

Research Department
Federal Reserve
Bank of
San Francisco

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Distorted Data?

The unemployment rate rose sharply in August to 6.0 percent of the civilian labor force — the first time it reached that level in over a year's time — and Washington's policymakers sat up to take notice. But past Congressional decisions have already dictated that billions in taxpayers' money will be transferred to various localities on the basis of such shifts in the jobless rate. That raises the obvious question: Are the figures good enough for the purposes for which they're used? The National Commission on Employment and Unemployment Statistics — which appropriately released its report on Labor Day — has some interesting (and at times disquieting) things to say on that subject.

The commission members, like most other economists, believe that the present procedures are adequate for measuring the national jobless rate. (Whether that figure is correctly interpreted is a completely different question, as we'll see in a moment.) But in contrast, they believe that the jobless data for smaller local areas are seriously inadequate — that the data which Congress uses to allocate billions of dollars annually to 6,100 local areas may be "extremely inaccurate."

Interpreting national data

The key question concerning the national jobless rate is one of interpretation rather than simple accuracy. What is the "full-employment" unemployment rate — the lowest point to which the jobless rate can fall without generating inflationary pressures on the labor market? Two decades ago, that rate generally appeared to be in the neighborhood of 4 percent. Today, however, most economists believe that full employment is reached in the neighborhood of 6 percent, because of the demographic and institutional changes that have occurred since the mid-1950's.

- The composition of the labor force has shifted, with a sharp expansion in the number

of teenaged and women workers — individuals who enter and re-enter the job market more often than average, and who consequently exhibit higher-than-average jobless rates.

- The unemployment-insurance program has been liberalized several times since the mid-1950's, with coverage extended and benefits increased, and these changes have tended to increase the duration of unemployment and hence raise the overall unemployment rate.

- Legislated increases in the minimum wage have tended to increase joblessness among young and unskilled workers, because their efforts are not worth the higher mandated wage to prospective employers.

- The work-registration requirement for welfare eligibility also has tended to boost the jobless figure; many such individuals wouldn't otherwise be counted as jobless because they wouldn't be looking for work.

Another question concerns the number of discouraged workers who remain outside the labor force because they believe no jobs are available for them. Some analysts believe that discouraged workers should be counted in the official unemployment rate because they, like the unemployed, are available for regular jobs. Yet the data indicate that large numbers of discouraged workers remain discouraged even during periods of tight labor markets, when inflationary pressures mount amid substantial shortages of workers. (There were more than 650,000 discouraged workers in 1967-69 and again in 1973 — both periods of labor-market tightness.) Thus the national unemployment rate, which is popularly regarded as an indicator of cyclical joblessness, would be distorted if all discouraged workers were included in the official jobless count. To help improve our analysis of this problem, the National Commission has recommended that more information be

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gathered to ascertain the labor-force attachment of discouraged workers and of job-market nonparticipants in general.

Measuring national data

Questions of interpretation aside, the national jobless figure appears to be quite accurate, and its accuracy should increase even more later this year as the national monthly sample increases from 56,000 to 70,000 households. As the National Commission says, "The Current Population Survey (CPS) . . . provides highly reliable current estimates of the employed, the unemployed and those not in the labor force."

Yet, as with any sample estimate, the reported national jobless figure for all civilian workers should not be considered precise — should not be cited as exactly 6.0 percent in August, for example. The most we can say is that, 9 times out of 10, we can be certain that the estimate from the sample is within the range of 0.18 percentage points of the true employment figure. So instead of saying that the national jobless rate was 6.0 percent in August, we'd be more correct to say that with 90-percent confidence, the range of 5.8-6.2 percent incorporates the figure that would be obtained from a complete census of the population.

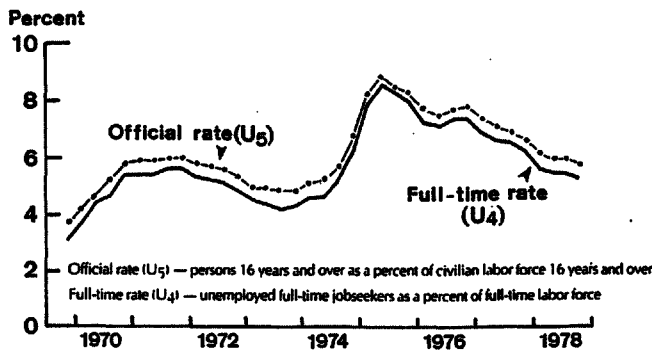
For the components of the total, jobless estimates are subject to greater error because of their smaller sample size. Thus, the error for nonwhite workers is just over four times the size of that for white workers, while the error for adult females is about 1.5 times as large as that for adult males. For teenaged workers, the error is considerably higher than for other groups. So instead of saying that the teenaged jobless rate jumped from 15.3 percent in July to 16.5 percent in August, we'd be more correct to say that the chances were 9 out of 10 that teenaged employment was within the

14.4-16.2 percent range in July and within the 15.6-17.4 percent range in August. The width of this range is much larger than for the national unemployment rate, and thus supports the National Commission's conclusion that the Current Population Survey provides inadequate precision for small demographic groups.

Other statistical problems affect the national figures, such as the inclusion of part-time as well as full-time job seekers among the total unemployed. The commonly reported national figure makes no distinction on the basis of the amount of work sought by an individual. According to the official definition, employed persons include all individuals (16 years old and over) who were available but performed no work during the week the population survey was taken, and who had looked for paid work within the preceding four weeks. Hence, a teenager whose major occupation is attending school but who wants several hours work a week is considered just as unemployed as the head of a household seeking full-time work. However, BLS has developed some alternative jobless measures which consider only full-time workers, such as the ratio of unemployed full-time jobseekers as a percentage of the full-time labor force — which averaged 5.2 percent in the first quarter of 1979, compared with the 5.7-percent official jobless rate. Still, the important point to note is that this measure of full-time unemployment moves closely with the official jobless rate over time.

Measuring smaller-area data

The problems with the national data, however, pale into insignificance compared with those of state and local areas. This is especially important because Congress has decreed that these weak estimates should be used to determine the allocation of Federal grants which totalled \$10 billion in fiscal 1979 — up more than tenfold since the beginning of this decade. The fund-allocation procedures assume a high degree of data accuracy which is simply non-



existent. For example, the formula used for allocating funds under the Comprehensive Employment and Training Act (CETA) would allocate substantial funds to an area with 6.5-percent estimated unemployment, but would allocate nothing to an area with 6.4-percent estimated unemployment — despite the fact that those two figures statistically are probably identical.

The unemployment data for most states are derived from both the state data on unemployment-compensation claims and the state data provided by the Current Population Survey (CPS). Neither source provides very accurate estimates. In particular, the claims data are highly unreliable, partly because many unemployed persons are not entitled to unemployment compensation, and partly because eligibility and benefit provisions vary widely by state.

For the 10 largest states, the Bureau of Labor Statistics estimates unemployment figures directly from Current Population Survey data. For smaller states, it uses a complex 70-step estimating method — the "handbook method" — to adjust claims data, and then combines those data with Current Population Survey data. For local areas, it uses the handbook method, adjusted for consistency with statewide estimates.

Because of the weakness of the estimates, state and local-area unemployment data frequently have been subject to substantial data revisions. Over the 1974-77 period, for example, the year-end revisions exceeded 10 percent each year for more than half of the individual states. (A 10-percent error in the unemployment rate for, say, Chicago would mean a \$250-million shift in that city's allocation of Federal money.) In an attempt to limit the amount of year-end revisions, the Bureau of Labor Statistics last year introduced a procedure of adjusting the monthly claims data by CPS data for the preceding six-month period. Even so, the resultant data remain quite weak.

Allocating grant funds

Congress has mandated the use of small-area unemployment data as a basis for allocating Federal grants to some 6,100 separate localities throughout the country. In its final report, the National Commission stated flatly that there is no way, at reasonable cost, to produce accurate jobless statistics for so many areas every month. To obtain the type of information which Congress demands would require a massive expansion of the Current Population Survey, with the cost rising from the present \$20 million a year to as much as \$2,300 million a year.

As a practical matter, the Commission has recommended certain incremental improvements which would raise the cost from \$20 million to \$54 million a year. The principal recommendation would be an increase in the CPS sample size, from 70,000 at the end of 1979 to 120,000 in future years. This would improve the reliability of the annual unemployment estimates for each of the 50 states and for 11 major cities. But for smaller areas, the Commission sees no solution in sight for the data problems which lead to such substantial inequities in the allocation of the taxpayers' money.

Rose McElhattan

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities	Amount Outstanding 8/29/79	Change from 8/22/79	Change from year ago @	
			Dollar	Percent
Large Commercial Banks				
Loans (gross, adjusted) and investments*	131,587	582	18,503	16.36
Loans (gross, adjusted) — total#	108,608	459	17,276	18.92
Commercial and industrial	31,521	144	4,272	15.68
Real estate	39,869	146	8,194	25.87
Loans to individuals	22,425	184	NA	NA
Securities loans	2,086	89	NA	NA
U.S. Treasury securities*	7,481	- 57	- 957	- 11.34
Other securities*	15,498	180	2,184	16.40
Demand deposits — total#	41,945	- 213	2,282	5.75
Demand deposits — adjusted	30,891	395	1,090	3.66
Savings deposits — total	30,401	- 162	41	0.13
Time deposits — total#	52,641	375	6,219	13.40
Individuals, part. & corp.	44,233	307	7,498	20.41
(Large negotiable CD's)	19,163	237	1,099	6.08
Weekly Averages of Daily Figures	Week ended 8/29/79	Week ended 8/22/79	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (+)/Deficiency (-)	33	11	88	
Borrowings	147	230	61	
Net free reserves (+)/Net borrowed(-)	- 114	- 219	27	
Federal Funds — Seven Large Banks				
Net interbank transactions	- 545	+ 242	+ 491	
[Purchases (+)/Sales (-)]				
Net, U.S. Securities dealer transactions	- 285	- 718	- 681	
[Loans (+)/Borrowings (-)]				

* Excludes trading account securities.

Includes items not shown separately.

@ Historical data are not strictly comparable due to changes in the reporting panel; however, adjustments have been applied to 1978 data to remove as much as possible the effects of the changes in coverage. In addition, for some items, historical data are not available due to definitional changes.

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