

**THE SURVEY OF INCOME AND
PROGRAM PARTICIPATION**

**COUNTING SPELLS OF UNEMPLOYMENT
No. 109**

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ACKNOWLEDGMENTS

Presented at the annual meeting of the Allied Social Science Associations (Society of Government Economists) in Atlanta, Georgia on December 29, 1989. Paul Ryscavage and Kathleen Short are economists in the Housing and Household Economic Statistics Division of the U.S. Bureau of the Census. The views expressed are attributable to the authors' and do not reflect those of the Census Bureau.

New Seminar Series on the Economics of Defense Expenditures

A new bag lunch seminar series focusing on economic aspects of defense expenditure issues is currently in the planning stages. Among the areas to be addressed are defense budgets in the 1990s, allocation of the "peace dividend," and the regional impacts of base realignments. The first seminar is planned for April. Members with suggestions for seminar topics or speakers should contact John Kort at 523-0591 or Narayan Sastry at 523-1219.

Economical Computing

by Reuben Snipper

Do people learn from the mistakes of others? I hope so, because I will try to get you to learn from mine. Recently I began a project that needed a lot of hard disk space, so I asked the computer support people to install another hard disk. While they were doing it, a freak accident occurred and all the files on my hard disk were scrambled. Over 35 megabytes of files were lost. The support person asked if I had a recent back-up. I replied, -well, sort of."

What I had been doing is saving on floppies only those files that were "important" or "large." I had not saved all the little files, such as my phone list, appointment calendar, and the batch and configuration files for all the software I use. Although restoring the software and files was tedious and time consuming, it was not as annoying as losing the small files. I now discover that many of those small files took a long time to develop.

What I am doing now (better late than never), is following a regular back-up schedule that includes all my files. What should you do? You have several choices that depend on your particular situation, but DO SOMETHING! If you are on a network, find out how to back-up your files through that. It may take some digging, since some networks back-up only what is on the network itself. If you have a stand-alone machine, find out if your office has special back-up software. If your office does not have such software, request it. Recent versions of the big names in the field are fast and easy to use. Some people use the back-up program, that comes with DOS. I do not recommend it because novice users find it hard to use and it is slow.

While you are waiting for the back-up software to arrive, make copies of your files. Get into the habit at the end of the day of copying your work. Remember, the time it takes to recreate a file---if it can be recreated at all-- is far longer than the time it takes to copy it to a floppy.

One thing everyone should do is save a copy of the back-up and restore programs you use. Several of them only restore back-ups made with the same version of the program. One time we were able to restore a backed-up file only after locating an old version of the original program that did the back-up. We were lucky that time.

If you have a very large file that does not fit on a floppy disk, *PC Magazine* published a free utility called SLICE that makes it easy to copy files on to multiple diskettes. Call me at 2415-1880 and I will send you a copy of it.

Data Comer

by Paul Ryscavage and Dan Kasprzyk

For those economists concerned with worker compensation issues, the May 1988 Current Population Survey (CPS) file on employee benefits is a potentially useful data source. Information is available on employer or union sponsored pension and retirement plans, individual retirement plans, Keoghs, lump sum payments, paid sick leave, and health insurance coverage. Also collected in this supplement to the May CPS is information on establishment and firm size and worker tenure.

Although the survey was conducted in May, the questions were asked of all employed persons in those CPS rotation groups common to the March 1988 CPS (in which income and work experience data for the previous calendar year were collected). This provides an added analytical dimension to the file. Personal characteristics such as age, sex, race, marital status, and education are also available.

The survey was conducted by the Bureau of the Census for the Bureau of Labor Statistics. Questions about the file should be directed to the Data User Services Division, Customer Services (Tapes), Bureau of the Census, Washington, D.C. 301-457-4100.

Addressing America's Workforce Crisis

by Steve Baldwin

At an SGE labor economics seminar on January 17, the report of the Secretary of Labor's Commission on Workforce Quality and Labor Market Efficiency was discussed by the Commission's erstwhile Deputy Director. Dr. Laurie J. Bassi. Bassi noted that the emphasis in the report's title. "Investing in People: A Strategy to Address America's Workforce Crisis," should be on the last word. The crisis is one of insufficient productivity growth to maintain and improve U.S. living standards.

The Commissioners, 20 individuals well-known in their respective fields, agreed on a report with perhaps "too many" recommendations (44). They were able, however, to produce a consensus document with just two notes of dissent.

In Bassi's view, the most significant recommendations had to do with providing greater incentives for non-college-bound youth to acquire skills in high school. The finding that the students who do not graduate from college (yet make up three-quarters of an age group) are ill-served by the public schools leads to recommendations such as providing teacher incentives and facilitating entry into teaching from other careers, especially for math and science.

Realizing that individuals in the workforce need retraining and their skills upgraded, the Commission felt that the private sector's primary role could be aided by public policy. An area that Bassi acknowledged having received insufficient treatment in the report was higher education. In particular, the importance of community colleges in providing post-secondary education and workforce training is not reflected in the report.

Immigration was a contentious area. The Commission tried to strike a balance between business representatives, who wanted to give greater weight to labor market conditions in admissions policy, and advocates for the disadvantaged and minority segments of the-U.S. workforce, the groups that are adversely affected by expanded immigration.

The Commission's last general recommendation, for more research and data collection, was particularly heartfelt because of the difficulty in finding data on which to base the other recommendations. Copies of the report can be obtained by calling the Labor Department's Consumer Affairs Coordinator at 52-6060.

European Banks and the Evolution of U.S. Banking Structure

by Robert A ten

At an SGE luncheon meeting on December 7, 1989, the Vice Chairman of the Federal Reserve Board of Governors Manuel Johnson discussed the role of European banks in the evolution of U.S. banking structure.

DATA CORNER . . . by Paul Ryscavage and Dan Kasprzyk

Another fairly recent Current Population Survey (CPS) file that should be of interest to those economists working in the health insurance area is the August Retiree Health Insurance file. The August 1988 supplement to the CPS consisted of questions relating to the health insurance status of retirees and surviving spouses of retirees. The purpose of the survey was to examine whether retirees or their surviving spouses have access to a health plan through the retiree's past employer. Information was collected on coverage (whether public or private), the status of the plan at the time of retirement, whether or not the employer also provided a pension or profit sharing plan, and so on. The survey was conducted by the Bureau of the Census for the Bureau of Labor Statistics and the Pension and Welfare Benefits Administration. U.S. Department of Labor. For more information about this file contact the Data User Services Division, Customer Services (Tapes) Bureau of the Census, Washington, D.C. 20233, 457-4100.

March 2, 1990

PRELIMINARY: NOT FOR PUBLICATION OR CITATION

December 28, 1989

COUNTING SPELLS OF UNEMPLOYMENT

by Paul Ryscavage and Kathleen Short

To be presented at the annual meeting of the Allied Social Science Associations (Society of Government Economists) in Atlanta, Georgia on December 28, 1989. Paul Ryscavage and Kathleen Short are economists in the Housing and Household Economic Statistics Division of the U.S. Bureau of the Census. The views expressed are attributable to the authors and do not reflect those of the Census Bureau.

COUNTING SPELLS OF UNEMPLOYMENT

by Paul Ryscavage and Kathleen Short

INTRODUCTION

Every month the Federal government measures the number of persons who are undergoing spells of unemployment. These statistics are watched closely by policymakers, economists, financial analysts and others for they reflect the health of the Nation's labor market, and, to a large extent, the economy. The manner in which spells are measured, however, has the result that some spells are not counted. This paper presents an initial attempt to quantify these "missed" spells of unemployment.

The fact that some spells are missed is not a new finding. It was implicit in the work of Kaitz (1970), Salant (1977), Bowers (1980) and others who examined and clarified the meaning of unemployment duration statistics. These data are collected every month through the Current Population Survey (CPS), the source of the Federal government's unemployment statistics and the official unemployment rate. Kaitz and the others drew attention to the fact that what the CPS measured were "ongoing" spells of unemployment and not "completed" spells, and in the process they uncovered other important characteristics of unemployment measurement. One of these was the likelihood that short spells of unemployment occurring-between the CPS monthly surveys were apt to be missed.

Just as the distinction between ongoing and completed spells is important, we believe some attempt at quantifying the spells of unemployment that are missed is important also. Using the Survey of Income and Program Participation (SIPP), a relatively new household survey, we present preliminary estimates of missed spells. We consider them preliminary since they are derived by replicating the CPS methodology in SIPP, and important differences exist between the two surveys. Nevertheless, we find that when these missed spells are quantified in a CPS-type unemployment measure derived from SIPP, their impact is nontrivial.

Our paper begins with a brief discussion of the CPS labor force concepts and its measurement of unemployment. The next section explains the methodology used to develop a CPS-type unemployment measure in SIPP. The fourth section presents our data results. The paper concludes with a summary and a discussion of the implications of our findings for further research.

CONCEPTS AND MEASUREMENT ISSUES

As was mentioned, the labor force status of the Nation's population is measured through the Current Population Survey (CPS), a monthly survey of almost 60,000 households. This survey is conducted by the Bureau of the Census (BC) for the Bureau of Labor Statistics (BLS) which reports on the country's employment situation each month. The CPS has been in operation

for nearly 50 years and its labor force concepts and methodology have served as the model for household surveys in other countries. Moreover, it is perhaps the most "studied" survey instrument in the world.

One fact about the CPS not commonly known is that labor force status is based primarily on an individual's activities as.-of the week containing the 12th of the month--the survey week--and not activities during the entire month. This makes the classification of persons into mutually exclusive labor force statuses that much easier.

The CPS labor force concepts are straightforward.¹ Employed persons are defined as persons who worked during the survey week, or persons who had jobs but were temporarily absent from them because of illness, bad weather, vacation, strikes, or personal reasons. Unemployed persons are those who did not work in the survey week, were available for work, and either were on layoff or had made efforts to find work sometime during the prior four weeks.²

Two additional features of the concepts should be mentioned. First, inherent in the conceptual framework is a priority system which prescribes that the status of employment takes precedence over the status of unemployment which in turn takes precedence over not being in the labor force. In other words, this priority system takes care of conflicts that may arise in the classification of individuals. For example, under this system a person in the survey week who had a job but also looked for work would be classified as employed. The second feature concerns the retrospective nature of the unemployment concept. That is, looking for work might take place at any time over a four week period to include the survey week. This retrospective dimension together with the priority system, creates the following possibility: a person who did not have a job in the survey week nor looked for work, could still be classified as unemployed if they looked for work, for example, three weeks earlier.

Kaitz and others wrestled with the problem of inferring the average length of completed spells of unemployment from the lengths of ongoing spells as estimated in the CPS. In the process, two biases were thought to exist in the CPS unemployment duration estimates. These have been referred to in the literature as length-bias sampling and interruption bias.³ We suggest that these biases are problematic not only for estimating the average length of completed spells of unemployment, but more simply for counting the number of spells being experienced during a month's time.

¹For a succinct statement of the concepts see the Explanatory Notes in any current issue of the BLS monthly publication Employment and Earnings.

²Persons who report they were not working, but waiting to be recalled to a job from one they had been laid off or waiting to report to a new one within 30 days, need not have looked for work to be classified as unemployed.

³Actually, length-bias sampling was discussed in the statistical literature many years before. See Cos and Lewis (1966).

Length-bias sampling occurs in the CPS because long spells of unemployment have a greater probability of being measured than do short spells. Spells of unemployment taking place between survey weeks--the weeks containing the 12th of the month--might last from 1 to 4 weeks depending on where the 12th is located. As is shown in the Figure, the spell experienced by person A would be missed. It is essential to note, however, that the spell would only be missed, theoretically, if the person had found and taken a job and was classified as employed in the survey week of month m . If the person had no job and did not look for one in that week, such as person B, he or she would be considered unemployed because of the CPS priority system.

One might ask about the importance of missing that short spell of unemployment of person A since he or she found employment and was classified accordingly in the survey week. We consider it to be important given the labor market dynamics of some population groups who have at best a weak labor force attachment. For these persons, the movement into and out of jobs may be a common occurrence. Moreover, the short spell may really only be the continuation of a much longer spell that was broken by a period of time outside the labor force. This notion has been popular for several years (Clark and Summers, 1979) and shared by many.

Interruption bias is represented by persons C and D in the Figure. As previously indicated, the CPS unemployment duration estimates are actually measurements of unemployment spells that are in progress (as depicted in month $m - 1$ of the Figure). CPS enumerators have recorded these individuals as looking for work in the survey week and further asked how long they have been looking. Since the spell is ongoing, the remaining week(s) the individual looks after the survey week in month $m + 1$, however, will not be recorded, unless, of course, the spell continues until the next survey week.⁴ In other words, these spells are "right" censored. Not only will the length of the unemployment spell in $m - 1$ be underestimated if it is construed as a completed spell, but the portion of it occurring after the survey week will not be recorded in month m .

Understanding the nature of these two biases was very important for Kaitz and the others, and as they pointed out, they conflict with one another when it comes to estimating the average length of a completed spell from ongoing spells.⁵ They do not conflict, however, when the object is to count the number of spells of unemployment during a month's time. Consequently, while their work is of interest in its own right, our analysis is not dependent on its further exposition.

⁴Bowers and Horvath (1984) have shown that the reported amounts of time spent unemployed are often consistent with the actual time existing between surveys.

⁵When length-bias sampling predominates, the average length of ongoing spells overestimates the expected average duration of completed spells. This is because longer spells have a greater chance of being observed in the survey. When interruption bias predominates, the average length of ongoing spells underestimates the expected average length of completed spells. Which bias predominates depends on the probability of escaping unemployment at a certain point in time, given that it has not ended before then. For a more thorough discussion of this, see Salant (1977).

METHODOLOGY

To estimate how many spells of unemployment may be missed because of length-bias sampling and interruption bias we use the longitudinal survey conducted by the BC called SIPP.⁶ This survey was designed to monitor the economic well-being of persons and households, with a particular emphasis on their incomes and participation in transfer income programs of the Federal government.

SIPP also has a labor force component in which sample members are asked about their labor force activity over a previous four month reference period. In general, the emphasis of the questions is on ascertaining in which weeks individuals held jobs or were self-employed. If work activity was not evident in particular weeks (or all weeks) of the reference period, further questions are asked about whether or not individuals looked for work or were on layoff in those weeks. In other words, individuals can be classified into mutually exclusive labor force status categories in each week of the reference period. This makes it possible to record spells of unemployment over time.

The SIPP labor force data have been used in conjunction with other SIPP data in various published reports of the BC as well as by themselves (U.S. Bureau of the Census, 1989a, 1989b). In addition, the CPS labor force methodology has been previously replicated in the SIPP for the purpose of comparing monthly labor force estimates (Ryscavage and Bregger, 1985). A complete replication, of course, is not possible given the multitude of differences between survey instruments (e.g., differences in sample designs, questionnaires, training of interviewers, data processing). Nevertheless, we believe SIPP is a useful tool for examining questions of this type and serves as a complement for understanding the CPS.

Since late 1983, panels of households have been placed in the field every year. Household members are interviewed every four months for approximately 2 ½ years. Our analysis is based on data from a part of the 1984 SIPP panel, specifically an 11-month period covering October 1983 to August 1984. These data were collected in the first four waves of interviews of the 1984 panel. During this period the SIPP sample declined because of attrition from nearly 20,000 households to 19,000 households, or 5.0 percent. Since labor force status in SIPP is obtained for each week of the four-month reference period, it is possible to identify labor force status in the week containing the 12th of the month.

DATA RESULTS

In this section we discuss our CPS-type unemployment levels and rates derived from the SIPP data for the period of October 1983 to August 1984. In addition, we focus on the spells of unemployment that would have been missed because of length-bias sampling and interruption bias.

⁶For a thorough discussion of SIPP see, Nelson, McMillen, and Kasprzyk (1985).

As in the CPS, the same priority system is used in SIPP, that is, having a job takes precedence over looking for one which in turn has precedence over being out of the labor force. In addition, for persons outside the labor force in the week of the 12th, a check was made to see if any job search or layoff had taken place in the previous four weeks (to include the week of the 12th).

The estimates presented here should be interpreted with some caution for a couple of reasons. First, although they were developed using sample weights, these weights do not take account of the sample selection process that was used in the analysis. They are cross-sectional monthly weights intended to produce nationally representative estimates from the observations available in each month. Our sample, however, includes only those persons who were interviewed in all four waves of interviewing and supplied data for each month. Therefore, the estimates of unemployment levels will be systematically underestimated and differential biases for subgroups are also possible. In other words, these are approximate estimates of unemployment and missed unemployment spells.

Second, recall bias is no doubt problematic in SIPP (National Research Council, 1989). This stands to reason given the four month recall period, relative to a 10 day recall period in the CPS (not counting the four weeks in which one could have looked for work). If indeed, the tendency is for respondents to forget spells of unemployment and/or the timing of spells, we would expect the SIPP data results to be conservative estimates of unmeasured spells of unemployment.

As shown in Table 1, the level of unemployment, according to the SIPP, varied from a high of 9.3 million in January of 1984 to a low of 8.1 million in May of the same year. How reflective this time series is of the national situation, as gauged by the CPS unemployment estimates, can also be seen in the table. As indicated above, the SIPP estimates would have been somewhat higher if they had been based on the full SIPP sample in each month.⁷ In terms of the unemployment rates, SIPP's tend to track somewhat higher than CPS'S; for the period under examination, SIPP's rate averaged 8.6 percent compared to 7.9 percent for the CPS.

With SIPP we can now move from the cross-sectional dimension to a longitudinal one so as to observe individuals' spells of unemployment that may have been missed because of length-bias sampling and interruption bias. Table 2 contains these estimates. According to SIPP, the total number of persons with missed spells of unemployment averaged 1.6 million per month. These are sample respondents who indicated that they had a job or were self-employed in the survey week, but in the previous three weeks had looked for a job or were on layoff in at least one of- those weeks. For these persons, we also -know what their labor force status was in the survey week of the previous month--and this is what distinguishes between the length-bias" group and

⁷In the Ryscavage and Bregger (1985) comparison of SIPP and CPS labor force estimates, SIPP unemployment levels were found to be higher than those in CPS for comparable time periods. Rates of unemployment were also implicitly higher in SIPP than in the CPS.

the "interruption bias" group.

To be classified in the length-bias group, an individual's labor force status had to be either employed or out of the labor force in the previous month's survey week. This is depicted by Person A in the Figure. In other words, a spell of unemployment fell between the two survey weeks. To be classified in the interruption bias group, an individual's labor force status had to be unemployed in the previous survey week, such as Persons C and D. Their spell of unemployment is continuing past the previous survey week; when these persons found their job in the current survey week, a portion of their unemployment spell was not recorded.

Approximately 71 percent of the total missed spells, on average, were of the interrupted variety, or 1.1 out of 1.6 million per month. This finding is surprising since Kaitz (1970), Salant (1977), and others, who considered the implications of these biases in the context of ongoing and completed spells of unemployment, presumed that length-bias sampling predominated. Table 2 does show that the length-bias group became more prominent in the overall composition of missed spells in January. We can only speculate about the -association between short spells of job search and the beginning of the new year.

Although we have emphasized the distinction between the two types of unemployment spells that are missed in a CPS-type Unemployment measure derived from SIPP, we caution against over-interpretation. It may very well be the case that, in some instances, it is difficult to distinguish between the statuses of unemployment and not in the labor force. Perhaps what is being measured here are long intermittent spells of job search that finally do end with a job.

An obvious question that now arises is what is the effect of these missed spells of unemployment on a CPS-type unemployment rate derived using the SIPP data? The answer to this question is that there would be no effect. This is because to include these missed spells would violate the CPS priority system which we introduced into our CPS-type unemployment measure. In other words, we would have to move persons with missed spells of unemployment from the employment category to the unemployment category.

But just for the sake of analytical inquiry, we have moved these persons to the unemployment category thus creating an alternative unemployment rate measure. This alternative measure is called a "monthly work experience unemployment rate," since it now relates to all persons who have experienced some unemployment in a four week period. By doing this we are not suggesting a change in the official method of measuring unemployment, but only wish to investigate how different the unemployment situation would look when more detailed information is incorporated in a monthly measurement method. Since these estimates are for time periods which now cover portions of consecutive months, we have labeled our tables accordingly (e.g., September-October 1983 instead of October 1983).

Table 3 presents the monthly work experience unemployment rates after missed spells have been added to the CPS-type unemployment levels derived from SIPP. When the length-bias

group is added the monthly work experience unemployment rate would be 9.1 percent. If the spells missed by the interruption bias group were added, this new rate would move up to 9.8 percent. The total impact of all missed spells would find the monthly work experience unemployment rate at 10.2 percent.

Because the job search process (e.g., duration, methods, intensity) varies across population groups, we suspect that the occurrence of missed unemployment spells varies and, indeed, find some evidence of that among age-sex groups. Table 4 shows the month-by-month trend and 11-month averages of SIPP sample members with missed spells of unemployment. As shown, young persons age 16 to 24 accounted for 600,000 of the 1.6 million missed spells, or 37.0 percent. In terms of employment, however, they represented only 19.2 percent of the monthly SIPP employment average. Their percentage point over-representation was larger than either the over- or under-representation of the other age-sex groups with missed spells.

This finding is not surprising given young persons greater proclivity to be moving in and out of the labor force as well as between employment and unemployment. School to work transitions, the establishment of households, and so on, all make them more prominent in this category of persons whose spells of unemployment are missed. Given SIPP's small sample size for Black and Hispanic youths, we can only speculate on the numbers of spells of unemployment that would go undetected.

We had hypothesized that among women age 25 to 54, as well as some of the youths, significant proportions of the spells for these groups would have been missed because of length-bias sampling, or the fact that long spells have a greater probability of being measured than short ones. (Women and youths do tend to have relatively shorter completed spells of unemployment than other groups (Clark and Summers, 1979).) As shown in the text table below, however, this was not the case.

Age-sex group	Total	Length-bias	Interruption bias
Total	100.0	28.9	71.1
Both sexes, 16-24	100.0	25.0	75.0
Men, 25-54	100.0	28.9	71.1
Women, 25-54	100.0	31.2	68.8
Both sexes, 55 +	100.0	40.3	59.7

Monthly work experience unemployment rates for each of these age-sex groups are displayed in Table 5. In the case of youths, their unemployment rate would now be 19.1 percent, and for persons age 55 and over the rate would be 6.3 percent.

SUMMARY AND IMPLICATIONS

The CPS measures the labor force status of the population at a point in time every month. Because of its periodicity and labor force concepts, some spells of unemployment occurring

between survey weeks and portions of other longer spells of unemployment are missed each month. The former is the result of length-bias sampling and the latter because of interruption bias. This is not a new finding, but it has never received much attention in the literature. By replicating the CPS in a relatively new longitudinal survey, SIPP, we have made preliminary estimates of the number of missed spells for the period of October 1983 to August 1984. We find that persons with missed spells because of length-bias sampling averaged 467,000 in this period and persons with missed spells because of interruption bias averaged 1.1 million, for a total of 1.6 million persons. Youths age 16 to 24 were over-represented in the total number of SIPP sample members with missed spells.

We view our results as preliminary for a number of reasons. First, the SIPP and CPS are different survey instruments. Inferring what takes place in one survey may not necessarily hold for another survey. Second, although our estimates are based on weighted sample data, the weights used are problematic. In addition, the estimates relate to only a short period of time. Appropriately weighted estimates over a greater part of the business cycle would be more useful. And third, SIPP's sample size is small, making it difficult to examine a variety of population groups who we suspect would be prone to missed spells of unemployment.

Table 1. CPS-Type Unemployment Level and Rate from SIPP and the CPS Unemployment Level and Rate--Oct. 1983 to Aug. 1984

Months	<u>SIPP</u>		<u>CPS</u>	
	Unemployment Level (in thous.)	Rate (%)	Unemployment Level (in thous.)	Rate (%)
Oct. 1983	8,947	9.3	9,383	8.4
Nov. "	8,809	9.2	9,129	8.1
Dec. "	8,955	9.2	8,992	8.0
Jan. 1984	9,308	9.5	9,755	8.8
Feb. "	8,976	9.1	9,407	8.4
Mar. "	8,643	8.7	9,057	8.1
Apr. "	8,152	8.1	8,525	7.6
May "	8,146	8.0	8,154	7.2
Jun. "	8,375	8.1	8,582	7.4
Jul. "	8,197	7.9	8,714	7.5
Aug. "	8,216	7.9	8,382	7.3
Average	8,611	8.6	8,916	7.9

NOTE: These data have not been seasonally adjusted.

Table 2. Persons Employed in the Week Containing the 12th of the Month (according to SIPP) BUT Had Looked for Work or Were on Layoff At Some time in the Previous Three Weeks by Type of Bias--Oct. 1983 to Aug. 1984

Months	Total (in thous.)	Length bias (in thous.)	Interruption bias (in thous.)
Oct. 1983	1,617	413	1,204
Nov."	1,405	410	1,040
Dec."	1,379	475	904
Jan. 1984	1,899	873	1,026
Feb."	1,674	379	1,295
Mar."	1,743	430	1,313
Apr."	1,532	362	1,170
May "	1,550	407	1,143
Jun."	1,712	512	1,200
Jul. "	1,737	474	1,263
Aug. "	1,430	398	1,032
Average	1,611	467	1,145

NOTE: These data have not been seasonally adjusted.

Table 3. CPS-Type Unemployment Rates (in percent) and Monthly Work Experience Unemployment Rates (in percent) Derived from SIPP--Sept.-Oct. 1983 to Jul.-Aug. 1984

Months		CPS-type unemployment rates	Work experience unemployment rates		Total bias
			Length bias only	Interruption bias only	
Sept.-Oct.	1983	9.3	9.8	10.6	11.0
Oct.-Nov.	"	9.2	9.6	10.2	10.7
Nov.-Dec.	"	9.2	9.7	10.2	10.7
Dec.-Jan.	1984	9.5	10.4	10.6	11.5
Jan.-Feb.	"	9.1	9.5	10.5	10.8
Feb.-Mar.	"	8.7	9.1	10.0	10.4
Mar.-Apr.	"	8.1	8.5	9.3	9.6
Apr.-May	"	8.0	8.4	9.1	9.5
May-Jun.	"	8.1	8.6	9.2	9.7
Jun.-Jul.	"	7.9	8.3	8.9	9.5
Jul.-Aug.	"	7.9	8.3	8.9	9.4
Average		8.6	9.1	9.8	10.2

NOTE: These data have not been seasonally adjusted.

Table 4. Persons Employed in the Week Containing the 12th of the Month (according to SIPP) BUT Had Looked for Work or Were on Layoff in the Previous Three Weeks by Major Age-Sex Groups--Sept.-Oct. 1983 to Jul.-Aug. 1984

Months	Both sexes	Women	Men	Both sexes
	16 to 24 (in thous.)	25 to 54 (in thous.)	25 to 54 (in thous.)	55 and over (in thous.)
Sept.-Oct. 1983	638	363	498	118
Oct.-Nov. "	469	308	571	102
Nov.-Dec. "	450	401	401	128
Dec.-Jan. 1984	606	446	627	220
Jan.-Feb. "	572	274	624	205
Feb.-Mar. "	624	304	625	191
Mar.-Apr. "	495	354	564	120
Apr.-May "	574	348	486	142
May-Jun. "	778	293	511	160
Jun.-Jul. "	763	385	501	88
Jul.-Aug. "	559	327	439	105
Average	593	343	532	144

NOTE: These data have not been seasonally adjusted.

Table 5. Monthly Averages of CPS-Type Unemployment Rates (in percent) and Monthly Work Experience Unemployment Rates (in percent) Derived from SIPP by Major Age-Sex Groups--Sept.-Oct. 1983 to Jul.-Aug. 1984

Major age-sex groups	CPS-type unemployment rates	Work experience unemployment rates		
		Length bias only	Interruption bias only	Total-bias
Total	8.6	9.1	9.8	10.2
Both sexes, 16-24	16.2	16.9	18.3	19.1
Women, 25-54	7.4	7.8	8.3	8.6
Men, 25-54	6.4	6.8	7.4	7.9
Both sexes, 55+	5.2	5.7	5.9	6.3

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