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# FRBSF WEEKLY LETTER

Number 94-11, March 18, 1994

## New Measures of the Work Force

The monthly report on employment and unemployment is one of the most closely watched indicators of the state of the U.S. economy. Beginning with the report for January 1994, the data on employment and unemployment are based on a new survey methodology that is expected to reflect today's labor force more accurately. Notably, the first two months of data showed more unemployment than had the previous survey. This *Weekly Letter* describes the new methodology and discusses the implications of the revised measures for inflation and monetary policy.

### The Current Population Survey

Data on employment in the U.S. come from two separate surveys, one of employers and another of households. The survey of employers, commonly known as the survey of nonfarm business establishments, has *not* been revamped. It counts the number of payroll jobs and so excludes the self-employed as well as certain areas of the economy such as farm and household employment. The survey of households, known as the Current Population Survey, has been substantially changed: it attempts to count all civilian workers, as well as people who are not working but who want a job. This survey is the source of the unemployment rate data.

Each month—during the week that includes the 19th day—interviewers from the Bureau of the Census contact a scientifically selected sample of 60,000 households to collect data on the labor force activities of each adult in the household during the preceding week. From these data the Bureau of Labor Statistics (BLS) constructs monthly estimates of civilian employment and unemployment.

The old survey questionnaire had remained essentially unchanged since 1967, despite dramatic changes in the U.S. labor market. More women are in the paid work force and larger proportions of the working population choose to work part-time, rather than full-time, and to work at more than one job. To account for these developments in the labor force, the survey was revamped,

both by introducing new survey methods and by changing and clarifying definitions.

### Changes in the survey

The interviewers now use laptop computers, which not only makes the process of interviewing easier, but also improves the accuracy of the responses. For example, the computer supplies follow-up questions that build on the replies already given, thus avoiding obviously irrelevant questions that irritate respondents and make them less willing to cooperate. Furthermore, since the computer prompts the interviewer to ask appropriate questions, it minimizes interviewers' errors of judgment. Such errors may have led to underestimation of the levels of female employment and unemployment in the previous survey. Specifically, interviewers frequently assumed that women who stated that they were not in paid employment outside the home were "keeping house," and so did not count them as part of the labor force. In some cases, these women may have been "keeping house" and working in home businesses or actively looking for paid jobs, and so were part of the labor force as either "employed" or "unemployed."

### The 'overlap' survey

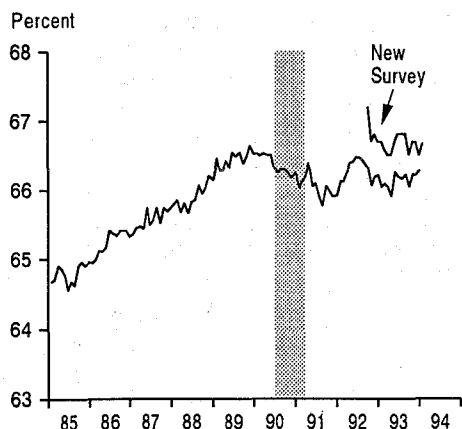
Between July 1992 and December 1993, the Census Bureau conducted parallel surveys using both the old and the new questionnaires and methodologies, in order to obtain estimates of the effects of the changes on the principal aggregates. Unfortunately, budget constraints limited the sample size for the overlap survey to only 12,000 housing units, compared with 60,000 in the main survey. As a result, the statistical significance of the differences between the two methods is rather low. The Census Bureau will continue to conduct parallel surveys until July 1995, using the new survey for the large sample and the old one for the smaller overlap sample. This will provide further evidence on the effects of the change in procedures. However, the BLS will not publish the results from the overlap survey on a regular basis.

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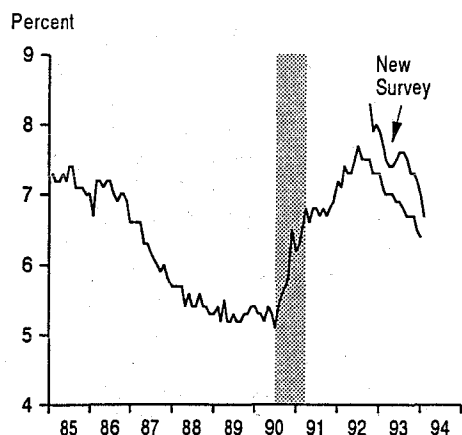
## More unemployed?

It appears that the new survey is yielding estimates of the unemployment rate and of total employment that are higher than those from the old survey. In 1993, the new survey produced an estimate of the unemployment rate that was on average 0.5 percentage point higher than the old survey. Similarly, the average participation rate—the proportion of the adult population that is in the labor force—was 0.3 percentage point higher in the new data. However, as shown in Figures 1 and 2, the gaps between the two measures varied substantially from month to month.

**Figure 1**  
**Labor Force Participation Rate**



**Figure 2**  
**Civilian Unemployment Rate**



At least on average, most of the difference in the estimated unemployment rate was due to a difference in the unemployment rate for women. Over 1993 as a whole, the adult female unemployment rate was 0.5 percentage point higher

on the new basis, whereas the male rate was only 0.2 percentage point higher. Moreover, the difference for females was statistically significant, whereas that for males was not and could have been due to chance. This supports the view that the old survey produced a gender-bias in the results. The new survey yielded a 0.5 percentage point *lower* participation rate for men and a 1 percentage point *higher* rate for women. The new methodology also showed a significantly higher unemployment rate for teenagers, blacks, and Hispanics.

Also beginning in January, the estimates now are based on projections of the total population derived from the 1990 Census of Population. The change in the population structure, compared to estimates based on the 1980 Census, boosts the measured unemployment rate by about 0.1 percentage point. Taking account of this change as well as of the new survey, the new data show a rate of unemployment that is, on average, 0.6 percentage point higher than the previous survey. However, this difference between the new and old estimates should be viewed only as a rough rule of thumb that may not hold in any individual month. In particular, there are indications that the seasonal pattern of the new data is somewhat different from the old, so that recent reported declines in the unemployment rate may be overstating the true improvement.

## New definitions

By asking more detailed questions about job-search methods, the new survey will distinguish more accurately between active and passive job-search. Persons are supposed to be classified as unemployed only if they were *actively* searching for a job. Active job search means taking specific actions, such as contacting an employment agency, that may bring potential employers and employees together. Passive activities, such as looking at the want-ads, are not sufficient to classify an individual as "unemployed."

For the first time, the new survey asks respondents whether they had more than one job, and if so, how many jobs they held and how many hours they worked in total and in their principal job. These data will aid in reconciling the results of this survey, which counts people, with the establishment survey, which counts jobs. In February, 5.8 percent of employed persons (not seasonally adjusted) reported that they held more than one job.

More accurate probing of the reasons for part-time employment is expected to lower the estimate of the proportion of the labor force that is working part-time "for economic reasons"—that is, because poor economic conditions make it

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difficult to find full-time work. In the new survey, respondents must indicate that they want to work full-time and were available to work full-time during the reference week. During 1993, the parallel survey yielded an estimate of the proportion of employed persons who were working part-time for economic reasons of 4.2 percent compared to 5.4 percent in the old survey.

It is frequently argued that the unemployment rate underestimates the degree of joblessness, because it excludes so-called discouraged workers—people who are not looking for work because they think no suitable jobs are available. In the old survey, discouraged workers were defined as unemployed people who have a desire to work, but who are not actively seeking a job because they believe the search would be unsuccessful. This definition was criticized because it did not include an objective measure of “desire to work,” and so might include people with only a casual interest in finding a job. In the new survey, discouraged workers will be defined only as those who have been active job-seekers sometime in the previous twelve months or since their last period of employment, and who were actually available for work in the reference week. This change in definition will reduce the measured number of discouraged workers. In 1993, the proportion of persons not in the labor force who were classified as discouraged according to the old definition was estimated as 1.7 percent in the main survey and 1.5 percent in the overlap survey. Using the new definition, the overlap survey estimated this proportion at only 0.7 percent.

### Unemployment and inflation

Some economists argue that, in the short run, the rate of inflation is inversely related to the gap between the current unemployment rate and the so-called natural rate. These economists use this gap as an indicator of the degree of pressure for a change in the rate of inflation. For example, if the level of aggregate demand is so strong that unemployment is below its natural level, wages and prices tend to be bid up more rapidly. Conversely, if aggregate demand is weak enough to push unemployment above its natural rate, there tends to be downward pressure on inflation. See *The Economist* (1994).

So, does the new higher estimate of the unemployment rate mean that the risk of increased future inflation is less than previously thought? Probably not, because changes in the measured

unemployment rate also alter our estimate of the natural rate. In a changing economy, there always will be some people who are unemployed as they move from businesses or industries that are contracting and reducing employment to others that are expanding and taking on new workers. Since finding a new job requires search, which takes time, this dynamic process necessarily involves some unemployment. The natural, or equilibrium, rate of unemployment represents an estimate of what the unemployment rate would be if it included only these “frictionally unemployed” individuals.

Empirical estimates of the natural rate often are constructed by looking at the past history of unemployment and inflation. These data are used to estimate the unemployment rate above which inflation has tended to increase and below which it has tended to decline in the past (see Weiner 1993). Hence, if past unemployment has been underestimated, as appears to be the case, this means that the natural rate also has been underestimated by roughly the same amount, leaving the estimated gap between the actual and natural rates of unemployment unaffected.

Most recent estimates of the natural rate (using the old data) have placed it at about 6 percent, though there is a relatively wide range of uncertainty around this number. Hence, using the new data, we infer that the natural rate is about 6½ percent. The 6.5 percent unemployment rate reported for February suggests that it is approaching the natural rate. But it is difficult to say this with confidence, given the uncertainties about the true equilibrium rate of unemployment, as well as uncertainties about the seasonal pattern—and hence the spread between the old and new data in any single month. This means that monetary policymakers face more uncertainty than usual in using the unemployment rate as a gauge of whether there are upward or downward pressures on inflation.

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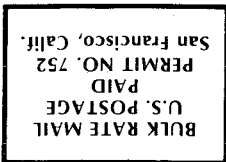
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