THE SURVEY OF INCOME AND PROGRAM PARTICIPATION

New Household Survey and the CPS: A Look at Labor Force Differences

No. 8

Paul M. Ryscavage and John E. Bregger

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PREFACE

This article compares the labor force concepts and methods used in the Survey of Income and Program Participation (SIPP) with those in the Current Population Survey (CPS). The basic labor force estimates from both surveys are then discussed. Of the many possible reasons for the differences in labor force estimates, two are examined in detail: coverage and reference period differences. A concluding section discusses the future research required to understand more fully SIPP and CPS labor force differences.

This article which was published in the September 1985 Monthly Labor Review is being made available in the SIPP Working Paper Series in order to broadly disseminate the early findings of this comparison between these two important surveys.

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New household survey and the CPS: a look at labor force differences

The Survey of Income and Program Participation, like the Current Population Survey, is a household survey conducted by the Census Bureau; labor force estimates from the new series differ from the 'official' estimates, but for good reasons

PAUL M. RYSCAVAGE AND JOHN E. BREGGER

In September 1984, the Bureau of the Census released initial statistics from a new household survey, the Survey of Income and Program Participation (SIPP).[1] The survey, which was developed over many years, is expected to provide an indepth look at the incomes of Americans and the extent to which governmental assistance plays a part in their lives.[2] This survey also includes selected information about labor force activity, because labor force activity and the receipt of certain types of income are closely related.

The Current Population Survey (CPS), a monthly survey conducted by the Bureau of the Census for the Bureau of Labor Statistics, is the source of the government's statistics on labor market activity.[3] It has been in existence since 1940 and is the oldest continuous household survey in the world. All other household surveys conducted by the Census Bureau, including the SIPP, are modeled after the CPS. Periodically, the labor force concepts and survey procedures used in the CPS undergo reviews by presidentially appointed commissions to ensure that the data produced continue to be as accurate and as representative of national labor market trends as possible.[4] Great care is taken to see that the measures of labor market activity are consistent over time. As a result, the CPS is a key source of data for both guiding economic policy and understanding the labor market.

Because SIPP data are now available on a regular basis, it is appropriate to examine the labor force estimates from the two surveys to determine the differences between them. And clearly, differences should be expected. Both surveys have different conceptual underpinnings, and methodological differences abound. Nevertheless, if the reasons for the differences between each survey's labor force estimates can be isolated, the SIPP data may prove to be an important complement to the CPS.

This article compares the labor force concepts and methods used in SIPP with those in CPS. The basic labor force estimates from both surveys are then discussed. Of the many possible reasons for the differences in labor force estimates, two are examined in detail: coverage and reference period differences. A concluding section discusses the future re-

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search required to understand more fully SIPP and CPS labor force differences.

Conceptual and methodological issues

The CPS came into existence as a result of a need for better information on the number of persons looking for work during the Great Depression. It is primarily concerned with measuring the current labor force activities of the Nation's population—that is, how many persons are working, how many are actively looking for work or are on layoff from jobs, and how many are not in the labor force. Among other things, the CPS is the source of the Nation's "official" unemployment rate. SIPP evolved in the 1970's when a need was recognized for better information on the incomes of persons and the extent to which they received income from government transfer programs. It thus is basically an income survey, but, because it is important for policy purposes to look at all income, including that earned through work, questions are necessarily asked in the survey concerning labor market activities.

At the core of the CPS labor force data is the "activity concept." This amounts to identifying a person's major activity in relation to the labor market during a 1-week reference period. A battery of questions determines whether these activities fit the official concepts of employment and unemployment. The activity concept is also used in SIPP, but somewhat differently. The concept in SIPP is used in conjunction with information on income and possible program participation. It involves ascertaining whether a person had a job at any time during the prior 4-month reference period. A sequence of questions in the SIPP questionnaire then establishes whether there were any periods of absence from a job or periods when one was looking for work or on layoff.

The concepts of "employment" and "unemployment" have very precise meanings in the CPS and use of these terms is avoided in SIPP. The comparable terms in the new survey—"with job" and "looking for work or on layoff"—are also carefully defined. Conceptual and methodological differences between the two surveys are summarized in exhibit 1 on pages 6 and 7.

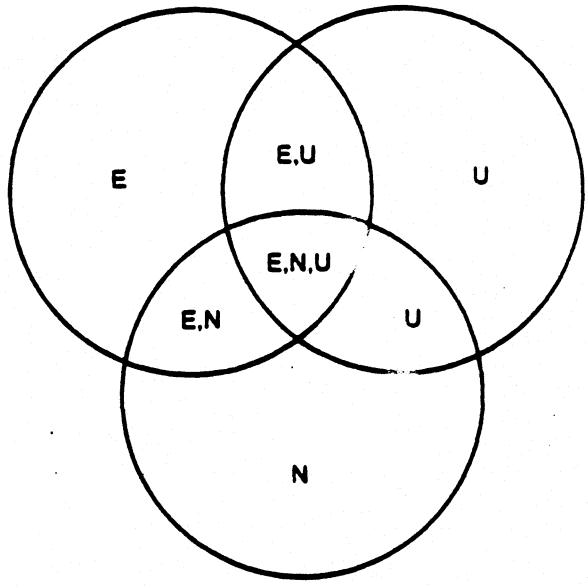
SIPP. SIPP is a longitudinal survey of persons, that is, data are collected for the same person over time. The sample contained individuals in 20,000 households when the survey started in the October 1983–January 1984 period; a second panel of 13,500 households was introduced in the February–May 1985 period. The entire sample is divided into four rotation groups, and one rotation group is in operation every month. This "staggered" sample design permits the full sample to be interviewed over a 4-month period; one complete interview sequence of the four rotation groups is referred to as a "wave."

Persons in the households of both panels remain in the survey for 2½ years, that is, through eight interviews. For those persons who move out of a household, attempts are made to follow them and thus retain them in the survey.[5] (In cases where household units are occupied by entirely new residents, no further interviews at that address are conducted.) Interviews are obtained, however, for persons moving into housing units containing SIPP sample members.

SIPP sample members are interviewed during the first 2 weeks of the month. Each person 16 years of age and over is interviewed if present in the household, and "proxy" interviews are obtained only from responsible household members. A typical interview lasts approximately 10 to 15 minutes per individual.[6] The reference period for the labor force, income, and program participation questions is the previous 4 months, although the labor force questions are asked in reference to each week of the 4-month period (involving up to a 19-week recall period).

Persons with jobs are defined as those who have ". . . a definite arrangement for regular work for pay every week or every month."[7] These persons may have been absent from their job because of illness, vacation, a labor dispute, bad weather, or other reasons, but still are considered as holding a job. As long as a job was held at some time during a week, a person is considered to have had a job the entire week. Individuals are classified as looking for work if they did not work in a week, but indicated that they looked for work and were available for work. They are classified as on layoff if they had been released from an employer due to a temporary lack of materials or slack work. In addition, persons who are to report to a new wage or salary job within 30 days are considered to be looking for work or on layoff.

Because of the length of the reference period, individuals can have more than one labor market status during the 4 months. For example, as depicted below, a person could have been out of the labor force (N), then started looking for a job (U), and then found one (E):



This is a key difference from the CPS concept of "current" labor force activity and accounts for some of the difference in the labor force statistics from the two surveys. This multiple-status possibility means that, basically, SIPP is measuring "work experience" of individuals during the 4-month reference period and thus is similar in this respect to the CPS supplement conducted each March when information is collected on the labor force activities of the population in the previous calendar year.[8]

Although SIPP data are collected using a 4-month reference period, all of the data—including the labor force estimates—are issued for a calendar quarter and are "monthly averages" for that quarter. This means that the labor force status estimates are averages of the various statuses individuals had in *each* of the 3 months of the quarter. In other words, monthly averages were calculated for each of the possible labor force statuses that occur in a month's time, and, just as multiple statuses are possible during the 4-month reference period, so too are they possible in a month.

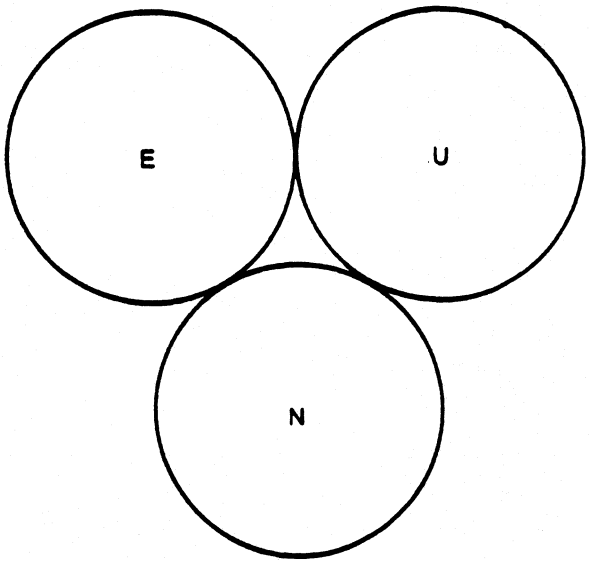
The SIPP data in this article refer to persons 16 years of age and over from nonfarm households and members of the Armed Forces living with their families either on or off post. Data for persons from farm households are currently being examined for possible inclusion in future SIPP quarterly reports.

The CPS. The CPS is a sample survey of 59,500 households that is conducted monthly. Households come into the sample for 4 months, are rotated out for 8 months, and then return for 4 months. This rotation pattern lends stability to the estimates of month-to-month and year-to-year changes, as the measurement of change over time is perhaps the most important aspect of the survey. The rotation pattern also yields a degree of longitudinality, in that the same households—actually, addresses—are tracked over a 16-month period.

Interviews are conducted initially in person—for the first and fifth month-in-sample households—and subsequently by telephone, after a relationship has been established between the enumerator and household members. On average, about 65 percent of a month's interviews are conducted by telephone. Generally, a responsible household member will answer questions on behalf of all members 16 years of age and older. Interviews typically last 5 to 7 minutes per person. The reference period for interviews is the week containing the 12th day (except in December, when it is often a week earlier). Enumeration is carried out in the subsequent week, the week of the 19th. Thus, questions on labor market status are framed in the context of one's activity "last week," a very short recall period. Data for the reference week are used to represent individuals' statuses for the entire month.

Classification of labor market status is carried out on a priority basis in which employment takes precedence over unemployment, and unemployment takes precedence over not being in the labor force at all. In the course of an interview, persons are asked if they performed any work at all—that is, an hour or more—"for pay or profit." A positive response results in their being counted as *employed*. In addition, persons who did not work at all in the week but were temporarily absent from jobs for personal reasons such as vacation and so forth (same as in SIPP) are also counted among the employed, regardless of whether they are paid for their time off. A comparatively small group of persons who work without pay on a family farm or business enterprise for 15 hours or more in the reference week are included in the employed counts.

To be counted as *unemployed*, a person must not, of course, have worked at all and must have actively looked for work some time in the prior 4-week period (for example, registered with a public or private employment office, applied directly to an employer, placed an ad, mailed a letter of application, and so forth) and be currently available for work. Persons who are on layoff (and expect to be recalled sometime in the future) and those who are waiting to start a new wage or salary job within 30 days need not be looking for work to be included among the unemployed. Those who are either employed or unemployed are in the labor force. Those doing neither are in the third major category: *not in the labor force*. In contrast to the illustration of multiple statuses in SIPP shown earlier, the circles for CPS would be tangential rather than possibly interlocking:



The differences

Qualitative. As noted earlier, differences in the operation of both surveys could easily affect any comparisons of the data, even if the surveys were conceptually identical (which, as we have seen, they are not). For example, an important

qualitative difference we know little about concerns interviewers and their training. Given the different focus of both surveys, it is possible that SIPP interviewers have different attitudes and expectations concerning the labor force questions. Training differences, too, may have an effect because the SIPP questionnaire is longer and more complicated to administer than the CPS's. Processing and estimation procedures are another possible source of the labor force differences of which little is known at this time. While the CPS procedures have been in operation for many years, SIPP's have only recently been set in place. The complexity of these procedures would make them a possible candidate to which some labor force differences could be attributed. Differences in recall period, as will be seen, can affect the data. And last, but not least, are the differences involving the SIPP and CPS questionnaires (this is discussed in greater detail later). It is known from survey research that the wording of questions and their placement can affect respondents' answers.

Survey nonresponse is an important factor in assessing the qualitative differences.[9] Although nonresponse to specific income questions in SIPP is less than that reported in the March CPS income supplement, the overall nonresponse rate to SIPP interviews is considerably higher than in the monthly CPS (see exhibit 1). The reasons for this may stem from a variety of factors, including sensitivity over the questions being asked and the amount of time needed to complete a SIPP interview. In any event, differences in rates of nonresponse may account for part of the differences in the labor force data from both surveys.

Unlike SIPP, the operation of the CPS has been scrutinized for many years, not only by statistical agencies responsible for it but also by independent researchers and presidential commissions. Topics such as questionnaire design and content, estimation procedures, nonresponse, and so on have been examined for their effect on the data. Because of this, the quality of the CPS labor force estimates is well known, while SIPP's awaits investigation. Consequently, qualitative differences between the two surveys cannot be ruled out in any accounting of the differing labor force estimates.

Data. The labor force categories used in SIPP are different from the traditional three used in the CPS. Whereas the CPS sorts the entire civilian noninstitutional population hierarchically into three mutually exclusive groups—employment, unemployment, and not in labor force—the SIPP produces more numerous and complicated categories. (See table 1.) The longer reference period in the SIPP concept permits multiple statuses (as noted earlier), a result of the design and intent of the survey. In SIPP, interest is in the strength of individuals' attachment to the job market over time in relation to their household income situation; in CPS, the interest is with measuring the labor force activities of the population at a single point in time.

Exhibit 1. Key differences between SIPP and CPS labor force concepts and survey design

Labor force concepts	Survey of Income and Program Participation	Labor force concepts	Current Population Survey
With job	• Persons who worked at a job or business in prior 1–4 months • Persons with a job or business in prior 1–4 months who did not work because of illness, vacation, bad weather, labor dispute, or personal reasons	*Employed*	• Persons who worked an hour or more for pay or profit at a job or business in prior week • Persons with a job or business in prior week who did not work because of illness, vacation, bad weather, labor dispute, or personal reasons • Persons who worked 15 hours or more without pay in a family farm or business
Looking for work or on layoff	• Persons with a job who were available for work and looking for work or on layoff at some time during the prior 1–4 months • Persons with a job or business at some time during the prior 1–4 months who did not work because of layoff or a new job was to begin in 30 days	*Unemployed*	• Persons who did not work at all in the prior week, were available for work, and looked for work some time during the prior 4 weeks • Persons who did not work at all in the prior week, were available for work, but did not work because of layoff or a new job was to begin in 30 days
No labor force activity	• Persons who neither had a job nor looked for one or was on layoff in prior 1–4 months	*Not in labor force*	• Persons who were neither employed nor unemployed during the prior week

Table 1 shows quarterly averages of SIPP labor force estimates for the third quarter 1983 through the second quarter 1984, and an average of these four quarters. According to the data, an average of 98.6 million persons had jobs for an entire month during this 1-year period, and 3.9 million had jobs for only part of the month. We have used averages of the four quarters in the SIPP and CPS labor force comparisons because they are more representative than are data for any single quarter. (Data differences between SIPP and CPS during the four-quarter period are discussed later.)

The SIPP estimates in table 1 can be collapsed into fewer categories so as to facilitate comparison with the CPS estimates. A monthly average of 102.6 million persons held jobs in the third quarter 1983 through second quarter 1984 period (98.6 million had jobs for the entire month and 3.9 million had jobs for part of the month). (See table 2.) Also an average of almost 12.0 million persons spent time looking for work or were on layoff (481,000 had jobs the entire month, but were on layoff for some of the time; 1.9 million had jobs for part of the month, but also spent time looking for work or were on layoff; and 9.5 million had no jobs during the month and spent varying amounts of time looking for work or were on layoff). Obviously, the two groups (those with jobs and those who spent time looking for jobs or were on layoff) are overlapping. Within each group there are small proportions of persons with jobs and of persons who looked for work or were on layoff.

One of the first SIPP–CPS differences that can be seen in table 2 that is *not* affected by overlapping groups involves the population covered. The civilian noninstitutional population age 16 and over (according to independently derived estimates) in the CPS was 175.3 million, while the estimate of the noninstitutional population age 16 and over (also an independent estimate) for SIPP was 171.3 million. The primary reason for the difference is that persons in farm households were excluded from the SIPP estimate. Operating in the opposite direction is the fact that military personnel

Table 1. Survey of Income and Program Participation (SIPP) labor force estimates, 1983–III through 1984–II, and average for the four quarters

(Numbers in thousands)

Labor force status	Average	1983 III	1983 IV	1984 I	1984 II
Total, 16 years and over	171,329	170,405	171,081	171,800	172,029
With some labor force activity	112,113	112,375	111,357	111,634	113,084
With job entire month	98,631	96,278	98,146	99,211	100,887
Worked each week	95,635	92,936	95,060	96,308	98,237
Full-time worker	77,398	75,523	76,244	77,522	80,303
Part-time worker	18,238	17,413	18,817	18,786	17,934
Absent 1 or more weeks[1]	2,995	3,341	3,085	2,903	2,651
Spent time on layoff	481	467	504	558	394
With job part of month	3,945	5,228	3,769	3,018	3,765
Spent time looking for work or on layoff	1,934	2,347	2,024	1,639	1,724
No job during month	9,538	10,869	9,443	9,406	8,432
Looking/layoff entire month	8,366	9,403	8,339	8,380	7,341
Looking/layoff part of month	1,172	1,466	1,104	1,025	1,091
With no labor force activity	59,216	58,029	59,724	60,166	58,945

[1]Without pay.

Exhibit 1. Continued—Key differences between SIPP and CPS labor force concepts and survey design

Survey design[1]	Survey of Income and Program Participation	Current Population Survey
Type of survey	Longitudinal	Cross-sectional, but with a longitudinal dimension
Sample areas	307	729
Sample size	28,500	59,500
Households interviewed per month	7,125	59,500
Length of time in survey	2½ years	1⅓ years
Collection mode	Personal visit	Personal visit, 35 percent; telephone, 65 percent
Respondent rule	Self; proxy interviews from responsible household member	Responsible household member answers on behalf of all members
Frequency of interview	Once every 4 months	4 consecutive months, not interviewed for 8 months, interviewed 4 more months
Number of times interviewed	Eight	Eight
Reference period	Previous 4 months	Week containing the 12th of month
When interviewed	First 2 weeks of month	Week containing the 19th of month
Average length of interview	10–15 minutes per person	5–7 minutes per person
Persons who move	Followed	Not followed
Response rate	85 percent[2]	95–96 percent

[1]Survey design differences are of the time of printing.
[2]As of the end of the fourth wave of interviewing, December 1984.

living in households within the continental United States are surveyed in SIPP but not in the CPS. (Resident Armed Forces members are, however, combined with CPS estimates for counts of total employment and labor force, based on figures provided by the Department of Defense.)

In terms of employment, SIPP found 102.6 million persons with jobs for at least part of a month, while the CPS had 103.2 million employed persons. If persons with jobs living in farm households had been included in the SIPP estimate, the resulting number would have exceeded the CPS employment estimate. In addition, the SIPP data relate to any employment within a month and not just in 1 week as in the CPS. The longer reference period in SIPP permits a greater likelihood for some employment to be captured than does the CPS.[10]

A proportionately larger difference involves persons looking for work or on layoff in SIPP versus unemployed persons in CPS. Table 2 shows that when the various looking for work/on layoff groups in SIPP are combined, there is a total of almost 12.0 million persons in this category. This figure greatly exceeds—by 28 percent—the CPS estimate of unemployment of 9.3 million. (This difference would be even greater if persons from farm households who were on layoff or looking for work were included in the SIPP estimate.) Again, because of the longer reference period in SIPP, more people who were jobseeking or on layoff over the course of an entire month are reflected in SIPP than in the CPS. For example, a person looking for a job in the first week of the month, but then employed in the second, would be counted as employed in the CPS, whereas in SIPP the weeks of unemployment and employment would both be counted. Also, the longer recall period could easily result in some "telescoping" (memory bias with respect to time) of job search, either within the period or from a prior period; it could also affect the recollection of marginal jobs, which, having gone unreported, would result in increased unemployment reporting.

Persons outside the labor force totaled 3.5 million more in CPS than in SIPP. If farm households were included in SIPP, its estimate would be closer to the CPS estimate. The longer reference period in SIPP allows more people only mildly interested in the job market to be counted as having labor force activity because there is more time for them to manifest their job interests.

The SIPP and CPS labor force estimates for the average of the four quarters extending from the third quarter 1983 through the second quarter 1984 were also compared by age-sex groups. The "with job-employment" comparison revealed that for most of the groups the estimates from both surveys probably were not different in a statistically significant sense. However, the "looking/layoff-unemployment" comparison indicated that significant differences existed and that the degree to which the SIPP estimates were higher varied by age-sex group. (See table 3.) Among men, for example, the amount of the disparity declined from about 38 percent for teenagers to 13 percent for those age 55 to 64. Among women there was no apparent pattern in the differences.

Table 2. Labor force estimates from the SIPP and the CPS, 1983–III through 1984–II average

(Numbers in thousands)

Survey of Income and Program Participation		Current Population Survey		SIPP/CPS ratio
Labor force status	Estimate	Labor force status	Estimate	
Nonnstitutional population, 16 years and over	171,329	Civilian nonnstitutional population, 16 years and over	175,301	.977
With some labor force activity	112,113	Civilian labor force	112,583	.996
With jobs[1]	102,576	Employed	103,235	.994
Spent time looking/layoff[2]	11,053	Unemployed	9,328	1.281
With no labor force activity	59,216	Not in labor force	62,738	.944

[1]Includes 4,428,000 persons who, at some time during the month, also looked for work or were on layoff or were outside the labor force.

[2]Includes 2,415,000 who also had a job for part of the month.

Accounting for the differences

To understand better how and why the labor force estimates from SIPP and CPS differ, three adjustments were made to the SIPP data, making them conceptually more similar to the CPS data. First, persons living in farm households were included in the SIPP estimates; second, members of the Armed Forces living in households on or off post were subtracted from the SIPP estimates; and third—and most importantly—only SIPP data relating to the CPS reference weeks were used.

The last adjustment was possible because labor force activities in SIPP are recorded weekly during the 4-month reference period, and thus the week containing the 12th of the month could be identified and the data tabulated.[11] An important source of difference still remained: the length of the recall period. In the CPS, of course, recall problems are at a minimum, as one is asked about activities in the previous week (or the previous 4 weeks in the case of jobseeking). In SIPP, where each interview covers 4 months, the recall period ranges from 1 week to 18 or 19 weeks. The recall bias problem, therefore, is potentially large in SIPP, particularly for identifying individual weeks where telescoping could easily occur.

These adjustments attempted to account for some of the conceptual differences between SIPP and CPS. Survey coverage became more similar. The labor force classification systems also became more similar in the sense that it was possible to fit SIPP respondents into CPS's mutually exclusive categories. And the SIPP data became averages of the same weeks as the CPS data.

Table 4 shows the results of these three adjustments.[12] Differences continue to exist with the employment, unemployment, and not in the labor force estimates. Employment was 1.2 million lower in SIPP than in the CPS—102.1 versus 103.2 million. In contrast, the unemployment estimate was 1.5 million higher, or about 16 percent greater, in SIPP than

Table 3. Persons who looked for work or were on layoff according to SIPP, and unemployed persons according to CPS, by age and sex, 1983–III through 1984–II average

(Numbers in thousands)

Sex and age	SIPP estimates	CPS estimates	SIPP-CPS ratio
Men, 16 years and over	6,835	5,313	1.286
16 to 19	1,229	899	1.362
20 to 24	1,528	1,149	1.330
25 to 34	1,957	1,516	1.291
35 to 44	980	810	1.210
45 to 54	609	511	1.192
55 to 64	429	380	1.129
65 and over	102	60	1.700
Women, 16 years and over	5,117	4,014	1.275
16 to 19	922	752	1.226
20 to 24	1,034	865	1.195
25 to 34	1,422	1,135	1.253
35 to 44	874	616	1.419
45 to 54	482	381	1.291
55 to 64	316	220	1.436
65 and over	57	46	1.239

in the CPS. (As discussed earlier, the SIPP count of persons looking for work or on layoff before these adjustments were made was 28 percent greater.) With respect to persons outside the labor force, SIPP found fewer persons than did the CPS (62.0 versus 62.7 million).

An examination of the adjusted SIPP labor force estimates for each quarter beginning with the third quarter of 1983 and ending with the second quarter of 1984 shows that for employment and unemployment, there appears to be a narrowing of differences, especially in the unemployment estimates. (See table 4.) In the third quarter of 1983, the unemployment estimates from both surveys differed by 20 percent, but then fell in each subsequent quarter. By the second quarter of 1984, the difference amounted to only 11 percent. The not-in-labor-force estimates from SIPP were below those of CPS throughout the period, although only the fourth quarter 1983 and first quarter 1984 estimates were significantly lower. The causes of this narrowing are not readily understood, but certainly the conditioning of SIPP respondents to the interview process has to be an important factor.

It should be noted that the population figures are not identical, as they should be theoretically, the SIPP figure being some 461,000 below the CPS level. This occurs because SIPP has a slightly different universe than the CPS, in that it includes persons in the military living in households. Although these persons were removed for purposes of this comparison, because of some errors in coding of such persons and other reasons, a slightly different population estimate was produced. Clearly, the difference is spread proportionately across the civilian labor force, employment, unemployment, and not in the labor force categories and thus should be taken into account in examining the SIPP–CPS labor force difference.[13]

Adjustments were made by age-sex groups in the "looking/layoff-unemployment" category. (See table 5.) Although differences were reduced in all of the age-sex groups, SIPP estimates were still greater than those for the CPS. The differences were most evident among younger men and middle-aged women.

To understand why the adjusted SIPP and CPS estimates continue to differ, many other factors would have to be accounted for besides coverage and reference period differences. These would include, for example, sample designs, nonresponse rates, training of interviewers, experience of interviewers, mode of interview, processing and estimation, questionnaires, length of recall periods, variance differences, and so on. While a comparison of such factors is outside the scope of this article, we can suggest how two of these—the questionnaires and recall periods—may account for some of the remaining difference.

The SIPP and CPS labor force questionnaires are very different. SIPP begins with a question about whether a person had a "job or business" at some time during the prior 4-month period. For persons who had jobs, subsequent questions are asked about how long they had their jobs in the reference period, whether they had been absent from them and why, and whether they looked for work or were on layoff when they did not have jobs. For persons who did not have jobs during the entire period, questions are asked if they looked for work or had been on layoff and, if so, for how long. All persons who looked for work or were on layoff are asked about their availability for work. (Exhibit 2 on page 11 contrasts relevant SIPP and CPS questions.)

In the CPS, the first question asked concerns activities during the reference week (working, looking for work, going to school, and so forth). If the respondent does not indicate "working" that week, a second question asks whether any work was performed at all. It is not until the third question, also concerning the existence of employment, that the word

Table 4. Adjusted SIPP labor force estimates and CPS labor force estimates, 1983–III through 1984–II, and average for the four quarters

(Numbers in thousands)

Labor force status	Average	1983 III	1983 IV	1984 I	1984 II
Adjusted SIPP estimates:					
Civilian noninstitutional population, 16 years and older	174,840	173,949	174,502	175,226	175,683
Civilian labor force	112,843	112,806	112,269	112,560	113,707
Employed	102,051	100,411	101,525	101,941	104,327
Unemployed	10,792	12,395	10,743	10,649	9,380
Not in the labor force	61,997	61,141	62,235	62,636	61,976
CPS estimates:					
Civilian noninstitutional population, 16 years and older	175,301	174,449	174,950	175,679	176,125
Civilian labor force	112,563	113,252	111,985	111,407	113,599
Employed	103,236	102,936	102,826	102,000	105,179
Unemployed	9,328	10,316	9,159	9,408	8,420
Not in the labor force	62,738	61,198	62,966	64,272	62,527
Adjusted SIPP/CPS ratios:					
Civilian noninstitutional population, 16 years and older	.977	.997	.997	.997	.997
Civilian labor force	1.002	.996	1.002	1.011	1.001
Employed	.989	.975	.987	.999	.992
Unemployed	1.157	1.202	1.172	1.132	1.114
Not in the labor force	.988	.999	.989	.975	.991

"job" or "business" appears. If the person had no job, the questions then focus on whether or not the person was looking for work. The looking for work questions include a query on the search methods used so as to verify that jobseeking took place.

These questionnaire differences undoubtedly contribute to the statistical differences. As indicated above, the CPS obtains more information about the possibilities of performing *any work at all* and thus should be expected to show a greater employment count. It follows that, having identified fewer people with jobs than in the CPS, SIPP can be expected to find more persons looking for work, particularly those not reporting marginal work. Also, the SIPP questions about jobseeking are less probing than in the CPS in the sense that they do not verify job search and thus can overstate unemployment to a degree.

The SIPP and CPS recall periods also are very different. As indicated earlier, CPS respondents report activities in the prior week, whereas SIPP reporting can extend up to 19 weeks, opening up the possibility for recall bias. Some research has been done in the area of recall bias in retrospective labor force questionnaires.[14] While the evidence is mixed as to the direction of the bias, one researcher found that respondents tend to overstate the amount of unemployment experienced in the immediate past and understate unemployment in the distant past (more than half a year).[15] Spells of unemployment experienced in the distant past tend to be forgotten.

Questionnaire and recall period differences, therefore, could be working hand-in-hand to cause SIPP's lower measurement of work activity and higher measurement of jobseeking relative to the CPS. And their joint effect may be especially evident among those groups who are only marginally or casually attached to the labor market. We are suggesting that many of these individuals with such marginal attachments, when interviewed in SIPP and asked the sole question about a "job or business," may reply in the negative because they feel their work activities (in the prior 4 months) did not constitute a "real" job. They may perceive a job as involving fixed working hours, a work station, or an identifiable employer who, in addition to paying a wage or salary, also provides certain fringe benefits. Moreover, they are more likely to forget jobs of comparatively short duration, especially when a long recall is involved. In the CPS, on the other hand, such individuals would very likely be enumerated as employed because there are several questions that will pin down *any* employment, including marginal jobs, and there is a short recall period. Having neglected to report marginal work in the SIPP interviews, these persons would most likely report that they were looking for work at some time in the prior 4-month period, especially because they had found odd jobs in their job search.

Table 5. Ratios of adjusted SIPP estimates of persons looking for work or on layoff to CPS unemployment estimates by age and sex, 1983–III through 1984–II average

Sex and age	SIPP estimates	CPS estimates	SIPP-CPS ratio
Men, 16 years and over	6,182	5,313	1.164
16 to 19	1,135	889	1.278
20 to 24	1,360	1,149	1.210
25 to 34	1,721	1,516	1.135
35 to 44	662	610	1.101
45 to 54	566	511	1.092
55 to 64	387	380	1.018
65 and over	59	58	1.030
Women, 16 years and over	4,610	4,014	1.149
16 to 19	829	752	1.102
20 to 24	652	695	1.077
25 to 34	1,282	1,135	1.130
35 to 44	784	616	1.273
45 to 54	464	391	1.192
54 to 64	282	229	1.232
65 and over	46	46	1.043

Future research

Clearly, this has only been a preliminary examination of the differences in the labor force estimates obtained from SIPP and CPS. Coverage and reference period differences in both surveys were examined as sources of the disparate estimates and did indeed help account for differences. In addition, questionnaire and recall period differences were considered as additional sources for the remaining discrepancies in the estimates. What direction should future research take?

As discussed, the possible sources of the SIPP–CPS labor force differences are numerous. A full fledged examination of each and every difference between the two surveys would encompass the subjects raised in a 1978 volume of the Department of Commerce, *An Error Profile: Employment as Measured by the Current Population Survey*.[16] But such an examination may be a long way off because SIPP is still in its infancy, and there is much yet to be learned about the survey itself. The full effect of the SIPP operation on the data has yet to be studied: How much bias stems from the long recall period? Does the amount of time taken to conduct an interview affect respondents' answers? To what extent is rotation group bias (or time-in-sample bias) present in the data? Although a survey research agenda has been established, topics await investigation. In addition, as SIPP matures, fundamental changes may be made, for example, in the estimating procedure or the questionnaire (small changes are being planned for the labor force questions in the 1986 panel) which might affect the data. In other words, SIPP is in a "settling-in" process during which changes in some labor force estimates may simply be a reflection of internal changes. Consequently, any rigorous examination of SIPP and CPS labor force estimates may be some years off.

Even after the SIPP is as fully integrated and stabilized as the CPS, differences in labor force estimates may still remain unexplained. Differences may result from the purposes of the two surveys. For example, given SIPP's emphasis on program participation, respondents who report the receipt of government transfer payments may be more likely to

Exhibit 2. Extract of questions from SIPP and CPS questionnaires measuring labor force activity

Survey of Income and Program Participation		Current Population Survey
With job		***Employed***
1. During the 4-month period outlined on this calendar,[1] that is, from . . . thru . . . did . . . have a job or business, either full time or part time, even for only a few days?	5a. Was . . . absent without pay from . . .'s job or business for any FULL weeks during the 4-month period?	19. What was . . . doing most of LAST WEEK—working or doing something else? If "something else" in 19, ask 20. 20. Did . . . do any work LAST WEEK, not counting work around the house? If "no" to 20, ask 21.
4. Did . . . have a job or business, either full or part time, during EACH of the weeks in this period?	6a. Please look at the calendar.[1] In which weeks did . . . have a job or business?	21. Did . . . have a job or business from which he/she was temporarily absent or on layoff LAST WEEK?
Looking for work or on layoff		***Unemployed***
If "no" in 1, ask 2a.	After 6a, ask 6b.	If "yes" in 21, ask 21a.
2a. Even though . . . did not have a job during this period, did . . . spend any time looking for work or on layoff from a job? If "yes" in 2a, ask 2b.	6b. Of those weeks that . . . had a job or business, was . . . absent from work for any full weeks without pay? If "yes" in 6b, ask 6c.	21a. Why was . . . absent from work LAST WEEK? (Unemployed if reply is "layoff" or "waiting to start new job within 30 days.")
2b. Please look at the calendar[1]. In which weeks was . . . looking for work or on layoff from a job?	6c. In which weeks was . . . absent without pay?	If "no" in 21, ask 22.
2c. Could . . . have taken a job during any of those weeks if one had been offered? If "yes" in 5a, ask 5b.	6d. What was the main reason . . . was absent from . . .'s job or business during those weeks? (Looking for work or on layoff if reply is "layoff" or "new job to begin within 30 days.")	22. Has . . . been looking for work during the past 4 weeks? If "yes" in 22, ask 22a.
5b. Please look at the calendar.[1] In which weeks was . . . absent without pay?	7a. I have marked that there were some weeks in this period in which . . . did NOT have a job or business. During that week or weeks did . . . spend any time looking for work or on layoff? If "yes" in 7a, ask 7b.	
5c. What was the main reason . . . was absent from . . .'s job or business during those weeks? (Looking for work or on layoff if reply is "layoff" or "new job to begin within 30 days.")	7b. In which of those weeks was . . . looking for work or on layoff from a job?	22a. What has . . . been doing in the last 4 weeks to find work?
	7c. Could . . . have taken a job during those weeks if one had been offered?	22e. Is there any reason why . . . could not take a job LAST WEEK?

[1]The SIPP interviewer shows the respondent a calendar containing the 4-month reference period with each week identified numerically.

indicate job search to justify their participation, even when search did not take place.[17]

All of this, of course, reemphasizes the preliminary nature of this study. In all likelihood, it will be many years before a better understanding of the relationship between SIPP and CPS labor force data can be achieved. In the meantime, the prudent use of these data should be as they were originally intended: SIPP's as information for interpreting income and program participation and CPS's as a measure of current labor market activity. □

FOOTNOTES

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[1] See *Economic Characteristics of Households in the United States: Third Quarter 1983, Current Population Reports*, Series P-70, No. 1 (Bureau of the Census, 1984). Subsequent reports in the same series are: No. 2, February 1985; No. 3, April 1985; and No. 4, May 1985.

[2] For an overview of the SIPP, see Roger Herriot and Daniel Kasprzyk, "The Survey of Income and Program Participation," *Proceedings of the American Statistical Association 1984, Social Statistics Section* (Washington, American Statistical Association, 1985), pp. 107–16.

[3] For a history of the Current Population Survey, see John E. Bregger, "The Current Population Survey: a historical perspective and BLS' role," *Monthly Labor Review*, June 1984, pp. 8–14.

[4] The most recent review was conducted in the late 1970's. See *Counting the Labor Force*, National Commission on Employment and Unemployment Statistics (U.S. Government Printing Office, 1979).

[5] Sample persons are not followed when they have been institutionalized, entered the Armed Forces, moved outside the United States, or moved more than 100 miles from a SIPP sampling area.

[6] This average time per interview does not include the time spent on the questions contained in special "modules." The subjects of these modules vary from interview to interview; in the third wave, for example, questions were asked about health and disability, work history, and education.

[7] *SIPP Interviewer's Manual*, (Census Bureau, 1983). For a detailed examination of SIPP and CPS labor force concepts, see Paul M. Ryscavage, "SIPP and CPS Labor Force Concepts: A Comparison," *Proceedings of the American Statistical Association 1984, Social Statistics Section* (Washington, American Statistical Association, 1985), pp. 523–28.

[8] See, for example, Ellen Sehgal, "Work experience in 1983 reflects the effects of the recovery," *Monthly Labor Review*, December 1984, pp. 18–24.

[9] For a discussion of the potential bias arising from nonresponse, see *The Current Population Survey: Design and Methodology*, Technical Paper 40 (Census Bureau, 1978), pp. 82–83.

[10] This is similar conceptually to the difference between March CPS work experience data and the data for the March reference week. (Clearly, however, many more people are employed some time over the course of a year than for a single month.)

[11] Actually, the reference period cannot be completely replicated in the month furthest from the SIPP interview. For example, for SIPP interviews conducted in November 1983 that had a July-to-October reference period, any jobseeking conducted in the last 2 weeks of June would be captured in the CPS reference period for July but not in the SIPP-adjusted reference period.

[12] The impact of *only* the coverage differences on the SIPP estimates was calculated for the third quarter of 1983. As shown below, when this was done, these SIPP labor force estimates became higher than the original SIPP estimates.

	SIPP	Adjusted SIPP (coverage only)	CPS
Civilian labor force	112.375	114.413	113.252
Employed	101.506*	103.427*	102.936
Unemployed	13.683*	13.869*	10.316
Not in labor force	58.029	59.534	61.198

*Both categories overlap to some extent.

[13] Adjusting for these differences does not materially alter the unemployment difference but causes the SIPP civilian labor force estimate to be nearly 600,000 above the comparable CPS estimate (instead of 280,000), the employment estimate to be about 900,000 lower (instead of 1.2 million), and the SIPP not-in-the-labor-force estimate to be within 600,000 of the CPS estimate (instead of 740,000).

[14] See Richard D. Morgenstern and Nancy S. Barrett, "The Retrospective Bias in Unemployment Reporting by Sex, Race, Age," *Journal of the American Statistical Association*, June 1974, pp. 355–57, and Francis W. Horvath, "Forgotten unemployment: recall bias in retrospective data," *Monthly Labor Review*, March 1982, pp. 40–43.

[15] See Horvath, "Forgotten unemployment."

[16] *Statistical Policy Working Paper 3* (Department of Commerce, Office of Federal Statistical Policy and Standards, 1978).

[17] See 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.