THE SURVEY OF INCOME AND
PROGRAM PARTICIPATION

SIPP LABOR FORCE TRANSITIONS: PROBLEMS AND PROMISES

No. 21

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Survey of Income and Program Participation

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by

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INTRODUCTION

Modern neoclassical approaches to labor markets frequently emphasize dynamic processes rather than static ones. The dynamic view of unemployment, for example, stresses labor turnover in understanding disequilibrium in labor markets (Robert E. Hall, 1972). Job instability, spells of unemployment, the flow of workers into and out of unemployment are some of the aspects of the dynamic view. Empirical research in this area (and others with a dynamic orientation) is usually based on longitudinal panel surveys which record the labor force transitions, or changes in labor force status, of persons over time. Unfortunately, longitudinal surveys are not numerous because they are expensive and difficult to conduct. The primary sources of labor force transition data, for example, have been the National Longitudinal Surveys, the Panel Survey of Income Dynamics, and the longitudinal subfiles from the Current Population Survey (CPS).

To this list may soon be added another longitudinal panel survey: the Survey of Income and Program Participation (SIPP). SIPP is conducted by the U.S. Bureau of the Census and is designed to collect information on the economic situation of households and persons. An important component of this survey is the questions about labor force activity. The data obtained from these questions, along with the data on income and participation in government transfer income programs, will provide researchers with a new data base for analyzing labor markets and labor force behavior.

The purpose of this paper is to introduce to potential SIPP users the survey's labor force transition data. We do so by critically examining some of the first transition data collected during the second half of 1983 and first half

of 1984. The paper begins with a discussion of SIPP labor force concepts and its labor force classification system. Aggregate data on labor force transitions contained in SIPP reports are also examined. 1/ The second section of the paper addresses some of the problems that have been discovered in the micro-level transition data, with special attention paid to response bias. Our paper's last section illustrates one of the many potential uses of the SIPP transition data by focusing on the dynamics of unemployment for White and Black men.

I. SIPP Labor Force Measurement

SIPP is a large longitudinal survey and it is complicated. 2/ It began in October 1983 when persons living in one-quarter of the 20,000 households of the SIPP sample were interviewed. The remaining three-quarters of the sample were interviewed in November, December, and January. In other words, the sample is divided into four rotation groups of equal size and it takes 4 months to interview the entire sample--commonly called a "wave" of interviewing (see diagram 1). Subsequent interviewing waves are carried out in the same rotation pattern for about 8 or 9 waves. Consequently, sample members are interviewed about 8 or 9 times (every 4 months) over a period of 2 1/2 years. SIPP was also designed to be a continuous longitudinal survey in that additional panels of households are added each year to the survey. In 1985, for example, 13,500 households were added in the February-May period and a similar increase will take place in 1986. The overlap of SIPP panels, of course, increases SIPP's sample size.

1/ See Economic Characteristics of Households in the United States: Third Quarter 1983, Current Population Reports, Series P-70, No. 1 (Bureau of of the Census, 1984). Subsequent reports in the same series: No. 2, February 1985; No. 3, April 1985; No. 4, May 1985; and No. 5, October 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.

The reference period for which data are collected in each interview is the previous 4 months (see diagram 1). Respondents answer questions about income sources and amounts and their program participation (if any) for each of the months in the reference period. Labor force activity, however, is reported on a week-by-week basis for each of the months in the reference period. Depending on the responses to the labor force questions for each month, it is possible to assign each sample member 16 years of age and over an employment status recode, or ESR, which summarizes their labor force activities in a month. There are eight ESR's: 3/

ESR	Description
1 -	With job entire month, worked all weeks.
2 -	With job entire month, missed 1 or more weeks, but not because of a layoff.
3 -	With job entire month, missed 1 or more weeks because of a layoff.
4 -	With job part of month, but not because of a layoff or looking for work.
5 -	With job part of month, some time spent on layoff or looking for work.
6 -	No job in month, spent entire month on layoff or looking for work.
7 -	No job in month, spent part of month on layoff or looking for work.
8 -	No job in month, no time spent on layoff or looking for work.

ESR's 3, 4, 5, and 7 contain more than one labor force status in the conventional sense of being employed, unemployed, or not in the labor force, because labor force activity is being measured across time and not at a point in time. ESR's 1, 2, 6, and 8 contain only one labor force status.

3/ The ESR's are encoded on each individual's file record. Labor force status in each week of the 4-month reference period is also contained on the record. The ESR's, therefore, are only summaries of labor force activity in a specific month.

Table 1 shows the published labor force estimates from SIPP based on the ESR's for the period from the third quarter of 1983 to the second quarter of 1984. They are monthly averages of each quarter and relate to persons in nonfarm households. The published classification system categorizes persons with some labor force activity into three major groups on the basis of whether they held a job or not: persons with a job the entire month; persons with a job part of the month; and persons with no job during the month. Within these groups persons may have been on layoff, looking for work, or outside the labor force. The fourth major group consists of persons who neither had a job nor looked for one in the month.

An average of the quarterly labor force estimates in the last column of table 1 shows that persons with a job for an entire month averaged 98.6 million, while persons with a job for part of a month averaged about 3.9 million. The table also provides an estimate of persons who experienced a change in labor force status in an average month. This estimate is obtained by adding together the following groups: persons who had a job the entire month, but spent some time on layoff; persons who had a job part of the month; and persons who had no job, but either looked for work or were on layoff sometime during the month (this is equivalent to adding together persons with ESR's 3, 4, 5, and 7 on the SIPP file). Over these four quarters, an average of 5.6 million persons a month changed their labor force status; this represents an average transition rate of 3.3 percent for the total nonfarm population, age 16 and over. If we consider only those persons with a job for all or part of the month and who also experienced a layoff or looked for work, then the SIPP estimate of the movement between employment and unemployment (and vice versa) was 2.4 million or 1.4 percent.

We should be clear what the average labor force transition estimate is and is not. It is the average number of persons who changed their labor force status (at least once) in a month over the second half of 1983 and first half of 1984. It is not the average number of transitions occurring in the period. The average number of transitions is much higher because individuals may have had more than one change in labor force status during the month. Consider the person who loses his or her job at the beginning of the month, looks for another, and finds one at month's end. The SIPP labor force category implies only one transition when in fact two have occurred.

The SIPP transition rate is also conceptually different from a labor turnover rate. A person may have changed employers during a month without any intervening period of unemployment or time spent outside the labor force. Labor turnover measures would typically record this change as a job separation (quit) and job accession (new hire); in the SIPP labor force transition data, no status change would be recorded. 4/

As is well known, gross flow data can be derived from the CPS as part of the monthly enumeration of the labor force (approximately three-fourths of the CPS sample is common month-to-month). According to the CPS, in 1982 the amount of change in labor force statuses between two consecutive months averaged 8.0 percent of the civilian noninstitutional population 16 years of age and over (13.8 million persons) (U.S. Bureau of Labor Statistics, 1983). Persons moving between employment and unemployment (and vice versa) totaled 4.3 million according to the CPS gross flow data. Levels of employment and unemployment from the two surveys are not exactly comparable, however, because of conceptual and methodological differences (Paul M. Ryscavage and John E. Bregger, 1985).

4/ In SIPP, however, we do know if a job change occurred because the names of employers are recorded as part of the basic information collected each

While the aggregate SIPP estimates of labor force status change are of interest, the usefulness of transition data is more fully realized at the microlevel of analysis. That is, what is really valuable is the direction of changes, the characteristics of the persons experiencing the changes, and the circumstances surrounding them. Before examining one possible use of the transition data, however, we discuss some problems that have been discovered with them.

II. Intra- and Inter-Wave Transitions

Careful study of SIPP's sample design reveals that in any two consecutive months, three-fourths of the sample respondents will have furnished information for those 2 months from the same interview (see diagram 1). Labor force transitions taking place in this portion of the sample are called intra-wave transitions. The remaining quarter of the sample respondents, however, will have supplied information for those 2 months from two different interviews. Transitions observed in this portion of the sample are called inter-wave transitions because they have occurred between waves.

Researchers at the Census Bureau have discovered that for certain types of income (e.g., unemployment compensation, food stamps, private pensions) rates of transition in recipiency differed considerably between the portion of the sample whose responses came from the same interview (intra-wave) and the portion whose responses came from different interviews (inter-wave) (Dan Burkhead and John Coder, 1985). Inter-wave transition rates were higher than intra-wave transition rates. This differential response is cause for concern since each rotation group is supposed to be representative of the population. Respondent recall error and questionnaire design were suggested as the primary causes of the different transition rates.

We have investigated labor force transitions in both portions of the SIPP sample over the September 1983 to April 1984 period--a period containing seven month-to-month experiences. Table 2 contains average transition rates based on intra- and inter-wave transition data by a number of characteristics. These rates have been calculated from unweighted data, unlike those discussed in section I. The average month-to-month transition rate in the inter-wave part of the sample was 13.1 percent compared to 7.2 percent in the intra-wave part. 5/ Differential response in the labor force transition data, therefore, is present just as it was in the income recipiency data.

Despite the different transiton rates, both intra- and inter-wave data confirm, a priori, our knowledge of labor force transition behavior. Change in labor force activity is greater for those groups with high rates of unemployment and other labor market problems. For example, rates of transition for teenagers, Blacks, and persons of Spanish origin are higher than those for adult men and women and Whites. Transition rates from both portions of the sample also reflected a negative relationship between labor force status change and household income.

But what causes the differential rates of transition between the two portions of the sample? Table 3 displays two eight-by-eight matrices of the ESR's in months t and t-1 of the September 1983 to April 1984 period. One matrix is derived from the portion of the sample reflecting information from two interviews (inter-wave data), and the other from the portion of the sample containing information from only one interview (intra-wave data). As shown by comparing the data in the diagonal of each matrix, smaller percentages of the inter-

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5/ These transition rates were calculated by first summing persons classified in ESR's 1, 2, 6, and 8 in both months and then dividing that sum by all persons. The result gives the proportion of the sample that did not change their labor force status; subtracting this from 1.00 yields the rate of transition.

wave sample are found in the same ESR's from one month to the next relative to the intra-wave sample. For example, 52.1 percent of the persons reported working at a job the entire month (ESR 1) compared to 53.7 percent in the intra-wave sample; only 2.3 percent of the inter-wave sample was looking for work or on layoff (ESR 6) compared to 4.0 percent; and 32.3 percent was outside the labor force (ESR 8) as compared to 34.4 percent. In other words, persons in the inter-wave portion of the sample systematically reported less month-to-month stability in labor force categories. While the differences are not large, it should be remembered that the amount of change taking place in the labor force from month-to-month is not large regardless of which portion of the sample is being examined.

Larger percentages of the inter-wave sample are found in different ESR's from one month to the next than is the case in the intra-wave sample. Again, while these differences are not large they do account for much of the overall difference in the transition rates between both segments of the SIPP sample. For example, in the inter-wave sample, a larger proportion of the persons employed in month t-1 reported that in month t they were either outside the labor force--1.3 vs. 0.1 percent--or unemployed--0.6 vs. 0.1 percent. Similarly, a larger proportion of those unemployed in t-1 said they were outside the labor force in t--1.1 vs. 0.1 percent, and a greater proportion of those who were outside the labor force in t-1 told SIPP interviewers that in t they had a job the entire month--1.2 vs. 0.1 percent--or were unemployed the whole month--1.1 vs. 0.1 percent.

The ESR's, or labor force categories, responsible for much of the overall transition rate difference are shown below:

ESR's (in percent)	Inter-wave	Intra-wave	Difference
No change	86.9	92.8	-5.9
1 to 1	52.1	53.7	-1.5
2 to 2	0.2	0.7	-0 5
6 to 6	2.3	4.0	-1.7
8 to 8	32.3	34.4	-2.1
Change	13.1	7.2	5.9
1 to 8	1.3	0.1	1.2
1 to 6	0.6	0.1	0.5
6 to 8	1.1	0.1	1.0
8 to 1	1 2	0.1	1.1
8 to 6	1.1	0.1	1.0
All others	7.8	6.7	1.1

In an effort to understand these disparate labor force behavior patterns in presumably self-representing portions of the SIPP sample, we can take two approaches: first, we can speculate why the transition data in the inter-wave sample might be biased upward; and second, why the transition data in the intra-wave sample might be biased downward.

For any 2 consecutive months, the labor force information contained in the inter-wave portion of the sample is based on two interviews. Using the September-October 1983 period as an example, the data for September are based on the first interview of the survey (conducted in October); respondents had to only think back approximately 2 to 6 weeks about their weekly labor force statuses. For October, however, respondents supplied information from the second interview (conducted in February) but now had to think back 15 to 18 weeks about their weekly labor force statuses in October (see diagram 1). Response error due to faulty recall in the second interview is more likely than in the first. The problem of faulty recall in reporting unemployment

durations in 2 consecutive months of CPS sampling has been investigated recently (Norman Bowers and Francis Horvath, 1984).

On the other hand, transition data in the intra-wave portion of the sample might be biased downward. Transition data here come from only one interview, so an individual's month-to-month labor force activity is reconstructed in one moment of time. The recall period of the intra-wave sample varies by rotation groups. Again, using the September to October period as an example, the recall period in rotation 2 would be 2 to 10 weeks; rotation 3, 6 to 14 weeks; and rotation 4, 10 to 18 weeks. Respondents might be forgetting periods of labor force status change in the reference period, thereby reporting an exaggerated amount of labor force status stability.

More research needs to be undertaken in determining the nature of the bias. For example, some of the differences in transition rates may be due to the imputation procedures used in adjusting the data for item nonresponse, or they may be due to the inconsistent responses given by proxy and self-respondents. In the interim, it might be possible to reduce the difference in labor force transition rates by two very modest changes to interviewer procedures and questionnaire design. First, in all rotation groups of the SIPP sample, interviewers might remind their respondents about what they reported as their labor force status in the last month of the previous reference period. Second, interviewers could ask respondents to search their memories carefully when they indicate that only one status was maintained throughout the 4-month reference period.

Other problems are found in the SIPP labor force transition data. Some of these have previously been discussed in connection with SIPP labor force data

in general (Martin David, 1984). One of the most serious is "left censoring." Labor force events occurring before the start of the first wave's reference period are not captured. That is, for someone who, upon entering the reference period, is unemployed, there is currently no way of finding out when that spell of unemployment began. Design changes in the survey have been studied and with the start of the 1986 panel (in February 1986) some "event dating" before the reference period will be tried.

SIPP labor force estimates also contain peculiarities which might make certain transition analyses problematic. For example, little information is obtained on what persons are doing outside the labor force (e.g., keeping house, in school, retired) or why they became unemployed (e.g., lost a job, quit, re-entered the labor force). Despite the abundance of other economic and demographic information, the absence of these elemental pieces of data will limit some research.

III. A Closer Look at Intra-Wave Transitions

The potential analytical uses of SIPP labor force transition data are numerous. In this section we use SIPP labor force transition data to summarize a few dynamic aspects of labor force behavior among Black and White men. We use only the first wave of SIPP data in this exercise which serves to illustrate only one potential application of the data.

As diagram 1 shows, the data from the first wave of SIPP are based on only one interview. Any transitions in labor force status are, therefore, intra-wave transitions. Parts of this data set span the entire period from June to December 1983 and the full sample is represented only in September. For example, data from the first rotation group relate to the June to September 1983 period

while data from the fourth rotation relate to the September to December 1983 period. This contrasts with the data discussed in section II which related to a specific time period (September 1983 to April 1984).

Another difference between the data discussed in section II and section III is that here transitions are observed on a week-by-week basis and not summarized as with the ESR's. It is possible, therefore, in any given week to classify persons into three mutually exclusive labor force statuses: "employment" (E), the individual had a job but may have been absent from work; "unemployment" (U), the individual was on layoff or looking for work; and "not in the labor force" (N), the individual did not have a job and was neither looking for work nor on layoff that week.

We have tabulated the labor force status "patterns" of White and Black men during the June to December 1983 period. 6/ This is possible since we know each individual's labor force status in every week. Because multiple statuses are possible over this period of time, persons could be categorized into 1 of 7 possible labor force status patterns as shown in table 4. Four of the patterns contain transitions: EU, EN, UN, and EUN (the statuses in each pattern are not necessarily in the order of occurrence). These four patterns, together with the three reflecting no labor force transitions (E, U, N), represent summaries of labor force behavior over time.

6/ Conventional labor force transition analyses typically show transition probabilities of individuals between the labor force statuses of E, U, and N in a three-by-three matrix across two points in time, usually a month. This convention is primarily due to the data base that is generally used in these analyses: the monthly CPS. These analyses also are frequently concerned with explaining differences in reported unemployment rates for various population groups (Marston, 1976). Since our purpose here is to illustrate the behavioral patterns of Black and White men using SIPP labor force transition data, we decided to present labor force transition patterns even though transition probabilities can be calculated from the data.

A primary comparison of interest involves the larger proportion of White men who were employed throughout the period relative to Black men, regardless of age. Our estimates show that White men have more employment stability than Black men--69.2 vs. 53.0 percent--and the other labor force status patterns explain why. If we look at the labor force patterns of U and N, we find that Black men were more likely than White men to be unemployed or out of the labor force for all the weeks in the period. Only small differences were observed in the EU, EN, UN, and EUN groups--20.6 percent of the Black men were in these labor force status patterns compared to 17.0 percent of the White men.

Although transition differences by race were not particularly evident across age groups, differences did exist in some specific transition categories. A much larger proportion of the Black teenagers (13.6 percent) were classified in the UN category than was the case for White teenagers (5.0 percent); on the other hand, a smaller proportion of Black teenagers (12.0 percent) were found in the EN category compared to White teenagers (19.8 percent). Similar differences were noted between Black and White young men. 7/

The SIPP labor force data can be combined in other ways to yield further summarizing information about labor force behavior. For example, the number of spells in a particular status, as well as durations spent in that status, can be calculated. In table 5 we focus on transitions that involve completed short-term unemployment spells and their outcomes for Black and White men. Our data, of course, relate to only 17- or 18-week periods and, therefore, the estimates are for only those men who actually completed spells of unemployment in the period. As shown in the text table, 30 percent of the

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7/ For some groups in the population, the distinction between being unemployed and not in the labor force is ambiguous because the "looking for work" concept is not seemingly relevant. See Kim B. Clark and Lawrence H. Summers (1979) for a discussion of this point.

White men and 44 percent of the Black men were unemployed for the full period and excluded from our calculations. A second group that was excluded consisted of men whose spells of unemployment were "censored"; that is, individuals who either entered (left censored) and/or exited (right censored) the SIPP reference period unemployed, thereby making it impossible to determine their lengths of unemployment spells. Almost 48 percent of the White men and approximately 36 percent of the Black men fell into this category. The third group--the group which is the subject of table 5--is composed of men who actually began and ended spells of unemployment in the reference periods. Roughly equal proportions of Black and White men (around 20 percent) had completed spells of unemployment, the outcomes of which could be observed in the period.

Groups	White men	Black men
Persons with some unemployment (000)	8,156	1,917
Percent	100.0	100.0
Persons with one continuous spell throughout	30.3	44.1
Persons with censored spells	47.9	35.8
Persons with completed spells	21.9	20.1

Table 5 shows that the average duration of a completed spell of unemployment for both races was identical--2.7 weeks. (It must be remembered that significant proportions of White and Black men with unemployment had censored spells and these averages would be larger if the second and third wave of SIPP were included in the analysis). Furthermore, the data suggest that there was no important difference in the frequency of unemployment spells for Black and White men. This also seemed to be the case for the average time spent unemployed for both groups of men.

While the observed racial differences relating to completed spells of short-term unemployment are inconsequential, more striking differences exist concerning

the outcomes of these unemployment spells. That is, does an unemployment spell end with a job or a withdrawal from the labor force, for whatever the reason? According to the SIPP data, about 38 percent of the Black men's spells of unemployment ended with a job, while the comparable proportion for White men was 67 percent; that means 62 percent of the Black men's unemployment spells ended by dropping out of the labor force compared to 33 percent for White men. Even though short-term unemployment spells tended, at first glance, to be similar for Black and White men, examination of their outcomes suggest a radically different experience.

Thus, combining the weekly reported labor force statuses in various ways, we can summarize labor force behavior of individuals across time. We have combined this information to categorize behavior patterns as well as calculate the number of unemployment spells, their durations, and the proportions of the spells that either ended in employment or a withdrawal from the labor force. This has allowed comparisons of labor force experiences of subgroups in the population.

Utilization of additional waves of the SIPP would enhance one's ability to describe labor force behavior over time. It would reduce the effect of censoring on the calculated results. However, it would also complicate analyses because of the inter- and intra-wave transition differences described in section II. The existence of a larger number of reported labor force changes occurring at the "seams" of the reference periods suggests that calculated status durations, like those above, are biased by reporting errors. If the timing of changes in labor force status are misreported, then the calculations of the amount of time spent in a status are not correct. Obviously, further research addressing this problem must be done before full advantage can be taken of the information reported over the 2 1/2 years of the life of the SIPP panels.

The primarily descriptive application of the labor force transition data discussed in this paper illustrates the problems and promises of the SIPP. The important problems include the differences in inter- and intra-wave transitions and censored data. But there is also much promise. Indeed, we have included only a small portion of the detailed labor force information collected. The SIPP also gathers information about income from a wide variety of sources, ownership of many types of assets, changes in household and family composition, as well as personal history information about health and disability, work, and education. This information lends itself to many areas of labor market research as was alluded to earlier. For example, studies about interpersonal differences in wages and labor supply could be conducted, theories about segmented labor markets could be tested, and hazard modelling techniques could be applied to the data (Kathleen S. Short and Karen A. Woodrow, 1985). In short, SIPP data will open many new avenues of research for micro-level dynamic analyses.

REFERENCES

Burkhead, Dan and John Coder. "Gross Changes in Income Recipiency from the Survey of Income and Program Participation," Proceedings of the American Statistical Association, Social Statistics Section, 1985 (forthcoming).

Bowers, Norman and Francis Horvath. "Keeping Time: An Analysis of Errors in the Measurement of Unemployment Duration," Journal of Business and Economic Statistics, April 1984, Vol. 2, No. 2, pp. 140-149.

Clark, Kim B. and Lawrence H. Summers. "Labor Market Dynamics and Unemployment: A Reconsideration," Brookings Papers on Economic Activity 1:1979, pp. 13-60.

David, Martin. "Discussion," Proceedings of the American Statistical Association, Social Statistics Section, 1984, 534-36.

Hall, Robert E. "Turnover in the Labor Force," Brookings Papers on Economic Activity 3: 1972, pp. 709-745.

Herriot, Roger and Daniel Kasprzyk. "The Survey of Income and Program Participation," Proceedings of the American Statistical Association, Social Statistics Section, 1984, 107-16.

Marston, Stephen T. "Employment Instability and High Unemployment Rates," Brookings Papers On Economic Activity 1: 1976, pp. 169-210.

Ryscavage, Paul M. and John E. Bregger. "New Household Survey and the CPS: A Look at Labor Force Differences," Monthly Labor Review, September 1985, pp. 3-12.

Short, Kathleen S. and Karen A. Woodrow. "An Exploration of the Applicability of Hazard Models in Analyzing the Survey of Income and Program Participation: Labor Force Transitions," Proceedings of the American Statistical Association, Social Statistics Section, 1985, (forthcoming).

U.S. Bureau of the Census. Economic Characteristics of Households in the United States (No's 1 to 5). Washington, D.C.: 1984-85.

U.S. Bureau of Labor Statistics. Gross Flows in the Labor Force, 1980-82. National Technical Information Service, Washington, D.C.: November 1983.

Diagram 1. SIPP's sample design--first three waves of the 1984 panel

		3Q83		4Q83			1Q84			2Q84				
Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	1	1	1	*										
	2	2	2	2	*									
		3	3	3	3	*								
			4	4	4	4	*							
				1	1	1	1	*						
Rotation groups					2	2	2	2	*					
						3	3	3	3	*				
							4	4	4	4	*			
								1	1	1	1	*		
									2	2	2	2	*	
										3	3	3	3	*

Wave 1

Wave 2

Wave 3

* Month in which a rotation group is interviewed

NOTE: This diagram does not show the other six waves of the 1984 panel.

Table 1. Monthly average of SIPP labor force estimates, third quarter 1983 to second quarter 1984, and average of the four quarters

(in thousands)

Labor force status	3Q83	4Q83	1Q84	2Q84	Average
Total, 16 years and over	170,405	171,081	171,800	172,029	171,329
With some labor force activity	112,375	111,357	111,634	113,084	112,113
With job entire month	96,278	98,146	99,211	100,887	98,631
Spent time on layoff	467	504	558	394	481
With job part of month	5,228	3,769	3,018	3,765	3,945
Spent time looking for work or on layoff	2,347	2,024	1,639	1,724	1,945
No job during month	10,869	9,443	9,406	8,432	9,538
Looking/layoff entire month	9,403	8,339	8,380	7,341	8,366
Looking/layoff part of month	1,466	1,104	1,025	1,091	1,172
With no labor force activity	58,029	59,724	60,166	58,945	59,216
Persons with labor force transitions	7,161	5,377	4,601	5,250	5,598
As a percent of total population	4.2	3.1	2.7	3.1	3.3

Note: Estimates are for the nonfarm noninstitutional population.

Table 2. Month-to-month inter-and intra-wave labor force transition rates by selected characteristics, September 1983 to April 1984 average (percent)

Characteristics	Inter-wave	Intra-wave
Total 16 years and over	13.1	7.2
RACE AND SPANISH ORIGIN		
Whites	12.5	7.0
Blacks	18.1	8.5
Spanish origin	17.2	8.5
AGE AND SEX		
Both sexes, 16 to 19	29.0	13.7
Men, 20 years and over	11.3	6.4
Women, 20 years and over	11.9	6.6
HOUSEHOLD INCOME		
Less than $1000	18.1	9.3
$1,000 to 1,999	13.4	7.2
$2,000 to 2,999	11.6	6.4
$3,000 to 3,999	9.9	5.9
$4,000 and over	10.0	5.8

NOTE: Rates based on unweighted sample counts.

Table 3. Employment status recodes in current month (t) and previous month (t-1) for inter-wave and intra-wave portions of SIPP sample, September 1983-April 1984 average (percent)

ESR's-Previous month (t-1)	Total	ESR's-Current month (t) 1	2	3	4	5	6	7	8
INTER-WAVE									
Total	100.0	56.4	1.1	0.3	0.6	0.7	4.6	0.4	35.8
1	55.5	52.1	0.8	0.2	0.2	0.3	0.6	-	1.3
2	1.4	1.0	0.2	-	-	-	0.1	-	.2
3	0.3	0.2	-	-	-	-	-	-	-
4	1.2	0.5	-	-	0.1	-	0.1	-	0.5
5	1.2	0.6	-	-	-	0.1	0.3	-	0.1
6	4.5	0.7	-	-	-	0.2	2.3	0.1	1.1
7	0.6	0.1	-	-	-	-	0.2	0.1	0.3
8	35.2	1.2	0.1	-	0.2	0.1	1.1	0.2	32.3
INTRA-WAVE									
Total	100.0	55.6	1.5	0.3	1.0	1.1	4.6	0.7	35.2
1	55.6	53.7	0.8	0.2	0.3	0.4	0.1	-	0.1
2	1.4	0.7	0.7	-	-	-	-	-	-
3	0.3	0.1	-	0.2	-	-	-	-	-
4	0.9	0.3	-	-	0.2	-	-	-	0.4
5	1.0	0.4	-	-	-	0.2	0.3	-	-
6	4.8	0.2	-	-	-	0.4	4.0	0.1	0.1
7	0.7	-	-	-	-	-	0.1	0.3	0.3
8	35.3	0.1	-	-	0.4	-	0.1	0.3	34.4

- Less than 0.05

NOTE: Percentages based on unweighted sample estimates.

Table 4. Labor force transition patterns of Black and White men by age based on SIPP's first wave (intra-wave data)

(percent)

Age and race	Total	E	U	N	EU	EN	UN	EUN
BLACK MEN								
Total	100.0	53.0	10.8	15.5	7.0	6.9	4.2	2.5
16 to 19	100.0	11.3	12.0	35.9	10.7	12.0	13.6	4.5
20 to 24	100.0	43.3	11.8	13.5	11.2	6.7	8.5	4.9
25 to 54	100.0	65.0	11.8	7.9	5.7	6.4	1.5	1.7
55 to 64	100.0	55.4	3.1	32.9	3.2	3.9	1.0	0.5
WHITE MEN								
Total	100.0	69.2	3.9	9.9	6.6	7.8	1.3	1.3
16 to 19	100.0	30.2	6.1	24.8	10.1	19.8	5.0	3.8
20 to 24	100.0	58.3	6.0	7.6	11.1	12.3	2.4	2.3
25 to 54	100.0	79.9	3.5	3.9	6.0	5.3	0.6	0.8
55 to 64	100.0	60.9	2.2	27.2	2.5	6.2	0.6	0.3

NOTE: Percentages based on weighted sample estimates.

E - Employment
U - Unemployment
N - Not in labor force

Table 5. Unemployment characteristics of Black and White men with completed spells of unemployment in SIPP's first wave (intra-wave data)

Characteristics	Black Men	White Men
Average duration of completed spells (wks.)	2.7	2.7
Average number of spells per person	1.7	1.4
Average amount of time spent unemployed (wks.)	4.4	3.9
Proportion of spells ending with E (percent)	37.5	67.1
Proportion of spells ending with N (percent)	62.5	32.9

E - Employment
N - Not in labor force

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SIPP LABOR FORCE TRANSITIONS: PROBLEMS AND PROMISES

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SIPP LABOR FORCE TRANSITIONS: PROBLEMS AND PROMISES

Modern neoclassical approaches to labor markets frequently emphasize dynamic processes rather than static ones. The dynamic view of unemployment, for example, stresses labor turnover in understanding disequilibrium in labor markets (Robert E. Hall, 1972). Job instability, spells of unemployment, the flow of workers into and out of unemployment are some of the aspects of the dynamic view. Empirical research in this area (and others with a dynamic orientation) is usually based on longitudinal panel surveys which record the labor force transitions, or changes in labor force status, of persons over time. Unfortunately, longitudinal surveys are not numerous because they are expensive and difficult to conduct. The primary sources of labor force transition data, for example, have been the National Longitudinal Surveys, the Panel Survey of Income Dynamics and the longitudinal subfiles from the Current Population Survey (CPS).

To this list may soon be added another longitudinal panel survey: the Survey of Income and Program Participation (SIPP). SIPP is conducted by the U.S. Bureau of the Census and is designed to collect information on the economic situation of households and persons. An important component of this survey is the questions about labor force activity. The data obtained from these questions, along with the data on income and participation in government transfer income programs, will provide researchers with a new data base for analyzing labor markets and labor force behavior.

The purpose of this paper is to introduce to potential SIPP users the survey's labor force transition data. We do so by critically examining

some of the first transition data collected during the second half of 1983 and first half of 1984. The paper begins with a discussion of SIPP labor force concepts and its labor force classification system. Aggregate data on labor force transitions contained in SIPP reports are also examined. 1/ The second section of the paper addresses some of the problems that have been discovered in the micro-level transition data, with special attention paid to response bias. Our paper's last section illustrates one of the many potential uses of the SIPP transition data by focusing on the dynamics of unemployment for white and black men.

I. SIPP Labor Force Measurement

SIPP is a large longitudinal survey and it is complicated. 2/ It began in October 1983 when persons living in one-quarter of the 20,000 households of the SIPP sample were interviewed. The remaining three-quarters of the sample were interviewed in November, December, and January. In other words, the sample is divided into four rotation groups of equal size and it takes four months to interview the entire sample--commonly called a "wave" of interviewing (see Diagram 1). Subsequent interviewing waves are carried out in the same rotation pattern for about 8 or 9 waves. Consequently, sample members are interviewed about 8 or 9 times (every 4 months) over a period of 2 1/2 years. SIPP was also designed to be a continuous longitudinal survey in that additional panels of households are added each year to the survey. In 1985, for example, 13,500 households were added in the February-May period and a similar increase will take place in 1986. The overlap of SIPP panels, of course, increases SIPP's sample size.

1/ See Economic Characteristics of Households in the United States: Third Quarter 1983, Current Population Reports, Series P-70, No. 1 (Bureau of of the Census, 1984). Subsequent reports in the same series are: No. 2, February 1985, No. 3, April 1985; No. 4, May 1985; and No. 5, October 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.

The reference period for which data are collected in each interview is the previous four months (see Diagram 1). Respondents answer questions about income sources and amounts and their program participation (if any) for each of the months in the reference period. Labor force activity, however, is reported on a week-by-week basis for each of the months in the reference period. Depending on the responses to the labor force questions for each month, it is possible to assign each sample member 16 years of age and over an employment status recode, or ESR, which summarizes their labor force activities in a month. There are eight ESR's: 3/

ESR	Description
1 -	With job entire month, worked all weeks.
2 -	With job entire month, missed 1 or more weeks, but not because of a layoff.
3 -	With job entire month, missed 1 or more weeks because of a layoff.
4 -	With job part of month, but not because of a layoff or looking for work.
5 -	With job part of month, some time spent on layoff or looking for work.
6 -	No job in month, spent entire month on layoff or looking for work.
7 -	No job in month, spent part of month on layoff or looking for work.
8 -	No job in month, no time spent on layoff or looking for work.

ESR's 3, 4, 5, and 7 contain more than one labor force status in the conventional sense of being employed, unemployed, or not in the labor force, because labor force activity is being measured across time and not at a point in time. ESR's 1, 2, 6, and 8 contain only one labor force status.

3/ The ESR's are encoded on each individual's file record. Labor force status in each week of the four month reference period is also contained on the record. The ESR's, therefore, are only summaries of labor force activity in a specific month.

Table 1 shows the published labor force estimates from SIPP based on the ESR's for the period from the third quarter of 1983 to the second quarter of 1984. They are monthly averages of each quarter and relate to persons in nonfarm households. The published classification system categorizes persons with some labor force activity into three major groups on the basis of whether they held a job or not: Persons with a job the entire month; persons with a job part of the month; and persons with no job during the month. Within these groups persons may have been on layoff, looking for work, or outside the labor force. The fourth major group consists of persons who neither had a job nor looked for one in the month.

An average of the quarterly labor force estimates in the last column of Table 1 shows that persons with a job for an entire month averaged 98.6 million, while persons with a job for part of a month averaged about 3.9 million. The table also provides an estimate of persons who experienced a change in labor force status in an average month. This estimate is obtained by adding together the following groups: persons who had a job the entire month, but spent some time on layoff; persons who had a job part of the month; and persons who had no job, but either looked for work or were on layoff sometime during the month (this is equivalent to adding together persons with ESR's 3, 4, 5, and 7 on the SIPP file). Over these four quarters, an average of 5.6 million persons a month changed their labor force status; this represents an average transition rate of 3.3 percent for the total nonfarm population, age 16 and over. If we consider only those persons with a job for all or part

of the month and who also experienced a layoff or looked for work, then the SIPP estimate of the movement between employment and unemployment (and vice versa) was 2.4 million or 1.4 percent.

We should be clear what the average labor force transition estimate is and is not. It is the average number of persons who changed their labor force status (at least once) in a month over the second half of 1983 and first half of 1984. It is not the average number of transitions occurring in the period. The average number of transitions is much higher because individuals may have had more than one change in labor force status during the month. Consider the person who loses his or her job at the beginning of the month, looks for another, and finds one at month's end. The SIPP labor force category implies only one transition when in fact two have occurred.

The SIPP transition rate is also conceptually different from a labor turnover rate. A person may have changed employers during a month without any intervening period of unemployment or time spent outside the labor force. Labor turnover measures would typically record this change as a job separation (quit) and job accession (new hire); in the SIPP labor force transition data no status change would be recorded. 4/

As is well known, gross flow data can be derived from the CPS as part of the monthly enumeration of the labor force (approximately three-fourth of the CPS sample is common month-to-month). According to the CPS, in 1982 the amount of change in labor force statuses between two consecutive months averaged 8.0 percent of the civilian noninstitutional population 16 years of age and over (13.8 million persons) (U.S. Bureau of Labor Statistics, 1983).

4/ In SIPP, however, we do know if a job change occurred because the names of employers are recorded as part of the basic information collected each month.

Persons moving between employment and unemployment (and vice versa) totaled 4.3 million according to the CPS gross flow data. Levels of employment and unemployment from the two surveys are not exactly comparable, however, because of conceptual and methodological differences (Paul M. Ryscavage and John E. Bregger, 1985).

While the aggregate SIPP estimates of labor force status change are of interest, the usefulness of transition data is more fully realized at the micro-level of analysis. That is, what is really valuable is the direction of changes, the characteristics of the persons experiencing the changes, and the circumstances surrounding them. Before examining one possible use of the transition data, however, we discuss some problems that have been discovered with them.

II. Intra- and Inter-Wave Transitions

Careful study of SIPP's sample design reveals that in any two consecutive months, three-fourths of the sample respondents will have furnished information for those two months from the same interview (see Diagram 1). Labor force transitions taking place in this portion of the sample we call intra-wave transitions. The remaining quarter of the sample respondents, however, will have supplied information for those two months from two different interviews. Transitions observed in this portion of the sample are called inter-wave transitions because they have occurred between waves.

Researchers at the Census Bureau have discovered that for certain types of income (e.g., unemployment compensation, food stamps, private pensions), rates of transition in recipiency differed considerably between the portion of the sample whose responses came from the same interview (intra-wave) and the portion whose responses came from different interviews (inter-wave) (Dan Burkhead and John Coder, 1985). Inter-wave transition rates were higher than intra-wave transition rates. This differential response is cause for concern since each rotation group is supposed to be representative of the population. Respondent recall

error and questionnaire design were suggested as the primary causes of the different transition rates.

We have investigated labor force transitions in both portions of the SIPP sample over the September 1983 to April 1984 period--a period containing seven month-to-month experiences. Table 2 contains average transition rates based on intra- and inter-wave transition data by a number of characteristics. These rates have been calculated from unweighted data, unlike those discussed in Section I. The average month-to-month transition rate in the inter-wave part of the sample was 13.1 percent compared to 7.2 percent in the intra-wave part. 5/ Differential response in the labor force transition data, therefore, is present just as it was in the income recipiency data.

Despite the different transiton rates, both intra- and inter-wave data confirm, a priori, our knowledge of labor force transition behavior. Change in labor force activity is greater for those groups with high rates of unemployment and other labor market problems. For example, rates of transition for teenagers, blacks, and persons of Spanish origin are higher than those for adult men and women and whites. Transition rates from both portions of the sample also reflected a negative relationship between labor force status change and household income.

But what causes the differential rates of transition between the two portions of the sample? Table 3 displays two eight-by-eight matrices of the ESR's in months t and t-1 of the September 1983-April 1984 period. One matrix is derived from the portion of the sample reflecting information from two interviews (inter-wave data), and the other from the portion of the sample containing information from only one interview (intra-wave

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5/ These transition rates were calculated by first summing persons classified in ESR's 1, 2, 6, and 8 in both months and then dividing that sum by all persons. The result gives the proportion of the sample that did not change their labor force status; subtracting this from 1.00 yields the rate of transition.

data). As shown by comparing the data in the diagonal of each matrix, smaller percentages of the inter-wave sample are found in the same ESR's from one month to the next relative to the intra-wave sample. For example, 52.1 percent of the persons reported working at a job the entire month (ESR 1) compared to 53.7 percent in the intra-wave sample; only 2.3 percent of the inter-wave sample was looking for work or on layoff (ESR 6) compared to 4.0 percent, and 32.3 percent was outside the labor force (ESR 8) as compared to 34.4 percent in the intra-wave sample. In other words, persons in the inter-wave portion of the sample systematically reported less month-to-month stability in labor force categories. While the differences are not large, it should be remembered that the amount of change taking place in the labor force from month-to-month is not large regardless of which portion of the sample is being examined.

Larger percentages of the inter-wave sample are found in different ESR's from one month to the next than is the case in the intra-wave sample. Again, while these differences are not large they do account for much of the overall difference in the transition rates between both segments of the SIPP sample. For example, in the inter-wave sample, a larger proportion of the persons employed in month t-1 reported that in month t they were either outside the labor force--1.3 vs. 0.1 percent--or unemployed--0.6 vs. 0.1 percent. Similarly, a larger proportion of those unemployed in t-1 said they were outside the labor force in t--1.1 vs. 0.1 percent; and a greater proportion of those who were outside the labor force in t-1 told SIPP interviewers that in t they had a job the entire month--1.2 vs. 0.1 percent--or were unemployed the whole month--1.1 vs. 0.1 percent.

The ESR's, or labor force categories, responsible for much of the overall transition rate difference are shown below:

ESR's (in percent)	Inter-wave	Intra-wave	Difference
No change	86.9	92.8	-5.9
1 to 1	52.1	53.7	-1.5
2 to 2	0.2	0.7	-0 5
6 to 6	2.3	4.0	-1.7
8 to 8	32.3	34.4	-2.1
Change	13.1	7.2	5.9
1 to 8	1.3	0.1	1.2
1 to 6	0.6	0.1	0.5
6 to 8	1.1	0.1	1.0
8 to 1	1 2	0.1	1.1
8 to 6	1.1	0.1	1.0
All others	7.8	6.7	1.1

In an effort to understand these disparate labor force behavior patterns in presumably self-representing portions of the SIPP sample, we can take two approaches: First, we can speculate why the transition data in the inter-wave sample might be biased upward, and second, why the transition data in the intra-wave sample might be biased downward.

For any two consecutive months, the labor force information contained in the inter-wave portion of the sample is based on two interviews. Using the September-October 1983 period as an example, the data for September are based on the first interview of the survey (conducted in October); respondents had to only think back approximately 2 to 6 weeks about their weekly labor force statuses. For October, however, respondents supplied information from the second interview (conducted in February) but now had to think back 15 to 18 weeks about their weekly labor force statuses in October (see Diagram 1). Response error due to faulty recall in the second interview is more likely than in the first. The problem of faulty recall in reporting unemployment durations in two consecutive months of CPS sampling has been investigated recently (Norman Bowers and Francis Horvath, 1984).

On the other hand, transition data in the intra-wave portion of the sample might be biased downward. Transition data here come from only one interview, so an individual's month-to-month labor force activity is reconstructed in one moment of time. The recall period of the intra-wave sample varies by rotation groups. Again, using the September-October period as an example, the recall period in rotation 2 would be 2 to 10 weeks, rotation 3, 6 to 14 weeks, and rotation 4, 10 to 18 weeks. Respondents might be forgetting periods of labor force status change in the reference period, thereby reporting an exaggerated amount of labor force status stability.

More research needs to be undertaken in determining the nature of the bias. For example, some of the differences in transition rates may be due to the imputation procedures used in adjusting the data for item nonresponse; or they may be due to the inconsistent responses given by proxy and self-respondents. In the interim, it might be possible to reduce the difference in labor force transition rates by two very modest changes to interviewer procedures and questionnaire design. First, in all rotation groups of the SIPP sample, interviewers might remind their respondents about what they reported as their labor force status in the last month of the previous reference period. Second, interviewers could ask respondents to search their memories carefully when they indicate that only one status was maintained throughout the four month reference period.

Other problems are found in the SIPP labor force transition data. Some of these have previously been discussed in connection with SIPP labor force data in general (Martin David, 1984). One of the most serious is "left censoring." Labor force events occurring before the start of the first wave's reference period are not captured. That is, for someone who, upon entering the reference

period, is unemployed, there is currently no way of finding out when that spell of unemployment began. Design changes in the survey have been studied and with the start of the 1986 panel (in February 1986) some "event dating" before the reference period will be tried.

SIPP labor force estimates also contain peculiarities which might make certain transition analyses problematic. For example, little information is obtained on what persons are doing outside the labor force (e.g., keeping house, in school, retired) or why they became unemployed (e.g., lost a job, quit, re-entered the labor force). Despite the abundance of other economic and demographic information, the absence of these elemental pieces of data will limit some research.

III. A Closer Look at Intra-Wave Transitions

The potential analytical uses of SIPP labor force transition data are numerous. In this section we use SIPP labor force transition data to summarize a few dynamic aspects of labor force behavior among black and white men. We use only the first wave of SIPP data in this exercise which serves to illustrate only one potential application of the data.

As Diagram 1 shows, the data from the first wave of SIPP are based on only one interview. Any transitions in labor force status are, therefore, intra-wave transitions. Parts of this data set span the entire period from June to December 1983 and the full sample is represented only in September. For example, data from the first rotation group relate to the June-September 1983 period while data from the fourth rotation relate to the September-December 1983 period. This contrasts with the data discussed in Section II which related to a specific time period (September 1983 to April 1984).

Another difference between the data discussed in Section II and Section III is that here transitions are observed on a week-by-week basis and not summarized as with the ESR's. It is possible, therefore, in any given week to classify persons into three mutually exclusive labor force statuses: "employment"

(E), the individual had a job but may have been absent from work; "unemployment" (U), the individual was on layoff or looking for work; and "not in the labor force" (N), the individual did not have a job and was neither looking for work nor on layoff that week.

We have tabulated the labor force status "patterns" of white and black men during the June-December 1983 period. 6/ This is possible since we know each individual's labor force status in every week. Because multiple statuses are possible over this period of time, persons could be categorized into 1 of 7 possible labor force status patterns as shown in Table 4. Four of the patterns contain transitions: EU, EN, UN, and EUN (the statuses in each pattern are not necessarily in the order of occurrence). These four patterns, together with the three reflecting no labor force transitions (E, U, N), represent summaries of labor force behavior over time.

A primary comparison of interest involves the larger proportion of white men who were employed throughout the period relative to black men, regardless of age. Our estimates show that white men have more employment stability than black men--69.2 vs. 53.0 percent--and the other labor force status patterns explain why. If we look at the labor force patterns of U and N, we find that black men were more likely than white men to be unemployed or out of the labor force for all the weeks in the period. Only small differences were observed in the EU, EN, UN, and EUN groups--20.6 percent of the black men were in these labor force status patterns compared to 17.0 percent of the white men.

6/ Conventional labor force transition analyses typically show transition probabilities of individuals between the labor force statuses of E, U, and N in a three-by-three matrix across two points in time, usually a month. This convention is primarily due to the data base that is generally used in these analyses: the monthly CPS. These analyses also are frequently concerned with explaining differences in reported unemployment rates for various population groups (Marston, 1976). Since our purpose here is to illustrate the behavioral patterns of black and white men using SIPP labor force transition data, we decided to present labor force transition patterns even though transition probabilities can be calculated from the data.

Although transition differences by race were not particularly evident across age groups, differences did exist in some specific transition categories. A much larger proportion of the black teenagers (13.6 percent) were classified in the UN category than was the case for white teenagers (5.0 percent); on the other hand, a smaller proportion of black teenagers (12.0 percent) were found in the EN category compared to white teenagers (19.8 percent). Similar differences were noted between black and white young men. 7/

The SIPP labor force data can be combined in other ways to yield further summarizing information about labor force behavior. For example, the number of spells in a particular status, as well as durations spent in that status, can be calculated. In Table 5 we focus on transitions that involve completed short-term unemployment spells and their outcomes for black and white men. Our data, of course, relate to only 17 or 18 week periods and, therefore, the estimates are for only those men who actually completed spells of unemployment in the period. As shown in the text table, 30 percent of the white men and 44 percent of the black men were unemployed for the full period and excluded from our calculations. A second group that was excluded consisted of men whose spells of unemployment were "censored," that is, individuals who either entered (left censored) and/or exited (right censored) the SIPP reference period unemployed, thereby making it impossible to determine their lengths of unemployment spells. Almost 48 percent of the white men and approximately 36 percent of the black men fell into this category. The third group--the group which is the subject of Table 5--is composed of men who actually began and ended spells of unemployment in the reference periods. Roughly equal proportions of black and white men (around 20 percent) had completed spells of unemployment, the outcomes of which could be observed in the period.

7/ For some groups in the population, the distinction between being unemployed and not in the labor force is ambiguous because the "looking for work" concept is not seemingly relevant. See Kim B. Clark and Lawrence H. Summers (1979) for a discussion of this point.

Groups	White men	Black men
Persons with some unemployment (000)	8,156	1,917
Percent	100.0	100.0
Persons with one continuous spell throughout	30.3	44.1
Persons with censored spells	47.9	35.8
Persons with completed spells	21.9	20.1

Table 5 shows that the average duration of a completed spell of unemployment for both races was identical--2.7 weeks. (It must be remembered that significant proportions of white and black men with unemployment had censored spells and these averages would be larger if the second and third wave of SIPP were included in the analysis). Furthermore, the data suggest that there was no important difference in the frequency of unemployment spells for black and white men. This also seemed to be the case for the average time spent unemployed for both groups of men.

While the observed racial differences relating to completed spells of short-term unemployment are inconsequential, more striking differences exist concerning the outcomes of these unemployment spells. That is, does an unemployment spell end with a job or a withdrawal from the labor force, for whatever the reason? According to the SIPP data, about 38 percent of the black men's spells of unemployment ended with a job, while the comparable proportion for white men was 67 percent; that means 62 percent of the black men's unemployment spells ended by dropping out of the labor force compared to 33 percent for white men. Even though short-term unemployment spells tended, at first glance, to be similar for black and white men, examination of their outcomes suggest a radically different experience.

Thus, combining the weekly reported labor force statuses in various ways, we can summarize labor force behavior of individuals across time. We have combined this information to categorize behavior patterns as well as calculate

the number of unemployment spells, their durations, and the proportions of the spells that either ended in employment or a withdrawal from the labor force. This has allowed comparisons of labor force experiences of subgroups in the population.

Utilization of additional waves of the SIPP would enhance one's ability to describe labor force behavior over time. It would reduce the effect of censoring on the calculated results. However, it would also complicate analyses because of the inter-and intra-wave transition differences described in Section II. The existence of a larger number of reported labor force changes occurring at the "seams" of the reference periods suggests that calculated status durations, like those above, are biased by reporting errors. If the timing of changes in labor force status are misreported then the calculations of the amount of time spent in a status are not correct. Obviously, further research addressing this problem must be done before full advantage can be taken of the information reported over the 2 1/2 years of the life of the SIPP panels.

The primarily descriptive application of the labor force transition data discussed in this paper illustrates the problems and promises of the SIPP. The important problems include the differences in inter-and intra-wave transitions and censored data. But there is also much promise. Indeed, we have included only a small portion of the detailed labor force information collected. The SIPP also gathers information about income from a wide variety of sources, ownership of many types of assets, changes in household and family composition, as well as personal history information about health and disability, work, and education. This information lends itself to many areas of labor market research as was alluded to earlier. For example, studies about interpersonal differences in wages and labor suply could be conducted, theories about segmented labor markets could be tested, and hazard modeling techniques could be applied to the data (Kathleen S. Short and Karen A. Woodrow, 1985). In short, SIPP data will open many new avenues of research for micro-level dynamic analyses.

REFERENCES

Burkhead, Dan and Coder, John, "Gross Changes in Income Recipiency from the Survey of Income and Program Participation," Proceedings of the American Statistical Association, 1985, Social Statistics Section (forthcoming).

Bowers, Norman and Horvath, Francis, "Keeping Time: An Analysis of Errors in the Measurement of Unemployment Duration," Journal of Business and Economic Statistics, April 1984, Vol. 2, No. 2, pp. 140-149.

Clark, Kim B. and Summers, Lawrence H., "Labor Market Dynamics and Unemployment: A Reconsideration," Brookings Papers on Economic Activity 1:1979, pp. 13-60.

David, Martin, "Discussion," Proceedings of the American Statistical Association, 1984, Social Statistics Section, Washington, 534-36.

Hall, Robert E., "Turnover in the Labor Force," Brookings Papers on Economic Activity 3: 1972, pp. 709-745.

Herriot, Roger and Kasprzyk, Daniel, "The Survey of Income and Program Participation," Proceedings of the American Statistical Association, 1984, Social Statistics Section, Washington, 107-16.

Marston, Stephen T., "Employment Instability and High Unemployment Rates," Brookings Papers On Economic Activity 1: 1976, pp. 169-210

Ryscavage, Paul M. and Bregger, John E., "New Household Survey and the CPS: A Look at Labor Force Differences," Monthly Labor Review, September 1985 pp. 3-12.

Short, Kathleen S. and Woodrow, Karen A., "An Exploration of the Applicability of Hazard Models in Analyzing the Survey of Income and Program Participation: Labor Force Transitions," Proceedings of the American Statistical Association, 1985, Social Statistics Section (forthcoming).

U.S. Bureau of the Census, Economic Characteristics of Households in the United States, (No's 1 to 5), Washington, 1984-85.

U.S. Bureau of Labor Statistics, Gross Flows in the Labor Force, 1980-82, National Technical Information Service, Washington, November 1983.

Table 4. Labor force transition patterns of black and white men by age based on SIPP's first wave (intra-wave data)

(percent)

Age and race	Total	E	U	N	EU	EN	UN	EUN
BLACK MEN								
Total	100.0	53.0	10.8	15.5	7.0	6.9	4.2	2.5
16 to 19	100.0	11.3	12.0	35.9	10.7	12.0	13.6	4.5
20 to 24	100.0	43.3	11.8	13.5	11.2	6.7	8.5	4.9
25 to 54	100.0	65.0	11.8	7.9	5.7	6.4	1.5	1.7
55 to 64	100.0	55.4	3.1	32.9	3.2	3.9	1.0	0.5
WHITE MEN								
Total	100.0	69.2	3.9	9.9	6.6	7.8	1.3	1.3
16 to 19	100.0	30.2	6.1	24.8	10.1	19.8	5.0	3.8
20 to 24	100.0	58.3	6.0	7.6	11.1	12.3	2.4	2.3
25 to 54	100.0	79.9	3.5	3.9	6.0	5.3	0.6	0.8
55 to 64	100.0	60.9	2.2	27.2	2.5	6.2	0.6	0.3

NOTE: Percentages based on weighted sample estimates.

E - Employment

U - Unemployment

N - Not in labor force

Table 5. Unemployment characteristics of black and white men with completed spells of unemployment in SIPP's first wave (intra-wave data)

Characteritics	Black men	White men
Average duration of completed spells (wks.)	2.7	2.7
Average number of spells per person	1.7	1.4
Average amount of time spent unemployed (wks.)	4.4	3.9
Proportion of spells ending with E (percent)	37.5	67.1
Proportion of spells ending with N (percent)	62.5	32.9

E - Employment

N - Not in labor force

TO:	FROM:
Dr. Bruce Klein (523-1821) U.S. Bureau of Labor Statistics GAO Building, Room 2486 441 G Street, N.W. Washington, DC 20212	Dr. Daniel Kasprzyk Office of the Chief Population Division Bureau of the Census Washington, DC 20233
1. Scheduled hand delivery [XX] Morning [ ] Afternoon	2. Special hand delivery [ ] URGENT – Deliver no later than _____ a.m. p.m. today Project No. 34-1451
Signature of Administrative Liaison: Nancy C. Hope Date: 1/10/86	Signature of Division Chief: — Date: —

3. Justification for hand delivery in lieu of using the mails

Needs information for upcoming meeting.

FORM BC-63 (8-1-80) PRES. BY A.M. CH. K17

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From: CDE::CAIN
To: PSLA::MCMILLEN
Subj: Memo for Kasprzyk

Please pass this along to Dan Kasprzyk. Thanks.
TO: Dan Kasprzyk, Roger Herriot\\
FROM: Glen Cain\\
SUBJECT: Referee Report on ``SIPP Labor Force Transitions...''

The Ryscavage-Short (RS) paper, ``SIPP Labor Force Transitions: Problems and Promises,'' is billed as an introduction to what SIPP offers for labor force analysis, and it achieves this purpose very well. We can see that for the analysis of labor force transitions and as a panel survey, SIPP is much superior to the CPS. The authors explain the survey's design, discuss the wording and content of the questionnaire, and give examples of applying the data to some issues about labor markets. I have no expertise on design or questionnaire content, so I will concentrate on the applications.

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1. Consider the issue of errors in reports of transitions. The authors show that interwave transitions are about double those of the intrawave. The interwave excess is plausibly related to memory faults. The reasons for the claim that the intrawave understates transitions is not so clear to me. RS say that ``Respondents might be forgetting periods of labor force status change in the reference period, thereby reporting an exaggerated amount of labor force stability.'' But, as I understand the survey, the respondents are asked about labor force status, per se, so why should stability be exaggerated? Actually, I can think of a reason, which is that respondents know or soon learn that if they do not give an answer that indicates a change, they will be asked fewer questions. But I do not think that this is what RS have in mind, and I am not sure what the response ``mechanism'' is that produces the exaggeration they claim.

2. Assuming for convenience that the discrepancy between the interwave and intrawave measures of change are errors, we see that the errors are much higher for blacks than whites. The reader needs some help in interpreting this. Is it correct to think that the error component in

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the measure of change is really higher for blacks, and that their ``true'' transition differences compared to whites are closer to those

shown in the intrawave measure? Or are the labor force status categories more ambiguous for blacks than whites to begin with?

3. My general reaction to the authors' tabulations on transitions is mainly that I need to have some basis for comparison to be able to interpret the results. Unfortunately, a lot of interesting comparisons are not available at this time. For example, how does some ''average rate of transition'' vary over the long run of many years? over the shorter run of the business cycle? How about its seasonality, which could be investigated with these data?

4. One comparison that appears starkly clear is that which reinforces the much discussed and disturbing differences in the labor force status of black and white male youth. For example:

\item If we lump unemployment and NLF statuses together, we see

that the ''permanent'' unemployment and ''permanent'' NLF sums are 62 percent

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for blacks and 36 percent for whites.

\item We need schooling status to better interpret these results, but it is unlikely that taking this into account would improve the racial gap in economic well being implied by these data. My general point is that I wish the authors would provide more in the way of context and commentary on issues and comparisons like the above.

5. It is too early to use these data to provide much analysis of behavioral change in response to policies, but I believe this is one of the principal motives for the creation of SIPP. Thus, I would have welcomed some descriptive guidance about what SIPP offers for the following type of questions. How does labor force status and the change in labor force status relate to:

\item welfare programs, unemployment insurance, disability and the receipt of disability payments (of which there are several types), and with the amounts of transfer payments received from these programs?

\item schooling status?

\item marital dissolutions and changes in household

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composition, particularly in relation to prolonged unemployment and NLF statuses?

At the meetings in New York when I raised point 5, Ryscavage responded by denying an obligation to ''tell other labor economists how to analyze these sorts of questions.'' But my request was only that the authors inform the readers of what data are available in SIPP to pursue these sorts of questions. The paper does not do this.

In summary, the paper serves the useful purpose of introducing SIPP to labor market analysts and of whetting our appetites for the potentialities of this rich source. A little more in the way of interpretations, context, and commentary, along the lines indicated above, would have made for a more lively paper.

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