THE SURVEY OF INCOME AND PROGRAM PARTICIPATION

THE SEAM EFFECT IN SIPP'S LABOR FORCE DATA: DID THE RECESSION MAKE IT WORSE?

No. 180

P. Ryscavage
Census Bureau

U. S. Department of Commerce BUREAU OF THE CENSUS

THE SEAM EFFECT IN SIPP'S LABOR FORCE DATA: DID THE
RECESSION MAKE IT WORSE?

by

Paul Ryscavage
U.S. Bureau of the Census

I.   Introduction

        The seam effect is a well-known phenomenon associated with longitudinal surveys, such
as the Survey of Income and Program Participation (SIPP). The "seam" derives its name from the
abutment of consecutive survey reference periods, about which survey enumerators collect
various kinds of information in interviews. The "seam effect" is observed when the information
collected for the end of one reference period (based on one interview) is compared to the
information collected for the beginning of the next reference period (based on another interview).
Survey researchers have found that there is a tendency for a greater amount of change in
information to be reported at the seams of reference periods than within reference periods.

        In the context of SIPP, in which reference periods consist of four months, the seam effect
has been observed and documented in SIPP's labor force, income, and program participation data
(e.g., Martini, 1989; Burkhead and Coder, 1985; Marquis and Moore, 1990). Changes are over-
reported in status (such as participation in the Food Stamp program or a labor force activity) and
amounts (such as the value of Food Stamps) for a pair of months at the seam of the reference
period. In this case data have been obtained from two different interviews. Changes are under-
reported, however, in such data items for a pair of months not at the seam of the reference
periods. In this case the data are obtained from only one interview.

        The impact of the seam effect on SIPP cross-sectional estimates, however, may be small
because of SIPP's sample design (Jabine et al, 1990). In any two consecutive months, over-
reporting of changes and under-reporting of changes may tend to cancel each other out. This is
because only one-fourth of the SIPP sample would have provided data items in two separate
interviews while three-fourths of the sample would have provided data items in only one
interview.[1] Indeed, some who have evaluated research in the area of program participation have
suggested as much (Singh, Weidman, Shapiro, 1989).

        This research has been corroborated to some extent by a recent examination of particular
cross-sectional estimates from SIPP panels placed in the field by the Census Bureau during the
1980's (Ryscavage, 1992a). Many of the cross-sectional estimates tracked benchmark data with
some consistency. With respect to labor force estimates, SIPP estimates showed strong increases
in employment and sharp decreases in unemployment during the 1980's. In fact, an analysis of the
SIPP labor force data from the 1990 panel, which covers the downturn in economic activity that
began in mid-1990, indicated a similar deterioration in the labor market as did data from the

Bureau of Labor Statistics' (BLS) Current Population Survey (CPS) (Ryscavage, 1992b).

Much less is known about the impact of the seam effect on SIPP's longitudinal data, other than it has an obvious effect on longitudinal measures such as gross flows, transition rates, and duration estimates. But its presence in the data has been monitored almost exclusively with data from SIPP panels fielded during the 1980's, a period of robust economic growth.[2] During this period, economic events were influencing particular longitudinal changes in unique ways, ways which would be consistent with what SIPP cross-sectional estimates were indicating. In the 1990-91 period, however, the economic events changed and presumably so did their influence on longitudinal changes (this no doubt occurred since SIPP's cross-sectional estimates reflected a weakening economy). The question becomes, then, given the change in economic climate and the differences in longitudinal flows, what happened to the seam effect? Is the seam effect responsive to changes in the business cycle or is it immune?

In this paper, an attempt is made to answer these questions in the context of SIPP labor force data. Labor force data, of course, are very sensitive to changes in the business cycle. The paper is organized as follows: In Section II the conceptual argument behind the above questions is further elaborated; in Section III a discussion of the SIPP data files used to address the questions is provided; Section IV contains the empirical results of the investigation; and in Section V, the implications of the empirical findings are discussed.

II.   Why Might the Seam Effect Vary With the Business Cycle

If we consider the seam effect in the context of labor force activity it would be intuitive to assume that it is the result of "multiple" seam effects arising from the different labor force transitions that can occur between two periods of time. Consider that labor force activity can be classified at a point in time into three mutually exclusive statuses: employed (E), unemployed (U), and not in the labor force (N). Between two points in time, t and t + 1, a variety of transitions in these statuses are possible, as is depicted in the matrix below: [3]

Time (t + 1)

Time (t)	Employed	Unemployed	Not in labor force
Employed	EE	EU	EN
Unemployed	UE	UU	UN
Not in labor force	NE	NU	NN

Six changes in labor force status are possible between these two time periods. Theoretically, in periods of economic expansion when employment is increasing and unemployment decreasing, the UE and NE transitions would exceed the EU and EN transitions since the stock of employed persons is rising and stock of unemployed persons is falling; in periods of economic contraction the reverse situation would prevail.

When transition rates such as these were estimated by Martini (1989) using SIPP data from the 1984 and 1985 panels, some relevant facts were revealed: First, transition rates varied and the rates from U to E and U to N were considerably higher than all other estimated transitions; second, all transition rates occurring at the seams of SIPP's reference periods were much higher than those occurring within reference periods; and third, and most importantly, the relationships between transition rates measured at the seams of reference periods and within reference periods varied. With respect to this last point, while the UE rate at the seam was almost twice as large as that within the reference period, the UN transition was around six or seven times greater at the seam then within the reference period and the NU rate was four or five times higher at the seam. This latter finding indicates that for whatever the reason or reasons, some labor force transitions are more likely to be "heaped" at the seams of reference periods than others. Therefore, shifts in the pattern of labor force flows, provoked by changing labor market conditions alone, could affect the seam phenomenon.

An example may further clarify this point. Imagine a tiny economy composed of 100 workers and a SIPP-like survey that produces a seam effect on the inflow and outflow of workers. Further, consider that employment is growing and that the inflow-outflow of jobs has the following pattern as recorded in SIPP:

Month-to-Month Transitions

GROWING	Total jobs	1->2	2->3	3->4	4->1	% at Seam
Net jobs	100	108	116	124	130	
Inflow	50	10	10	10	20	40%
Outflow	20	2	2	2	14	70%

In this example, of the 50 inflow transitions, 40 percent were caught at the seam but of the 20 outflow transitions, 70 percent were reported at the seam. Of all the transitions, therefore, 49 percent (34/70 x 100) took place at the seam. Now consider a declining economy with a different inflow-outflow pattern but with the same probabilities that the transitions will be observed at the seam:

Month-to-Month Transitions

DECLINING	Total jobs	1->2	2->3	3->4	4->1	% at Seam
Net jobs	100	99	98	97	70	
Inflow	20	4	4	4	8	40%
Outflow	50	5	5	5	35	70%

Here we see net jobs declining by 30 workers and the same proportion of inflow and outflow transitions being caught at the seam. BUT because the inflow-outflow pattern of jobs has changed, the proportion of all transitions being reported at the seam (the "seam effect") rises to 61 percent (43/70 x 100).

This oversimplified example (designed to be consistent with Martini's findings), of course, suggests that the seam effect would be much higher in an economy that is undergoing declining employment. A priori, our suspicion is that the seam effect would have been exacerbated by the decline in the economy in the 1990-91 period. This is because of the greater likelihood that many transitions between UN and NU would have taken place during this time and these particular transition have a much greater probability than others to be reported at the seam.

The measurement error process involved with labor force activity and the seam effect is very complicated and Martini (1989) has distinguished three types of errors that may be associated with it. These are: 1) omitting periods of employment, unemployment, or no labor force activity; 2) incorrectly reporting the start and end dates of periods of labor force activity or inactivity; and 3) errors in classifying periods of employment, unemployment, or no labor force activity. The important point for this paper is that whatever the measurement error process, a change in the mix of labor force transitions could result in a change in the proportion of labor force transitions being reported at the seams of reference periods.

III.   The SIPP Data Files

SIPP labor force data for the first five waves of interviewing from the 1987 panel and 1990 panel were used in the analysis providing four sets of seam months. (The reason for using only the first five waves was that at the time of this writing only a five-wave longitudinal file was available from the 1990 panel.) This file, nevertheless, covered the 20-months in which the economy reached its cyclical peak (mid-year of 1990) and then began to contract (gross domestic product declined in the second-half of 1990 and the first-quarter of 1991) (Council of Economic Advisers, 1993). With respect to the labor market, between the second quarters of 1990 and 1991, employment fell by 1.2 million persons and unemployment rose by 1.8 million (U.S. Department of Labor, 1992).

For the sake of comparability, only the first five waves of the 1987 SIPP panel were used in the analysis. This time period was marked by quite different economic circumstances. Gross domestic product grew at an average rate of 4.2 percent per quarter (seasonally adjusted) between the first quarter of 1987 and second quarter of 1988, and, on an annual average basis, employment increased by 2.5 million workers and unemployment dropped by 724,000 persons between 1987 and 1988 (Council of Economic Advisers, 1993). Consequently, the economic conditions under which the first five waves of the 1987 and 1990 panels were conducted were markedly different.

Both files contain only individuals who were fully interviewed for the entire panel, in other

5

words, persons who were assigned positive weights.[4] Naturally, attrition bias is of concern.
According to the Census Bureau, however, the amount of sample loss in the first five months of
the 1990 panel was not substantially different from that experienced in the 1987 panel.[5]

All estimates presented are weighted, although there is a difference in the types of weights
used. In the 1987 panel longitudinal weights have been used, while in the 1990 panel, 1990
calendar year weights are applied but only to fully interviewed persons.   Longitudinal weights
had not yet been developed for the 1990 five-wave panel file.   While this creates inconsistency in
estimated levels, it does not necessarily affect proportions or rates which is the analytical metric of
this paper. [6]

Because of SIPP's staggered sample design, it is important to remember how the data are
interpreted with respect to time. For example, the 4th and 5th, 8th and 9th, 12th and 13th, and
16th and 17th months are "seam" months in SIPP in that they represent the last month of a
reference period and abut the first month of the following reference period. They DO NOT
correspond to the same calendar month: This is because of the staggered pattern of the four
rotation groups. In other words, the first seam in the 1987 panel for the second rotation group
occurred between January and February 1987; the first seam for the third rotation occurred
between February and March 1987; the first seam for the fourth rotation group occurred between
March and April 1987, and for the first rotation group it occurred between April and May 1987.

IV. Labor Force Transitions at the Seam

Two types of labor force variables unique to SIPP are used to examine the seam effect.
The first is a simple variable that identifies whether or not an individual held a wage or salary job
at any time in a particular month. We refer to transitions involving this variable "job transitions."
The second variable is a more complicated variable. It characterizes an individual's labor force
status during the course of the month, that is, whether the person had a job, or had a job and also
spent some time looking for work, or had a job, was on layoff, and was also outside the labor
force, and so on, all within a single month. There are eight possible statuses in SIPP and
transitions associated with these variables will be referred to as "status transitions." Both of these
labor force variables are commonly used by researchers in conjunction with other information
collected in the SIPP panels.

Job Transitions. Figure 1 displays the by now classic picture of the seam effect when portrayed as
the probability of a change taking place in an individual's job status, in other words, moving from
no job to a job, or from a job to no job, or from one job to another job.[7] Clearly, the likelihood of
job changing is higher in a pair of seam months, that is, between the end of one reference period
and the start of another. Roughly speaking, the likelihood of a change in job status taking place is
more than three times as great at the seam then it is within the reference period.

With respect to the seam months, the percentages of individuals involved in job changes
were not significantly different between the panels, except for the second seam where the

likelihood of a change was higher in 1987 than in 1990.[8] While this is of interest and one way of looking at the seam effect, for this paper our interest is in whether or not there was a difference in the proportion of all job transitions being reported at the seam in a period of economic recession and a period of economic expansion.

Table 1 presents distributions of the total number of job transitions taking place in the 1987 and 1990 panels by the kind of job transition, as well as the proportion taking place at the seam of the reference periods. As indicated in the top panel of the Table, there was not a great deal of difference in the distribution of transitions by type. However, the changes that did occur were consistent with a weakening job market. The proportion of transitions that involved a change from having a job to not having a job rose from 34.1 to 35.1 percent; the proportion of transitions involving a no job to job movement fell from 35.9 percent to 33.9 percent. The difference in proportion involving a movement from one job to another was not statistically significant.

The bottom panel of Table 1 shows the proportion of the total transitions as well as the transitions by type that were reported taking place between the seam months. Overall, a somewhat greater proportion of transitions were observed in the seam months in the 1990 panel than was the case in the 1987 panel--54.9 vs. 51.4 percent. When the types of transitions are examined, it appears that all types were more likely to be reported at the seam (however, the difference in the job-to-job transition was not statistically significant).

This finding provides some preliminary evidence that the overall seam effect did worsen in the 1990. However, it also indicates that this increase was not necessarily due to one type of transition dominating another. Indeed, it weakens the argument that the recession had caused one type of transition pattern to influence the overall seam problem. It appears that the problem was worse regardless of the type of transition.

(These data are also suggestive of some other aspects of the seam phenomenon. For whatever the reason or reasons and regardless of panel, individuals who report moving from one job to another job have a great tendency to report this at the seam of the reference periods. On the other hand, persons moving into jobs are less likely to report these events occurring at the seams of reference periods. Whether or not this has something to do with the relative saliency of the events is certainly a topic for further investigation.)

Because economic downturns affect population groups differentially it was decided to analyze what happened to the seam effect across three age-sex groups, groups which have different patterns of labor force participation as well as unemployment experiences. The first group examined was young persons age 16 to 24. Typically, they have a very dynamic labor force activity pattern, but the data examined showed no statistically significant shifts in the composition of their job transitions between the 1987-88 period and the 1990-91 period. In the 1990 SIPP panel, however, there was a somewhat greater likelihood for young persons' job changes to take place at the seam, as shown in Table 2. This was particularly true for those young persons who

did not have a job in one month but moved into one in the next month. The proportion of these no job-to-job transition recorded at the seams in the 1990 panel was 43.2 percent compared to 38.0 percent in the 1987 panel.

Adult men age 25 to 64 were hit hard by the recession in 1990-91 (of the three groups, their unemployment rate, as measured in the CPS, rose the most). Indeed, the SIPP data in Table 3 show "job-to-no job" transitions rose as a proportion of all transitions from 32.4 percent in the 1987 panel to 34.9 percent in the 1990 panel. The changes in the other transition possibilities were not statistically significant. Interestingly, the proportion of these types of transitions reported at the seam were no higher in that panel than in the earlier panel. However, men moving from job-to-job or from no job to a job did tend to report greater changes in the seam months in the 1990 panel than in the 1987 panel. And these types of changes are more characteristic of an expanding labor force. Consequently, this is additional evidence that although the seam effect had increased, it may have not necessarily been associated with weak labor market conditions and labor market transition patterns typically associated with this type of market.

The last group examined was adult women age 25 to 64. Consistent with deteriorating labor market conditions the proportion of women's transitions accounted for by "no job to job" declined from 37.1 percent to 33.8 percent (Table 4). But not consistent with deteriorating labor market conditions was the increase in the proportion of transitions occurring between jobs. This transition pattern rose from 26.4 to 29.9 percent.

The women's overall seam effect was also significantly higher in the 1990 panel, as was the case for young persons and adult men. Transitions involving a movement from a job to no job, which did not change in importance between panels, were much more likely to be recorded in the seams months.

Status Transitions. The status transitions used in this analysis provide a somewhat more refined look at the nature of changes in labor force activity and are based on SIPP employment status recodes (ESR's). For example, a person may move from having a job one month and no job the next, but in that subsequent month he or she may have looked for another job or dropped out of the labor force, or both. SIPP uses eight ESR's to characterize an individual's labor force activity in the course of a month:

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

As with the more traditional labor force statuses (employed, unemployed, and not in the labor force) in which six unique transitions can be identified between two periods of time, so too can transition paths be identified from the ESR's. However, there are many more than six possibilities.

In Table 5, we identify six transition possibilities (and an all other category) which attempts to replicate the more traditional labor force transitions. The first, ESR 1 to 3, 5-7, identifies a movement of a fully employed worker in one month to a status in a month containing some unemployment; the second, ESR 3, 5-7 to 1, represents the reverse situation in which a partially unemployed person is moving into a job for the entire month. The third transition, ESR 8 to 1,2,4, represents a person moving from outside the labor force to a status of full or partial employment; the fourth, ESR 1,2,4 to 8, is the reverse flow of someone leaving employment to outside the labor force. The fifth transition, ESR 8 to 6,7, represents the transition of a worker from outside the labor force to some amount of active job search; and the sixth, ESR 6,7 to 8, represents the movement of someone dropping out of the labor force.

As shown in the upper panel of the Table 5, these transitions accounted for slightly more than 50 percent of all the transitions that took place in the 1987 and 1990 panels. What is also shown is that there was a statistically significant shift in the proportion of ESR 1 to 3, 5-7 transitions involving a movement from employment to unemployment--from 8.5 to 10.1 percent-- which would have been anticipated given the slackening demand in the labor market. The other identified transitions, however, showed very little change. The residual category--composed of all other possible transitions--declined slightly in importance from 46.3 to 45.2 percent.

In the bottom half of the panel is shown the proportion of these transitions that were reported at the seams of the reference periods. Overall, there was a statistically significant increase in the seam problem (as was the case with job transitions). While increases occurred in all the transition categories, most of them were small and only three were statistically significant. Two of these involved the movement of persons from outside the labor force to employment or unemployment. The all other transition category also showed a greater likelihood of having transitions reported at the seam. (It is of interest to note the difference in the proportions of transitions reported at the seam when the transition involves a movement between not in the labor force and unemployment (or vice versa) and the "all other" transitions. In the former case, upwards of 60 to 70 percent are reported as occurring at the seam, but in the latter slightly less than 30 percent. Of course, the former comprised a much smaller proportion of all transitions than the latter.)

Transitions from employment to unemployment (ESR 1 to 3,5-7), which had increased in importance in the 1990 panel, were no more likely to be reported at the seam in that panel than they were in the 1987 panel. Consequently, the impact of their shift in importance between the 1987 and 1990 panels, relative to other transitions, had presumably little effect on the overall seam problem.

9

A Shift-Share Analysis. To more rigorously determine the quantitative impact of shifts in job and status transitions on the overall seam effect between the 1987-88 period and 1990-91 period, a simple shift-share analysis was carried out on both types of transitions. This analysis involves, first, holding constant the distribution of transitions as they were in the 1987 panel, but then applying the actual percentages of transitions reported at the seams in the 1990 panel and then recalculating the overall seam effect. This yields the effect of the shift in composition of the transitions on the overall seam effect.

Thus, the seam effect in 1990 can be expressed as follows, where S represents the overall effect, p the relative weight of the ith transition and s is the proportion of transition i observed at the seam:

$$S \quad = \quad p \quad \quad s$$

To compute what the overall seam effect would have been if shifts in the composition had not taken place the following expression is calculated where the p are the relative weights of the transitions in the 1987 panel.

$$S^* \quad = \quad p \quad \quad s$$

The second part of the analysis involves holding constant the seam effects on the individual transitions as of the 1987 panel and applying these to the actual distribution of transitions that resulted in the 1990 panel. Thus, if the seam effects for individual transitions had not changed between the panels, the overall seam effect would be calculated as

$$S^{**} \quad = \quad p \quad \quad s$$

Table 6 presents the results of this simple exercise. In terms of the job transitions, it shows that the overall seam problem increased not because of shifts in the composition of job transitions induced by the recession, but more generally as a result of higher seam effects among the various transitions. If, indeed, the same proportions of transitions had been reported at the seams in the 1990 panel as in the 1987 panel, virtually the same overall seam effect would have resulted, despite the much different economic environment. In terms of the status transitions, this fact is demonstrated even more convincingly.

V. Implications

The economic situation in this country changed dramatically between the late 1980's and early 1990's. As unfortunate as this was for millions of Americans, it does provide survey researchers involved with the collection of socio-economic data with an opportunity to examine how their data collection operations perform under different economic conditions.

This paper looked at one problem concerning the Survey of Income and Program Participation--and that was its seam problem. The phenomenon of over-reporting change at the

seams of SIPP's reference periods and an under-reporting of change during its reference periods has been observed in many of the SIPP panels in the 1980's. An obvious question is how did this problem behave in the 1990 panel when the Nation's entered a period of much slower economic growth.

The analysis was conducted exclusively with labor force data from the first five waves of interviewing in SIPP's 1987 and 1990 panels. The seam problem had increased with respect to these data in the 1990 panel relative to the 1987 panel, and an argument was made that this might have been the result of shifts in the composition of various labor force transitions, transitions with a greater likelihood of being reported at the seam. After investigating the various transitions, both with respect to the changes involving jobs and changes involving labor force statuses, it was concluded that greater "seam reporting" of transitions had occurred across many different transitions irrespective of their association with slackened labor demand.

Two directions for further research are warranted. First, it would be useful to observe whether the seam problem was higher in the 1990 panel in terms of other variables, such as program participation and amounts received. Second, and more challenging, is to explore why survey respondents in the 1990 panel became more inclined to report changes in their labor market activity in seam months. Because of its large sample size and because of the time period it covers, the 1990 panel will become an important data source for researchers. It would behoove survey researchers, therefore, to better understand the increased seam problem it contains.

REFERENCES

Burkhead, Dan and Coder, John, "Gross Change in Income Recipiency for the SIPP," Proceedings of the Social Statistics Section, American Statistical Association, pp. 351-356, 1985.

Council of Economic Advisers, Economic Report of the President, (Washington, D.C.:USGPO), January, 1993.

Jabine, Thomas B., King, Karen F., and Petroni, Rita J., SIPP Quality Profile, Bureau of the Census, May, 1990.

Marquis, Kent, and Moore, Jeffrey, "Measurement Errors in the Survey of Income and Program Participation (SIPP) Program Reports," Proceedings of the 1990 Annual Research Conference, U.S. Bureau of the Census, pp. 721-745, August, 1990.

Martini, Alberto, "Seam Effect, Recall Bias, and the Estimation of Labor Force Transition Rates From SIPP," Proceedings of the Section on Survey Research Methods, American Statistical Association, pp. 387-392, August, 1989.

U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, January, 1992.

Ryscavage, Paul, "The 1990-91 Recession Through the Lens of SIPP," Internal Census Bureau memorandum from Paul Ryscavage to Charles Nelson (HHES Division), November 18, 1992a.

Ryscavage, Paul, "Slipping Into the Recession: How Well Did SIPP Labor Force Data Reflect It?" Proceedings of the Section on Social Statistics, American Statistical Association, 1992b (forthcoming).

Singh, Raj, Weidman, Lynn, and Shapiro, Gary, "Quality of SIPP Estimates," Individuals and Families in Transition: Understanding Change Through Longitudinal Data, Bureau of the Census, pp. 301-332, 1989.

Table 1.   Total Job Transitions by Type and Percent Occurring at the Seam of the Reference Periods, 1987 SIPP Panel and 1990 SIPP Panel

(In percent)

Type of Transition	1987 Panel	1990 Panel
	TOTAL TRANSITIONS	
Total	100.0	100.0
Job-to-Job	30.0	31.0
Job-to-No Job	34.1	35.1*
No Job-to-Job	35.9	33.9*
	PERCENT OF ALL TRANSITIONS AT THE SEAM	
Total	51.4	54.9*
Job-to-Job	60.8	62.6
Job-to-No Job	53.2	56.3*
No Job-to-Job	41.9	46.4*

*   The difference between the estimate for the 1990 panel and that for the 1987 panel was statistically significant at the 10-percent level.

Table 2.   Total Job Transitions of Persons Age 16 to 24 by Type and Percent Occurring at the Seam of the Reference Periods, 1987 SIPP Panel and 1990 SIPP Panel

(In percent)

Type of Transition	1987 Panel	1990 Panel
TOTAL TRANSITIONS		
Total	100.0	100.0
Job-to-Job	30.0	30.8
Job-to-No Job	32.4	32.8
No Job-to-Job	37.6	36.4
PERCENT OF ALL TRANSITIONS AT THE SEAM		
Total	49.3	52.5*
Job-to-Job	60.9	62.1
Job-to-No Job	51.9	53.6
No Job-to-Job	38.0	43.2*

* See Table 1.

Table 3.   Total Job Transitions of Men Age 25 to 64 by Type and Percent Occurring at the Seam of the Reference Periods, 1987 SIPP Panel and 1990 SIPP Panel

(In percent)

Type of Transition	1987 Panel	1990 Panel
TOTAL TRANSITIONS		
Total	100.0	100.0
Job-to-Job	36.0	34.8
Job-to-No Job	32.4	34.9*
No Job-to-Job	31.6	30.1
PERCENT OF ALL TRANSITIONS AT THE SEAM		
Total	53.5	57.2*
Job-to-Job	59.6	63.7*
Job-to-No Job	55.2	56.7
No Job-to-Job	44.7	50.5*

* See Table 1.

Table 4.   Total Job Transitions of Women Age 25 to 64 by Type And Percent Occurring at the Seam of the Reference Periods, 1987 SIPP Panel and 1990 SIPP Panel

(In percent)

Type of Transition	1987 Panel	1990 Panel
TOTAL TRANSITIONS		
Total	100.0	100.0
Job-to-Job	26.4	29.9*
Job-to-No Job	36.3	36.4
No Job-to-Job	37.1	33.8*
PERCENT OF ALL TRANSITIONS AT THE SEAM		
Total	52.1	55.1*
Job-to-Job	62.0	61.8
Job-to-No Job	53.1	57.5*
No Job-to-Job	44.5	46.6

* See Table 1.

Table 5.   Total Status Transitions by Type and Percent Occurring at the Seam of the Reference Periods, 1987 SIPP Panel and 1990 SIPP Panel

(In percent)

Type of Transition 1/		1987 Panel	1990 Panel

TOTAL TRANSITIONS

Total		100.0	100.0
ESR 1	to ESR 3, 5-7	8.5	10.1*
ESR 3, 5-7	to ESR 1	11.2	11.1
ESR 8	to ESR 1, 2, 4	10.8	10.5
ESR 1, 2, 4	to ESR 8	12.3	12.2
ESR 8	to ESR 6, 7	5.9	5.9
ESR 6, 7	to ESR 8	5.0	5.1
All other		46.3	45.2*

PERCENT OF ALL TRANSITIONS AT THE SEAM

Total		38.5	40.2*
ESR 1	to ESR 3, 5-7	34.1	34.5
ESR 3, 5-7	to ESR 1	37.6	37.9
ESR 8	to ESR 1, 2, 4	46.3	49.9*
ESR 1, 2, 4	to ESR 8	54.9	56.8
ESR 8	to ESR 6, 7	52.8	59.0*
ESR 6, 7	to ESR 8	68.4	68.2
All other		28.2	29.7*

* See Table 1.

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

Table 6. Changes in Overall Seam Effects With Job Transitions and Status Transitions When the Composition of Transitions and Individual Seam Effects are Held Constant as of the 1987 Panel

Effects	1987 Panel	1990 Panel	Change
JOB TRANSITIONS			
Actual Change	51.4	54.9	3.5*
Constant 1987 Composition	51.4	54.6	3.2*
Constant 1987 Individual Seam Effects	51.4	51.7	0.3
STATUS TRANSITIONS			
Actual Change	38.5	40.2	1.7*
Constant 1987 Composition	38.5	40.2	1.7*
Constant 1987 Individual Seam Effects	38.5	38.5	0.0

* See Table 1.

[1] The SIPP sample consists of four rotation groups of equal size which are interviewed over a four-month period to spread out the interview and processing workloads. This staggered sample design, together with the four-month reference period, produces the over-reporting and under-reporting of changes to be muted. For more information on the design of the survey see Jabine et al (1990).

[2] SIPP panels have been fielded in every year since 1984.

[3] This, of course, is the classic labor force transition matrix that has been used by many labor economists in analyzing labor force dynamics (e.g., gross labor force flows, transition rates) using the monthly labor force data collected in the CPS. These transitions have been shown to be greatly affected by measurement errors, specifically errors of coverage and response.

[4] Persons who were interviewed at the beginning of the year but later died or were institutionalized were also excluded from the files.

[5] Type A rates (noninterviews of household because no one was at home, temporarily absent, refusal, or unable to find the sample household in the first five waves of the 1990 panel were as follows: 1st wave, 7.2 percent, 2nd wave, 11.3 percent, 3rd wave, 11.5 percent, 4th wave, 12.5 percent, and fifth wave, 13.6 percent. Comparable rates from the

1987 panels were: 6.7 percent, 11.1 percent, 11.5 percent, 12.3 percent, and 13.7 percent. Type D rates in both panels (noninterviews of sample persons who have moved and are living at unknown addresses or at addresses more than 100 miles from a SIPP primary sampling unit) were also similar.

[6/]   This creates an inconsistency in levels. For example, in the case of the population age 16 and over, the 1987 panel data would yield a population estimate of 177.0 million using the panel weight; this compares to a population estimate of 174.9 million using the 1990 calendar year weight.

[7/]   The job identification number is the operable variable here. When an individual does not have a job, his or her job "id" is 0; when they do report they had a job in the month the variable becomes a positive number and, of course, the job id number changes with each different job the persons holds in the reference period. Consequently, changes in these job id's across months is the basis for the analysis.

[8/]   All changes have been tested at the 90-percent confidence level and are statistically significant unless otherwise indicated. Standard errors were obtained from the Demographic Statistical Methods Division of the Bureau of the Census (the parameters for the 1990 panel estimates are considered preliminary).