FRBSF WEEKLY LETTER

Number 93-14, April 9, 1993

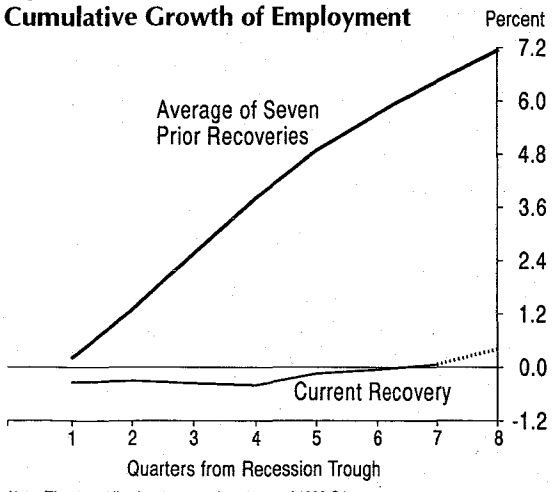
Why Has Employment Grown So Slowly?

Although the economy has been in a recovery since the first half of 1991, job growth has been anemic. This *Weekly Letter* looks at the behavior of employment and related variables since the current recovery began, and compares it to the behavior of these variables during earlier postwar recoveries. The results from this comparison provide a useful way of evaluating the different explanations that have been offered to explain the slow employment growth. One of the explanations considered suggests that rapid productivity growth is the culprit; the other suggests that it is the unusually high degree of uncertainty that has prevailed over this expansion.

What the data show

Figure 1 compares the behavior of employment over the current recovery with its average behavior over prior postwar recoveries that have lasted at least as long as the current one. (This eliminates the short recovery that lasted from 1980.Q4 to 1981.Q2.) The contrast shown in the figure could hardly be more obvious: While employment increased on average by more than 7 percent over the first eight quarters of a recovery, this time it has grown by around half a percent. (As data for March were not available at the time of this writing, I assume that employment in March will be the same as employment in February.) In fact, for the first six quarters of the recovery, employment was lower than it was at the bottom of the recession. Confirmation of sluggish job growth is provided by the unemployment rate, which—two years into the recovery—is still higher than it was at the bottom of the trough. This is the only postwar recovery for which this is the case.

Figure 1:
Cumulative Growth of Employment



Note: The dotted line is a two-month estimate of 1993.Q1.

Several hypotheses have been put forward to explain the sluggish employment growth in this expansion. For our purposes, it is useful to look at these hypotheses in the context of the following relationship: The rate of growth of output can be expressed as the sum of the rate of growth of employment, the growth in average hours per worker and the growth rate of productivity (or output per worker hour). If growth in output is accompanied by little change in employment, for example, then either productivity must be higher or workers must be working longer hours.

Uncertainty

One explanation for the sluggish behavior of employment has to do with uncertainty about the state of the current expansion. Some observers have suggested that the sluggish pace of economic growth over the early part of the recovery made it more likely that the economy would stall and employers became cautious about hiring more workers as a result. This caution was not unfounded, since the current recovery did appear on the verge of collapse around mid-1992. Employers could have responded to this higher uncertainty by inducing existing employees to work longer hours, instead of hiring more workers. Data on manufacturing employment appear to be consistent with this hypothesis: The February employment report showed that the average workweek for production workers was the longest it has been in over 25 years, while overtime was the highest it has been in the 36-year history of the series.

What does this explanation imply about employment in the near future? Clearly employers cannot keep increasing hours indefinitely, and they will have to hire additional workers at some point. This tendency is likely to be reinforced by growing evidence of a strong economy. The 4 percent growth rate of output in the second half of last year and the subsequent strong employment gains in February are consistent with this hypothesis.

Striking though this evidence is, it is important to realize that the manufacturing data refer to only a part of the economy. It turns out that average weekly hours for all workers across all industries are just about where they were at the recession trough. These data do not suggest that employers are reacting to unusually high uncertainty by hiring fewer workers and making existing workers work longer hours. Furthermore, this behavior of hours is not very different from what typically happens two years into a recovery.

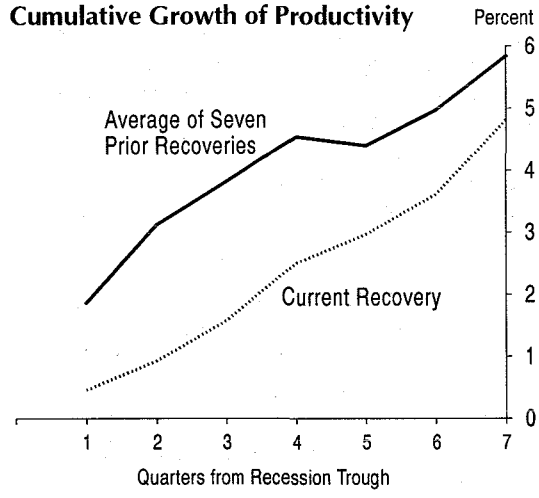
Productivity

Of the various explanations put forward, perhaps the most commonly encountered points to the unusually rapid growth of productivity last year; it turns out that productivity growth in 1992 was the fastest it has been in 20 years. The logic underlying this argument is that since workers are becoming more productive, firms can increase output without hiring more workers. In the words of Paul Krugman (1993) of the Massachusetts Institute of Technology, "We are now officially a year and a half into an economic recovery, yet unemployment remains stubbornly high. One of the reasons for this lingering joblessness is that productivity has risen faster than expected . . ."

Computers play an important role in this explanation. Some analysts point out that companies are only gradually learning to make efficient use of the computers and related equipment that they purchased during the 1980s. This process may have been accelerated by the need to economize in the recession. Krugman says that "corporate hierarchies are getting flatter" because of more efficient use of computers. Indeed, increasing automation may be one reason behind the unusually large number of white-collar job losses during this recession. If increased computerization is behind the unusually rapid growth of productivity, then it is likely that the relatively faster growth in productivity will continue for a while. This is because investment in computers and related equipment continues to be unusually strong.

While developments such as increased computerization do imply continued growth in productivity over time, available data provide a somewhat ambiguous picture of the size of such effects over this recovery. Figure 2 looks at productivity growth since the trough of the last recession and compares it to productivity growth over the first seven quarters of the average postwar recovery. The figure shows that productivity has grown somewhat slower than average in this recovery. Thus, part of the remarkably fast productivity growth in 1992 could just be a rebound from the unusually slow growth in the early quarters of the recovery.

Figure 2:
Cumulative Growth of Productivity



Is there a puzzle?

So far we have found that neither productivity nor hours appear to be behaving unusually compared to the average postwar recovery. Since we can think of output growth as the sum of the growth in productivity, the growth in average hours and the growth in employment, it is tempting to conclude that the unusually slow growth in employment over this cycle is due to the unusually slow growth of output, and that whatever is causing the latter must be causing the former.

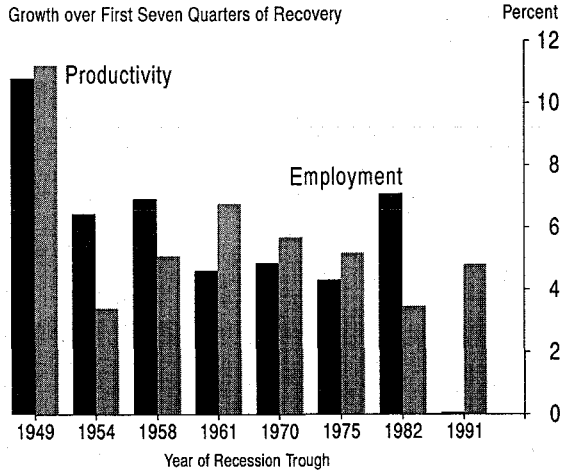
Accepting this conclusion, however, overlooks an important feature of the data, which is that productivity growth has accounted for a disproportionately large share of output growth over this recovery. Thus, there is still a puzzle concerning the behavior of employment in this recovery, and it lies in the relative movement of productivity and employment. Specifically, why hasn't rising productivity led to rising employment? Economic theory tells us that this is what should happen. If

workers become more efficient, firms will find it more profitable to hire more of them.

The historical evidence is consistent with this theoretical prediction. Figure 3 compares the cumulative growth in productivity and employment over the first seven quarters during each of the postwar recoveries (except 1980, as before). In every recovery—except the current one—productivity and employment have gone up together.

These considerations demonstrate why it is difficult to buy arguments that firms are not hiring because growing worker productivity allows them either to expand output without hiring more workers or produce the same amount with fewer workers. It seems that the reasons for sluggish employment growth must lie elsewhere. It may be, for instance, that the kind of technological change that is taking place requires new skills and so employment will only go up slowly as workers are retrained. This would imply that the sources of productivity growth over this expansion are different from what they have been in prior expansions; it would also explain why firms have not increased employment after almost two years of increasing productivity this time around, even though they have always managed to do so in every other postwar recession (see Figure 3). While this is a plausible hypothesis, and is heard often, more evidence is needed before we can be sure that this is really what is going on.

Figure 3:
Comparing Employment & Productivity Growth



Conclusions

In this *Weekly Letter* I have looked at the behavior of employment since the recovery began, and have discussed some popular explanations for this behavior. One of the explanations is that we are in a period of unusual productivity growth, and that firms have used this opportunity to increase output without increasing employment. While it is difficult to determine whether the growth in productivity since the end of the recession has been due to unusual factors, it is useful to keep in mind that the growth *rate* of productivity in this recovery is not very different from the past. More obviously unusual is the fact that employment growth has not kept pace with the increase in productivity since the recovery began.

It is possible that uncertainty about the durability of the recovery has kept firms from hiring more workers even though productivity has been going up. Here, at least, the passage of time is likely to provide a test. As (and if) the recovery lengthens, firms should become more confident and should respond by increasing employment to match the increases in productivity we have seen over the first seven quarters of this expansion. This would imply a surge in employment at some point in the near future. Whether this will happen remains to be seen. At this point in time, though, neither of the two popular explanations discussed above seems to provide a complete answer.

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Research Officer

Reference

Krugman, Paul R. 1993. "Plugging in to Productivity." *U.S. News and World Report* (February 15).

MONETARY POLICY OBJECTIVES FOR 1993

On February 19 Federal Reserve Board Chairman Alan Greenspan presented a report to the Congress on the Federal Reserve's monetary policy objectives for 1993. The report includes a summary of the Federal Reserve's monetary policy plans along with a review of economic and financial developments in 1992 and the economic outlook in 1993. Single or multiple copies of the report can be obtained upon request from the Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco, CA 94120; phone (415) 974-2246; FAX (415) 974-3341.

Printed on recycled paper with soybean inks.

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The *FRBSF Weekly Letter* appears on an abbreviated schedule in June, July, August, and December.