FRBSF Weekly Letter

June 22, 1990

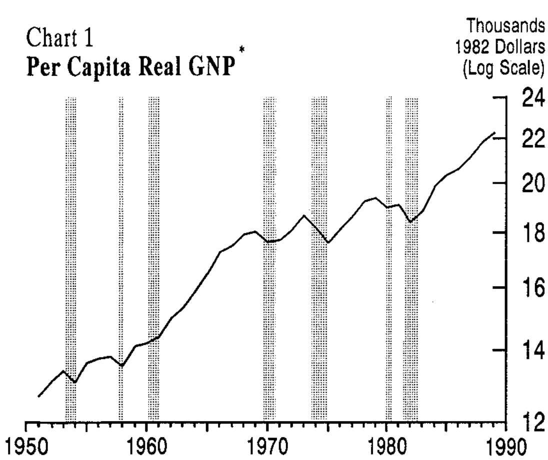
Working Harder?

The current economic expansion, which began at the end of 1982, is the second longest since World War II. In per capita terms, it has exhibited average growth that is more rapid than any previous postwar expansion, except for the very short upturn in 1958–60. What accounts for the unusually strong performance of the U.S. economy in the 1980s? In this *Letter* we argue that a change in labor supply has contributed to the staying power of the current expansion: on average, individuals have been working more hours per week and have been more willing to take jobs than in the past.

Strong growth

The strength of the current expansion can be seen in Chart 1, which plots real output (GNP adjusted for inflation) per working-age person (sixteen years and older) from 1951 through 1989. This measure (referred to hereafter as "per capita real output") enables us to focus on the fundamental economic factors that have contributed to output growth, and abstracts from any impetus provided simply by growth in the working-age population.

Chart 1
Per Capita Real GNP*



*Population 16 Years and Over

During the current expansion, per capita real output has grown at a 2.8 percent annual rate. This growth rate is high compared with the 2.2 percent average rate of growth experienced in the other postwar expansions, and especially high when compared with the very low rates of increase (1.6 percent average annual rate) during the two expansions in the 1970s.

Moreover, the duration of the current expansion, now at 7½ years (and counting), is surpassed only by the 1960–69 expansion, when per capita real GNP grew at an average rate of 2.7 percent annually. The 1960s expansion is recognized as the benchmark for the performance of postwar expansions in the U.S. The current expansion is on the verge of becoming the new benchmark.

Changes in the labor market

To arrive at a better understanding of the underlying factors that account for the relative strength and longevity of the current expansion, we decompose growth in per capita output into four components. Analyzing how the changes in each of these components compare with those in prior expansions helps to identify the factors that have contributed to the economy's superior performance in the 1980s.

These components are: first, the proportion of the population sixteen years and older that decides to work or to seek work (the labor-force participation rate); second, the proportion of the labor force that is employed (the employment rate); third, the average hours worked by the employed population (average hours); and finally, the average production of goods and services obtained from an hour of work (labor productivity). The product of the growth rates of these four components is the growth rate of per capita output.

The level of the labor force participation rate has risen noticeably in the current expansion, but the rate of increase is not substantially different from that over the 1970s. Given the fairly steady increase in labor force participation over the last twenty years, it appears that the acceleration in per capita GNP growth in the 1980s is not the result of a sudden surge in the proportion of the population that is in the labor force.

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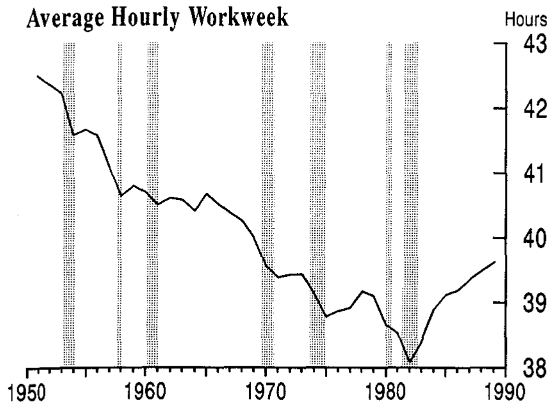
The second component, the employment rate, has risen significantly during the current expansion, after declining sharply over the 1970s and early 1980s. The employment rate is now at approximately the same level as at the beginning of the 1970s. This rise in the employment rate (fall in the unemployment rate), then, appears to have been a factor associated with the higher-than-average rate of per capita output growth over the course of this expansion.

Average weekly hours during this expansion also have differed from past expansions. Hours declined more or less continuously from 1951 to 1982. Since that time, however, hours have been increasing steadily (see Chart 2). Although it is too early to be sure that this new upward trend is permanent, the sustained increase since 1982 is striking when put in the context of the steady decline over the previous three decades.

Chart 2
Average Hourly Workweek



In contrast, the final component of output per capita, productivity growth, does not appear to have been a distinguishing feature of the current expansion. Productivity growth certainly was the most notable feature of the strong GNP growth in the 1960s, and slowing productivity growth explains most of the slowdown in the GNP trend in the expansions of the 1970s. During the 1980s, however, productivity growth has increased only moderately even though output has grown rapidly.

In summary, then, the distinguishing characteristics of this expansion compared to those in the 1970s are the rise in average hours worked from 38.1 hours per week in 1982 to 39.6 hours per week in 1989, and the rise in the employment rate from 90.3 percent to 94.7 percent over the same period.

Interpreting the trends

Now that we have identified the underlying trends, we can use our findings to weigh alternative explanations for the faster-than-average rate of growth of per capita output in the 1980s. One explanation that is contradicted by the data is that technology shocks—such as new inventions—were a major factor. If, on balance, such developments had been important, they should have shown up in the productivity figures. Although the rate of growth of output per hour was higher during the 1980s than it was during the 1970s, the difference between the two is not very pronounced. A note of caution is warranted here, however. John Kendrick, a productivity expert at George Washington University, argues that productivity growth is being understated in current statistics, in part, because of the difficulty in measuring changes in service-sector productivity.

A second explanation, namely, that an increase in the supply of labor boosted economic growth in the current expansion, is consistent with the trends we observed in the components described above. Specifically, an increase in individuals' willingness to work is consistent with the strong growth of average hours, the employment rate, and the participation rate during the 1980s.

However, a third explanation also is possible, namely, that rapid economic growth is the result of a cyclical increase in aggregate demand, which led to a rise in the *demand* for labor. For example, expansionary fiscal policy associated with record federal budget deficits, possibly reinforced by an easing of monetary policy as inflation subsided, could have raised demand and led to rapid growth in output per capita. With real GNP expanding rapidly, employers would hire more workers (raising the employment rate) and would ask current workers to put in longer hours (raising average weekly hours).

A number of considerations can help to sort out these two competing explanations. First, it seems unlikely that a demand-induced increase in labor hours would persist long enough to sustain the current expansion for 7½ years. In the past, such demand-induced increases have lasted for only a year or two, as can be seen in Chart 2, where they show up as transitory increases in average hours worked at the beginning of each expansion. Thus, the sustained increase in hours worked in this expansion seems to reflect a change in workers' underlying preferences.

Another consideration is that although the average number of hours worked by each individual increased in the 1980s, the average number of hours worked on each *job* did not. These findings suggest an increase in the number of individuals working at second jobs, and are consistent with a greater willingness to work. If an increase in demand had fueled the expansion in average hours, it is likely that hours per *job* would have gone up as well as hours per person.

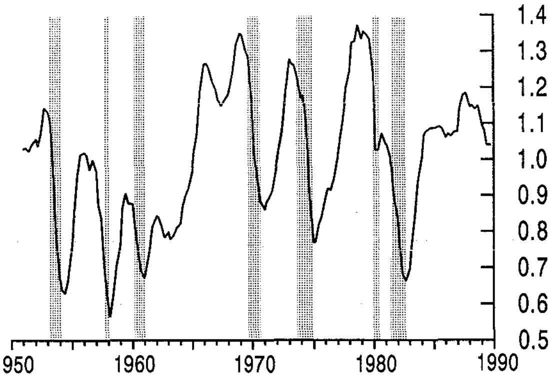
A final consideration is the behavior of job vacancies during this expansion. If an increase in labor demand were the primary cause of labor market developments, the employment rate and the number of job vacancies at firms would have risen together. In contrast, an increase in willingness to work would have caused the employment rate to rise, as unemployed members of the labor force accepted employment earlier in the job-search process, and would have caused firms' vacancies to *decline*.

Although data on the vacancy rate are not available, it is possible to use a proxy (following research by Katherine Abraham)—the national help-wanted index compiled by the Conference Board in New York (see Chart 3). One obvious feature of the help-wanted advertising series shown in the chart is the change in its level after the 1960s. Researchers have attributed this change to more rapid shifts in the sectoral composition of the economy after the 1960s, raising the level of so-called frictional unemployment as workers changed jobs between different industries.

For our purposes, the interesting point is that during the current expansion the index did not rise as high as it did during the expansions of the 1970s, suggesting a smaller number of vacancies than in the earlier expansions. Since vacancies were weak despite the increase in the employment rate, a willingness-to-work explanation seems more likely than a rise in labor demand.

Chart 3

Help Wanted Advertising Index*



* Scaled by Total Nonfarm Employment

Why the increase in labor supply?

What could have caused such an increase in willingness to work? One possibility is that tax reform in the early 1980s, which reduced marginal income tax rates, may have induced greater work effort. In fact, this was touted as a beneficial effect of the legislation when it was proposed. In theory, however, the relationship between wages and work effort is ambiguous. A higher after-tax wage rate could raise hours worked by increasing the return to such added effort, or it could reduce work effort by making it possible to work fewer hours and still earn the same income. A large body of empirical research has failed to settle the issue. Thus, there may be other explanations for the apparent rise in work effort over the last decade.

But whatever the explanation, it seems far more likely that the economic expansion of the 1980s has been sustained by a rise in workers' willingness to work than by an increase in aggregate demand, which is inherently transitory. This development may be an important reason for the strength and longevity of the current expansion.

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