

# An examination of employment and unemployment rates

The persistence of high rates of unemployment after more than two years of economic recovery has increased the controversy over what the best measure of labor market conditions is. The usefulness of the unemployment rate, the traditional measure, has been called into question; the employment ratio is the most frequently recommended alternative. Too frequently, the debate has implied that an absolute choice must be made between the two statistics. Such a view is mistaken, for no single measure can hope to provide a complete assessment of labor market conditions.

At the outset, it must be recognized that each measure suffers from some shortcomings. The unemployment rate has the most deficiencies, and because of them that rate has become an increasingly imperfect measure of labor market conditions. Analysts are therefore regarding the unemployment rate with increasing reservations, and some have suggested that the employment ratio be given more emphasis in the analysis of the labor market as it reflects demand pressures in the economy as a whole.

## The two measures defined

The unemployment rate refers to the percentage of the civilian labor force that is seeking work but does not have a job.<sup>1</sup> This widely used statistic is not the only unemployment rate that the Bureau of Labor Statistics (BLS) regularly reports. A number of other unemployment rates, such as the percentage of household heads in the labor force who are unemployed, the percentage of teenagers in the labor force who are unemployed, and the percentage of the labor force out of work for fifteen weeks or longer are also available for evaluating labor market conditions. No matter whether the total or a segmental unemployment rate is ex-

amined, all these rates are intended to represent the proportion of labor force participants that offer labor for sale but are unable to find employment at the current level of wages. Thus, each measures the unutilized or excess supply of labor in the market at existing wages.

The employment ratio, in contrast, is defined as the proportion of the noninstitutionalized *population* in the working ages—16 years of age and older—that is employed, and it thus measures the extent of utilization of potential labor resources.<sup>2</sup> Employment ratios analogous to many of the published unemployment series may be constructed. These ratios measure the proportion of labor resources whose services have been purchased in the labor market.

A rate of unemployment supposedly indicates the extent of utilization of available rather than potential labor resources. The unemployment rate is also used to help assess the hardship experienced by workers who are willing to work and are available for work but are unable to find jobs. But whether the unemployment rate indicates hardship or need as precisely as one would like has come to be questioned. Its accuracy is impaired in several ways. The measured rate can be considered too low because it fails to include "discouraged workers", that is, the people who do not seek work if they do not believe they are likely to obtain jobs and thus leave the labor force temporarily or remain outside it. Similarly, the rate fails to include those who want to work full time but are forced to work part time because of economic conditions. In-

<sup>1</sup> The civilian labor force refers to all noninstitutionalized individuals 16 years of age and over who are employed or are without a job and seeking work

<sup>2</sup> If the employment ratio were defined as the proportion of civilian labor force that is employed, it would simply be the mirror image of the unemployment rate. In that case, it could be obtained by subtracting the unemployment rate from 100. But then, any statistical or institutional factors that caused defects in the unemployment rate would cause the same defects in an employment ratio based on the civilian labor force. That is why the employment ratio uses the relevant population rather than the labor force in the denominator.

stead, all part-time workers with jobs are treated as employed whether or not they would prefer full-time work.<sup>3</sup> The measured rate can be considered too high because of the expansion in the coverage of such programs as unemployment insurance as well as the rise in benefit levels. Applicants must remain in the labor force to receive these benefits even though they may not be seriously looking for jobs. Such behavior imparts an upward thrust to the unemployment rate. And the increases in these programs have also served to weaken the tie between the unemployment rate and "hardship".

### Changing participation rates and their impact

The employment ratio avoids to a greater degree than the unemployment rate a statistical problem that is caused by changing labor force participation rates, *i.e.*, the proportion of the population 16 years of age and over who are at work or are looking for work. Changes in these participation rates have altered the composition of the labor force in recent years. The changes suggest that a basic structural alteration in the pattern of choice among work in the market, work at home, and the amount of leisure desired is under way, particularly in certain demographic groups. As a result of these changes, a larger proportion of the labor force now consists of women and teenagers. Indeed, the secular increase in labor force participation rates (see top panel, Chart 1) is attributable largely to this change in behavior by women and teenagers. And these groups in the labor force are among those that traditionally have experienced higher than average rates of unemployment. It is now recognized that for this reason alone a given rate of aggregate demand will be associated with a higher level of unemployment than in the past.<sup>4</sup>

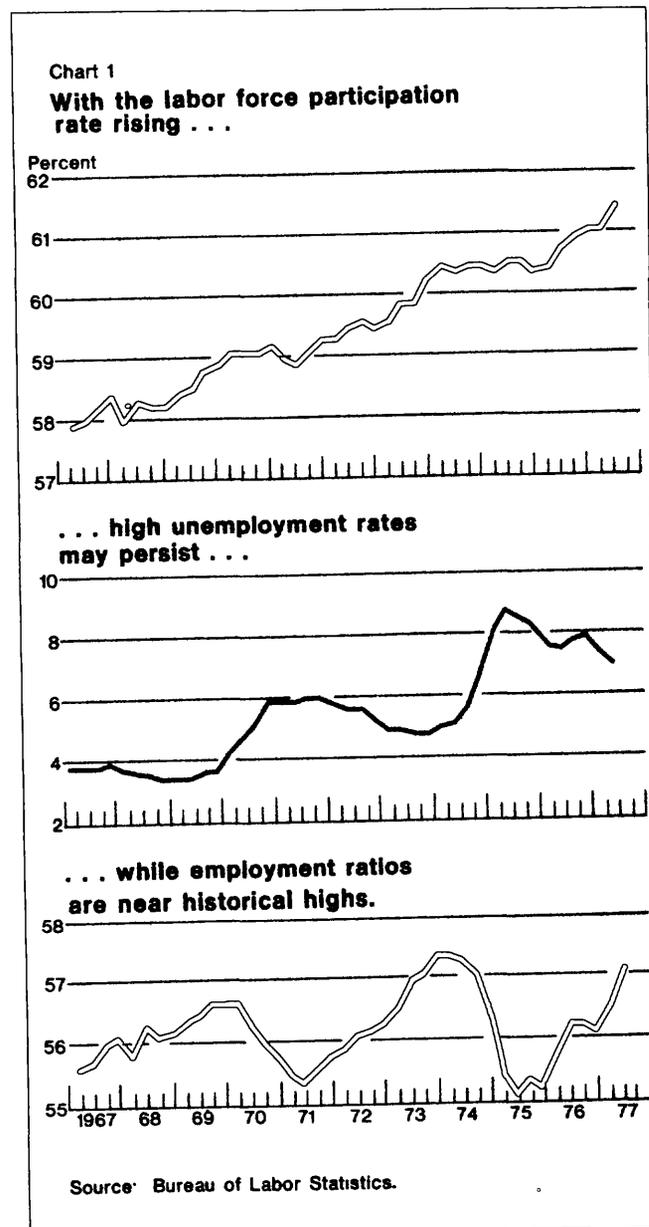
Experience shows that rates of labor force participation respond to a host of influences. In the short term, the rate of business activity may have the most effect. On the one hand, the rate of participation in the labor force typically increases during upswings in economic activity because individuals perceive increased job opportunities. If, as sometimes happens, the growth of the labor force is faster than that of employment, the resultant increase in the unemployment rate should

<sup>3</sup> It should be noted that this treatment of part-time workers impairs both the unemployment rate and the employment ratio, and also creates difficulties of interpretation with respect to both

<sup>4</sup> While it can be shown that an increasing proportion of the unemployment rate stems from the changing composition of the labor force, this by no means is the only or even the principal explanation for today's high unemployment rates. For further discussion of this point, see "The Changing Composition of the Labor Force" by Sharon P. Smith in this Bank's *Quarterly Review* (Winter 1976), pages 24-30

not be construed as a sign of weakening economic conditions. On the other hand, if during an economic decline workers become discouraged and leave the labor force, the resulting tendency toward a lower unemployment rate should not be construed as a sign of improving economic conditions.

Changes in the long-term trend of labor force participation rates also affect the interpretation of the two measures. Should the rate of participation in the labor force and the age-sex composition of the population



remain constant for a considerable period, the unemployment rate and the employment ratio would suggest similar assessments of labor market conditions. However, if the labor force participation rate changes, the unemployment rate and the employment ratio can yield different assessments. Among all the possible scenarios, here are two. If the labor force participation rate is rising, then the employment ratio may suggest stable labor market conditions although the unemployment rate would be increasing. If the labor force participation rate is falling, the unemployment rate may suggest a strengthening of labor market conditions although the employment ratio would be declining. It thus seems clear that when changes in labor force participation rates occur, whether for cyclical or secular reasons, *both* the unemployment rate and employment ratio ought to be looked at to obtain more accurate appraisals of labor market conditions.

The relationships being discussed are highlighted in Chart 1, which shows quarterly data for the labor force participation rate, the civilian unemployment rate, and the employment ratio. During periods when labor force participation rates are more or less constant, as they were during most of 1970-72, a rise in the unemployment rate and a decline in the employment ratio suggest worsening labor market conditions. In fact, whenever these statistics move in opposite directions and participation rates are roughly the same, both statistics yield similar labor market appraisals. In recent years, however, it has been more typical for the labor force participation rate to rise—it went up strongly from 59.8 percent at the end of 1973 to 62.3 percent in September of this year. Consequently, the present employment ratio of 57.3 percent is associated with an unemployment rate of 6.9 percent; in 1973, the same employment ratio was accompanied by an unemployment rate of only 4.8 percent.

### Characteristics of the two measures

The employment ratio is in general less subject to error than the unemployment rate. Because the impact of measurement error on the unemployment rate appears to be increasing, the unemployment rate is becoming the less reliable measure with which to assess labor market conditions.

Unemployment data are collected in a survey of households, and one individual usually responds for all members of the household. As a result, the recorded employment rate is affected by the accuracy of replies by the individuals who report on the labor force status of all members of the household. It has been observed that reports given by most households show higher unemployment when they have recently been added to the survey sample than in later interviews.

This is documented in a study by Robert E. Hall.<sup>5</sup>

Because of the difficulty of determining whether individuals actually are looking for and are available for work, a count of the employed is likely to be much more accurate than a count of the unemployed.<sup>6</sup> Moreover, because the employment figure is much larger than the unemployment figure, sampling errors that are to be expected in either statistic introduce a smaller possibility of error into the employment ratio than the unemployment rate. Seasonal fluctuations also are much smaller in employment than they are in unemployment.

In addition to these statistical problems, the unemployment rate is affected by institutional influences. Among the most publicized are those that occur as a consequence of unemployment compensation and of work registration requirements in certain welfare programs. To be eligible to receive benefits under the above programs, individuals are required to register as unemployed with the United States Employment Service or to register for manpower training.<sup>7</sup> These individuals are defined by the BLS to be unemployed, since registration with a public employment service is viewed as a means of actively seeking employment. However, these programs, like any income-maintenance plan, also create disincentives to seek employment in a more active fashion than by merely registering for employment to obtain benefits. As a result, it is likely that some recipients of benefits under these plans are voluntarily unemployed—that is, they basically choose not to work—and so would not be counted in a more precise measure of unemployment.

A number of analysts have attributed much of the present high rate of unemployment to Government benefits programs. Ehrenberg and Oaxaca, as well as Feldstein,<sup>8</sup> have suggested that a large portion of un-

<sup>5</sup> "Why is the Unemployment Rate So High at Full Employment?" *Brookings Papers on Economic Activity* (3, 1970), page 375.

<sup>6</sup> The BLS defines the employed as those who, during the survey week, worked either as paid employees or in their own profession or business, worked without pay for fifteen hours or more on a farm or a family-operated business, and those with jobs but not at work because of a labor-management dispute, illness, vacation, etc. The unemployed are defined as those who did not have a job during the survey week but were available for work and (according to the survey respondent) actively looked for a job at some time during the four-week period immediately prior to the survey.

<sup>7</sup> Some welfare recipients are exempt from these work registration requirements. These include certain categories such as the ill or incapacitated (with medical verification) and mothers or other members of the household charged with the care of children under age 18.

<sup>8</sup> See Ronald Ehrenberg and Ronald L. Oaxaca, "Do Benefits Cause Unemployed to Hold Out for Better Jobs?" and Martin Feldstein, "Unemployment Compensation: Its Effect on Unemployment", both in the *Monthly Labor Review* (March 1976).

employment is voluntary, because the high levels of unemployment compensation enable unemployed workers to engage in a longer period of search before taking another job or simply to enjoy leisure-time activities. Moreover, Feldstein believes that the present system of unemployment compensation costs some employers less in contributions to unemployment programs than the benefits that are paid to the employees they lay off. He concludes that this system thereby encourages employers to organize production so as to exaggerate seasonal and cyclical variations in unemployment and to create more temporary jobs than would otherwise exist.

Clarkson and Meiners maintain that the single most important factor contributing to the high level of unemployment is the change in certain welfare eligibility requirements.<sup>9</sup> They argue that the current overall unemployment rate has been inflated by as much as 2.1 percentage points because of the work registration eligibility requirements that were introduced in 1971 into the Aid to Families with Dependent Children (AFDC) program and into the food stamp program. In their view, these registrants represent a group of individuals who either are largely unemployable or have no need or desire to work but are counted as unemployed because they have to register to obtain benefits.

Clarkson and Meiners estimate a "corrected" unemployment rate by omitting from both the unemployment and the civilian labor force figures all those work registrants who have been required to register to be eligible for AFDC or food stamp benefits. This is undoubtedly an overadjustment since many welfare recipients actually do want a job. Indeed, nearly a fourth of all the AFDC recipients who register for work with the public employment service are exempt from registering. Moreover, a study of AFDC recipients indicates that nearly half of them have had recent labor market experience.<sup>10</sup> These facts cast doubt on the assumption that none of the welfare recipients are employable or seeking a job. In sum, while it appears that the work registration requirements of the welfare programs inflate the unemployment rate, the extent of overstatement is likely to be considerably less than the 2.1 percentage points suggested by Clarkson and Meiners.

An increasing awareness of the foregoing sorts of problems is reflected in the new unemployment insurance benefits bill signed into law on April 12, 1977.

Under this legislation, individuals may be denied unemployment compensation if they do not actively seek work, do not apply for suitable work to which they are referred, or do not accept an offer of suitable work. Contrary to past practice, under the new law individuals may be required to accept positions that are significantly different in tasks and pay from their past jobs if the position is within the individual's "capabilities", if the individual is offered either the Federal minimum wage or more than the unemployment benefit, if the job does not entail unreasonable travel, and if it does not endanger the individual's "morals, health, or safety". It is too early to ascertain the extent to which the law may affect labor market statistics.

#### **The need for further study**

All in all, the unemployment rate tends to be inaccurate for both statistical and institutional—including legislative—reasons. In addition, the possible size of any error seems greater than for any associated with the employment ratio. In large part, this is because it is simply easier to identify clearly those who are working than to identify clearly those who want to work and are seeking work, since it is difficult to determine how many of the latter are in fact available for work. Further study of labor supply behavior under various income maintenance programs is necessary to formulate techniques that will eliminate from the unemployment numbers those who are really voluntarily unemployed.

Although at present the unemployment rate is a less accurate measurement than the employment ratio, this does not imply that the unemployment rate should be abandoned as a means of assessing labor market conditions. Instead, it calls for action to correct the shortcomings in all statistics relating to the labor market. For this reason, the Emergency Jobs Programs Extension Act of 1976 (Public Law 94-444) established a new National Commission on Employment and Unemployment Statistics. (The last major evaluation of employment and unemployment statistics was made fourteen years ago.) The new commission is charged with the responsibility of evaluating the present statistics as well as with making recommendations for their improvement.

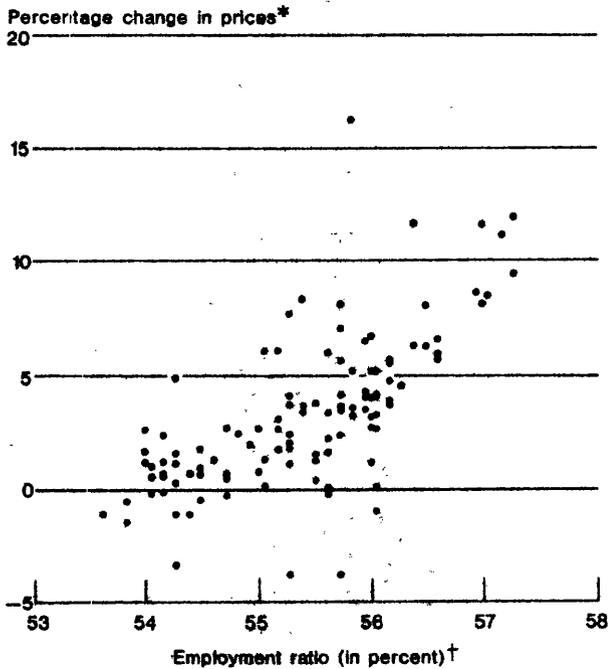
In seeking the proper statistics to assess labor market conditions, the measure chosen should depend on the question being posed. For example, the Employment Act of 1946 calls for the Federal Government to take all feasible action to encourage the "conditions under which there will be afforded useful employment opportunities, including self-employment for those able, willing, and seeking to work, and to promote maximum employment, production, and purchasing power". To find out whether maximum—or full—

<sup>9</sup> Kenneth W. Clarkson and Roger E. Meiners, "Government Statistics as a Guide to Economic Policy: Food Stamps and the Spurious Increase in the Unemployment Rates", *Policy Review* (Summer 1977)

<sup>10</sup> Robert George Williams, *Public Assistance and Work Effort* (Research Report Series No. 119, Industrial Relations Section, Princeton University, Princeton, N. J., 1975)

Chart 2

**Relationship between the Consumer Price Index and the Employment Ratio**



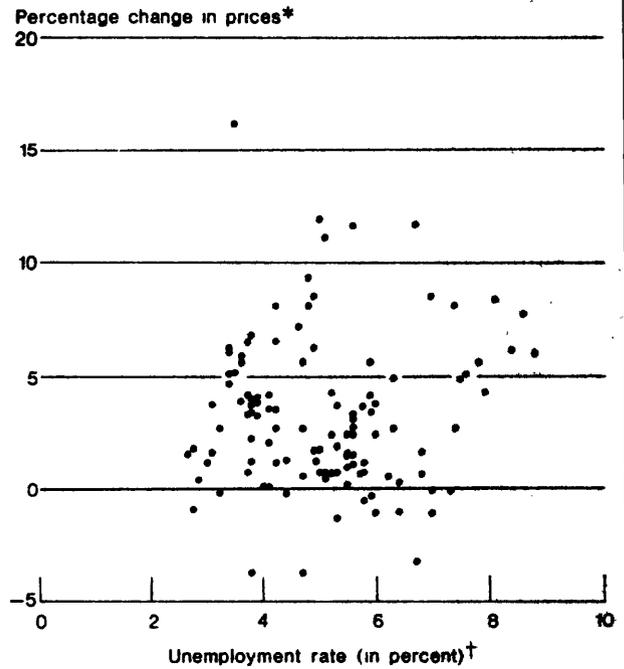
\*Change from previous quarter (at annual rate), 1948-77.

†By quarters, 1948-77.

Source. Computations based on data from the Bureau of Labor Statistics.

Chart 3

**Relationship between the Consumer Price Index and the Unemployment Rate**



\*Change from previous quarter (at annual rate), 1948-77.

†By quarters, 1948-77.

Source. Computations based on data from the Bureau of Labor Statistics.

employment has been achieved, the unemployment rate is conceptually the more appropriate measure, although its inaccuracies seriously compromise its relevance at the present time.

If, however, the primary interest is the relation between wage changes or inflation and the condition of the labor market, the employment ratio may be the better statistic to use because increasing inaccuracy of the unemployment rate has weakened the relationship between that statistic and excess demand. This has been pointed out by Geoffrey Moore<sup>11</sup> and is illustrated in Charts 2 and 3, which show a much stronger association between the percentage change in the consumer price index and the employment ratio than between the percentage change in the consumer price index

and the unemployment rate. Of course, the observation of correlation between these statistical series does not prove the existence of any causal relationship between them.

If the unemployment rate included only the involuntarily unemployed, the rate could be interpreted as an indirect measure of the inflationary pressures resulting from excess demand. This, in fact, is the interpretation that underlies the Phillips curve relation. In that relation, wages are expected to rise when there is excess demand—which is taken to be indicated by a low unemployment rate—and the rate of wage increase is expected to be the faster the greater the excess demand. However, if the unemployment rate is increasingly affected by the inclusion of the voluntarily unemployed, this relationship becomes blurred and the employment ratio may provide a better indication of demand pressures.

<sup>11</sup> "Employment, Unemployment, and the Inflation-Recession Dilemma", *AEI Studies on Contemporary Economic Problems* (1976)