 percent in June 2000 to 81 percent in April 2002, a decline of 3.8 percentage points. The corresponding employment ratio for females declined from 70.6 percent in April of 2000 to 68.6 percent in April 2003, a decline of 2.0 percentage points. The total employment ratio for these age groups declined from a high of 77.4 percent in April of 2000 to 74.6 percent in April 2003, a decline of 2.8 percentage points. The decline in the overall employment ratio for these age groups compares with an increase of 2.2 percentage points in the overall unemployment rate in the U.S. economy over the same three-year period.

I don't know whether, or how quickly, the U.S. economy will return to the same high employment ratio experienced three years ago. But there is little question that the labor force is significantly underemployed today. Thus, it is reasonable to expect that total hours could increase substantially over the next several years. We have the potential for labor hours to increase by 2 percent per year for several years—1 percent per year from the longer-run growth of the population, and another 1 percent per year to make up for the declines during the recent slow-economy years. Adding to the increase in labor hours the growth in labor productivity of 2 to 2.5 percent per year gives us the potential for real GDP growth of 4 to 4.5 percent per year for several years.

These simple calculations make clear that the United States has the potential to grow substantially over the next several years, and that a major part of that growth will come from growth of labor hours. Productivity growth is the critical element of our longer-run future, but over the immediate future labor utilization plays an equally important role. We need to make sure that public policy encourages productivity growth and full utilization of labor, both for the immediate future and for the long run. I think we're on the right track, and have ample reason to be optimistic.