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MEASURING SPELLS OF UNEMPLOYMENT AND THEIR OUTCOMES

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MEASURING SPELLS OF UNEMPLOYMENT AND THEIR OUTCOMES

by Paul Ryscavage

I. Background

Almost twenty years have passed since Hy Kaitz's (1970) pathbreaking article about how to estimate, from cross-sectional survey data, the average length of a completed spell of unemployment. His breakthrough encouraged researchers to begin addressing new questions about the well-being of the unemployed, such as:

-- Is unemployment concentrated among a few persons with very long spells or among many with short spells?

-- Do unemployment spells typically end with a job or labor force withdrawal?

-- Are frequent, short unemployment spells really the same as one long one?[1]

Embodied in some of this research was a discussion of the statistical techniques for refining and improving Kaitz's methodology. Indeed, a literature has developed on the more general topic of estimating economic duration data, and it recently has been summarized (Kiefer, 1988).

Most analyses involving unemployment duration have been based, quite naturally, on the unemployment data from the Bureau of Labor Statistics' (BLS) monthly Current Population Survey (CPS).[2] This survey, of almost 60,000 households, is the official source of the Federal government's unemployment statistics. Because the CPS was designed to provide current labor market information, however, it does not lend itself to estimating the average length of completed spells of unemployment. Nevertheless, as Kaitz showed, the average time newly unemployed persons will remain unemployed can be inferred from the monthly CPS data on the age of spells in progress, if certain "steady state" assumptions are made. His methodology, in its simplest form, breaks down to:

$$D = TU/NU$$

where TU is total unemployment at a point in time, NU the newly unemployed, and D the

[1]A sampling of the work in which such questions and others are investigated might include Salant (1977), Clark and Summers (1979), Bowers (1980), Akerlof and Main (1980), and Sider (1985).

[2]For a thorough discussion of the conceptual and empirical problems in measuring completed spells of unemployment from the CPS cross-sectional data see Horrigan (1987).

anticipated duration.[3] The assumptions require that the level of total unemployment is unchanging over time, as well as the inflow and outflow of unemployed persons.

Researchers since Katiz's time have made different assumptions about the rate of outflow of unemployed persons, or the probabilities of remaining unemployed from one time period to another. As is frequently seen in the literature, the expected duration of a completed spell of unemployment for people who became unemployed in the same period can be written as:

$$D = (1 - P_1) + 2P_1 (1 - P_2) + 3P_1 P_2 (1 - P_3) + \ldots$$

where D is the expected duration and the P's, the probabilities of remaining unemployed--continuation rates--after successive time periods.

The particular pattern of probabilities which describes the flow out of unemployment will affect the characteristics of the unemployment duration distribution. Most researchers have assumed, based on aggregate data, that these probabilities rise over time. Continuation rates have been derived from both the CPS cross-sectional data on spells of unemployment in progress as well as the CPS gross labor force flow data (a limited longitudinal feature exists in the CPS because sampled households are interviewed four consecutive months, then dropped from the sample for eight months, and then interviewed again for four additional months).

Methodological research continues based on the CPS unemployment data. However, some researchers have become skeptical about the value of the CPS, given its present survey - design, for addressing the subject of unemployment duration (.Kiefer, Lundberg, and Neumann, 1985). In the CPS many unemployment spells are censored, and sampling and reporting techniques introduce measurement error. For example, respondents frequently round their amounts of time spent unemployed and the amounts are sometimes inconsistent with the actual time between survey's (Bowers and Horvath, 1984). An implication of these problems is that a survey is needed which continuously monitors spells of unemployment--from their inception to their completion-for the study of unemployment duration. Indeed, considerable thought and planning has already begun at the BLS (in conjunction with the Bureau of the Census) on ways of enhancing the longitudinal capability of the CPS (Norwood, 1985).

The purpose of this paper is twofold. First, it is to introduce researchers interested in the topic of unemployment duration to the Survey of Income and Program Participation (SIPP), a longitudinal survey conducted by the Bureau of the Census. This survey, although designed to collect information on the incomes, income sources, and Federal program participation of individuals and households, also collects information on labor force activity. While the planning for a redesigned CPS continues, researchers interested in the analysis of unemployment duration might avail themselves of the SIPP labor force data. For example, from SIPP it is possible to verify CPS continuation rates, or the probabilities of remaining unemployed. In other words,

[3]The formal derivation of this formula is frequently found in the literature (e.g., Horrigan, 1987).

SIPP could become a complementary source of data to the CPS in this area of research.

The second purpose of the paper is to present a descriptive analysis of the unemployment duration data from SIPP for calendar years 1984 and 1985. The data to be presented do reflect the continuous monitoring of actual unemployment spells as seen through the lens of SIPP. In addition, certain events associated with these spells, which affect the welfare of the unemployed, can be investigated since a variety of other economic information is collected. Refining statistical techniques and methodologies is certainly important in developing reliable estimates of unemployment duration, but important issues involving the economic security of the unemployed require attention and have immediate policy relevance. For this reason, a descriptive analysis of the consequences of unemployment spells from a longitudinal survey, takes on added significance.

Section II of the paper contains a discussion of how unemployment is defined in SIPP and how we have measured unemployment duration in this paper. Sections III to VII present our data analysis of unemployment spells which began in 1984 and 1985 and were completed--average lengths of completed spells, duration distributions, outcomes, changes in health insurance and unemployment insurance status, and so on. Section VIII discusses the limitations of SIPP for unemployment duration analyses: response bias, conditioning affects, attrition, and other problems. The paper closes with a brief conclusion.

II. Measuring Unemployment and Unemployment Duration in SIPP

Through a series of eight interviews evenly spaced over a two and one-half year period, SIPP collects social, economic, and demographic data relating to the economic well-being of persons and households.[4] The information from these interviews comprise a panel and the data examined in this paper come from the 1984 SIPP panel (which actually started in the second half of 1983). SIPP panels, designed essentially the same way as the 1984 panel, have been fielded each year since 1984.

A longitudinal research file was developed from SIPP's 1984 panel by the Census Bureau for use by researchers interested in the dynamic relationships between the income situation of household members, their involvement in Federal government income transfer programs, and their participation in the labor market. SIPP contains a labor force component and the information derived from these questions was included on the longitudinal file.

For every sample member age 15 and over, a series of questions are asked ascertaining whether an individual held a job or not during the previous four months, or the reference period. For persons who replied that they did not have a job, or did so only for some of the weeks, additional questions are asked concerning whether or not they had looked for work or had been

[4]A technical description of SIPP can be found in Nelson, McMillen, and Kaspryzk (1985).

on layoff during those weeks.[5] In other words, the labor force status is identified on a weekly basis in each of the four months of the reference period.

The basic labor force information on the 1984 longitudinal research file has been recoded into eight employment status recodes (ESR's).[6] These recodes summarize an individual's labor force status in a month. Obviously, in the course of a month a person could have been employed, unemployed, and out of the labor force. (In the creation of the 1984 longitudinal research file, a decision was made to include on the file only the ESR'S, but the weekly labor force information could have been included as well.)

We have used two definitions of unemployment--a limited definition and a comprehensive definition. The limited definition is limited to only two ESR'S. The first identifies individuals as being unemployed (looking for work or on layoff) the entire month. The second identifies individuals as being unemployed for part of the month and the rest of the month as not in the labor force. The comprehensive definition of unemployment uses four of the ESR's, the two just mentioned and two others. The two others reflect individuals who, in addition to being unemployed at some time during the month, also had a job, or had a job as well as some time outside the labor force. [7]

The data in the longitudinal research file relate to the period extending from June 1983 to April 1986, and were collected during eight interviews over the period beginning in October 1983 and

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[5]In SIPP, persons without jobs but looking for work or on layoff (and available for work) in any week of the four month reference period are considered "unemployed." This definition should not be confused with the Federal government's official definition of unemployment used in the monthly CPS. Briefly, in the CPS a persons must not have worked during the week containing the 12th of the month (the survey week), but actively looked for work in the prior four week period and be currently available for work. Persons who are on layoff or awaiting to start a new wage and salary job within 30 days need not have looked for work to be counted among the unemployed.

[6]These ESR's are defined as follows:
ESR 1 --With job entire month, worked all weeks.
ESR 2 --With job entire month, missed 1 or more weeks, but not because of a layoff.
ESR 3 --With job entire month, missed 1 or more weeks because of a layoff.
ESR 4 --With job part of month, but not because of a 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.

[7]The limited definition of unemployment consists of persons with an ESR 6 or ESR 7 in a single month or consecutive ESR 6's and/or ESR 7's in a multi-month period. The comprehensive definition of unemployment consists of an ESR 3 or ESR 5 or ESR 6 or ESR 7 in a single month or consecutive ESR 3's and/or ESR 5's and/or ESR 6's and/or ESR's in a multi-month period.

ending in May 1986.[8] Consequently, it is possible to observe all unemployment spells beginning, in calendar years 1984 and 1985. In addition, it is possible to observe other spells outside our scope of interest. Before discussing all of the unemployment spells observed on this file, it would be useful to briefly discuss some of the file's characteristics.

The 1984 SIPP panel began with about 19,900 interviewed households and consisted of 53,734 persons of all ages. By the end of the eighth interview the sample had shrunk to 32,306 persons who were fully interviewed (Coder, 1988). This sample reduction occurred for two reasons: normal survey attrition due to refusing to continue to participate, inability to locate persons, deaths, etc. and to an intentional sample reduction at the time of the fifth interview in response to budgetary cutbacks (the latter amounted to roughly 18 percent of the original households.).

The tabulation below shows the distribution of fully interviewed persons age 16 and over by their labor force status during the two and one-half year life of the panel:

Total persons, age 16 and over	22,842
With some labor force activity	17,457
With some unemployment:	
Limited definition	4,237
Comprehensive definition	5,245
With no labor force activity	5,385

Regardless of whether the limited or comprehensive definition of unemployment is considered, the sample size is relatively large for a longitudinal survey.

A summary of all of the unemployment spells observed in SIPP is presented in Table 1. The limited definition of unemployment yields 7,562 spells and the comprehensive definition 9,710. Obviously, many of these spells were in progress at the beginning of the first SIPP reference period and at the end of the eighth. (Only a handful of spells extended across the entire life of the panel). Censored spells at the beginning of the panel amounted to between 1,200 and 1,400, depending on the unemployment definition, and between 700 and 900 at the end of the panel (the sum of those spells ending censored).

We are interested in spells beginning in 1984 and 1985, and more specifically, those that were completed, or uncensored at the end of the panel. In 1984, SIPP observed almost 2,.700 completed spells of unemployment according to the limited definition and 3,400 according to the comprehensive definition. In both cases less than 2.0 percent had been censored. Spells beginning in 1985 totaled 2,300 according to the limited definition and about 3,100 according to

[8]SIPP has a staggered sample design in which one of four rotation groups is in operation each month. Because of the four month reference period, the data collected in the first rotation group in October 1983 covered the June to September 1983 period, the second rotation group in November 1983 covered the July to October 1983 period and so on. Data for the full sample , therefore, were first available for September 1983.

the comprehensive definition. A considerably higher proportion of these spells--about 17.5 percent regardless of definition--were censored. Nevertheless, even in 1985, SIPP collected a significant number of completed unemployment spells.

Table 1. Spells of Unemployment (unweighted) in the SIPP 1984 Longitudinal Research File According to the Limited and Comprehensive Definitions

Unemployment spell's beginning and ending dates	Limited		Comprehensive	
Total spells	7,562		9,710	
Began censored	1,208		1,445	
Ended in 1983	917		1,086	
Ended in 1984	258		310	
Ended in 1985	25		36	
Ended in 1986*	8		13	
Began in 1983	990		1,277	
Ended in 1983	516		700	
Ended in 1984	454		555	
Ended in 1985	20		21	
Ended in 1986**		-		1
Ended censored	9		9	
Began in 1984	2,693		3,413	
Ended in 1984				
Ended in 1985	2,646		3,362	
Ended in 1986**				
Ended censored	47		51	
Began in 1985	2,308		3,090	
Ended in 1985				
Ended in 1986**		1,897		2,558
Ended censored	411		532	
Began in 1986	363		476	
Ended in 1986**		113		141
Ended censored	250		335	

* Includes some that ended censored as well as during or before April, 1986.
** During or before April, 1986.

Focusing on spells of unemployment beginning, in a calendar year is analogous to focusing on the spells of a newly unemployed cohort each month. Theoretically, we would eventually capture all individuals who become unemployed. Although a significant proportion of the spells beginning in 1985 were censored in the 1984 SIPP panel, the 1985 SIPP panel (which began in February 1985), should contain a smaller proportion of censored spells for that year.

III. Persons Beginning Spells of Unemployment

Table 2 contains weighted estimates of persons who began spells of unemployment in 1984 and 1985 and completed them (based on two definitions).[9] Year-to-year comparisons, however, should not be made because of the greater proportion of the spells beginning in 1985 that were censored. SIPP shows that in 1984, according to the limited definition, 17.5 million began spells of unemployment and, according to the comprehensive definition, 21.7 million began spells of unemployment. The estimates of persons beginning spells of unemployment in 1985 that were completed during the life of the SIPP panel amounted to 13.0 million under the limited definition and 17.0 million under the comprehensive definition.

[9]The estimates for 1984 and 1985 have been weighted using the longitudinal weights for persons who were fully interviewed in all interviewing waves of the 1984 panel.

Table 2. Persons Beginning Completed Spells of Unemployment in 1984 and 1985 According to the Limited and Comprehensive Definitions

(Numbers in thousands)

Age and sex	Limited		Comprehensive	
	1984	1985	1984	1985
Total persons, 16 and over	17,460	13,038	21,682	16,985
16 to 19	4,033	2,082	4,546	2,557
20 to 24	3,853	3,000	4,656	3,839
25 to 54	8,291	6,857	10,722	9,145
55 to 64	1,048	870	1,426	1,130
65 and over	234	230	332	315
Total men, 16 and over	7,883	5,743	10,011	7,575
16 to 19	2,016	1,000	2,278	1,231
20 to 24	1,759	1,378	2,153	1,834
25 to 54	3,466	2,751	4,734	3,772
55 to 64	474	474	634	537
65 and over	167	140	212	202
Total women, 16 and over	9,577	7,295	11,671	9,410
16 to 19	2,017	1,082	2,268	1,326
20 to 24	2,094	1,622	2,503	2,005
25 to 54	4,825	4,106	5,988	5,373
55 to 64	574	395	793	592
65 and over	67	90	119	113

Perhaps the most intriguing estimates in this table concern those for men and women. In both years, the number of women beginning spells of unemployment exceeds that for men by a range of from 17 to 27 percent, depending on definition and year. Whether measured by the monthly CPS or from the March CPS supplement on work experience in the previous year, the level of unemployment for men, traditionally, has been higher than for women.

What we may be seeing here is the effect of different survey methodologies. In SIPP, interviews are conducted every four months and labor force activity for each week of the four month reference period is recorded. In the monthly CPS it is possible for persons to have very short spells of unemployment between monthly interviews which may not be reported. In the March CPS work experience supplement, persons may forget short spells of unemployment when they are interviewed about their annual work experience in the previous calendar year. Consequently, it is possible that short spells of unemployment among women are more apt to be reported in SIPP and account for the larger estimate.

As shown in the text table below, the vast majority of persons beginning spells of

unemployment in 1984 had only one spell of unemployment. Around 80 percent of the persons who began spells in 1984 and completed them had only one spell of unemployment, regardless of definition.

Table 3. Completed Spells of Unemployment Beginning in 1984 and 1985 By Their Duration According to the Limited and Comprehensive Definitions

(Numbers in thousands)

Duration in months	Limited		Comprehensive	
	1984	1985	1984	1985
Total completed spells	21,064	15,021	26,740	19,866
1 month	6,730	5,412	8,727	7,682
2 months	3,832	3,285	4,960	4,444
3 months	2,281	2,025	3,192	2,592
4 months	3,813	2,494	4,451	2,976
5 to 7 months	2,249	1,260	2,600	1,548
8 months	926	342	1,230	380
9 to 11 months	489	97	657	192
12 months	230	98	297	52
13 to 15 months	253	7	261	-
16 months	88	-	129	-
17 months or more	172	-	237	-
Average completed spell duration (in months)	3.46	2.68	3.41	2.54

Number of persons	**Limited**	**Comprehensive**
Total (in thousands)	17,460	21,682
Total (in percent)	100.0	100.0
1 spell	82.4	79.8
2 spells	14.9	17.4
3 spells	2.3	2.4
4 spells	0.3	0.4
5 spells or more	-	-

IV. Distributions of Completed Spells of Unemployment

One reason researchers had to derive distributions of completed spells of unemployment by various statistical techniques was because of the lack of longitudinal data which continuously monitors spells. Indeed, Kaitz (1970) pointed this out as the rationale for his own work when he wrote about the difference between the average duration of spells in progress and the average duration of completed spells: "...each measurement is an estimate since at the present time we do not have so-called longitudinal surveys that follow unemployed individuals week-by-week during their spell of unemployment." We now have longitudinal surveys, and although the data from them also have limitations, we can examine the distribution of unemployment duration as it is reported through a survey. These distributions are free of the many assumptions needed in deriving them through statistical techniques.

Table 3 shows the distribution of unemployment spell duration by month for those spells beginning in 1984 and 1985 (under two definitions of unemployment). In 1984, close to one-third of the spells, regardless of the definition, were at most of one month duration.[10] Only about 3.5 percent of the completed spells of unemployment lasted 12 months or longer (as was shown earlier, only a small percentage of the spells beginning in 1984 were censored by the conclusion of the survey). The mean. completed spell length for 1984 was 3.46 months under the limited unemployment definition, or (multiplying by 4.3 weeks) 14.9 weeks, and 3.41 months, or 14.7 weeks when based on the comprehensive definition. According to the monthly CPS data, as reported by the BLS, in 1984 the mean duration of spells in progress of the currently unemployed was 18.2 weeks (U.S. Bureau of Labor Statistics, 1985). The SIPP and CPS means are conceptually different, of course, and one factor accounting for the difference is the "length-sample bias" in the monthly CPS. That is, short spells of unemployment are underreported in the monthly survey, or stated another way, long spells of unemployment have a higher probability of being reported.

As mentioned earlier, year-to-year comparisons of persons beginning spells in 1984 and 1985 should be avoided because of the greater number of censored spells in 1985, and the same is true regarding the duration distributions (and the means) of the spells. It would have been expected, given the improvement in economic conditions between 1984 and 1985, that the average length of completed spells would have declined over this period.

One characteristic of the distributions which is disturbing is the "clumping" of four-month spells. As was mentioned, in SIPP a four month reference period is used. This phenomenon is characteristic of surveys with specific reference period lengths. For an unknown proportion of unemployed respondents, it is probable that they simply told the enumerator they were unemployed for the entire four months rather than attempt to recall specific weeks.

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[10] Actually, unless the individual was coded as an ESR 6, the amount of unemployment would be less than one month.

V. The Concentration of Unemployment

Previous research, based on the CPS unemployment data, has shown that within a given period of time a small proportion of unemployed persons accounts for a large proportion of the total time spent unemployed (e.g., Clark and Summers, 1979; Bowers, 1980). This seems also to be evident in the SIPP data as well.

Months of unemployment	Limited	Comprehensive
Total months (in percent)	100.0	100.0
1 month	9.2	9.6
2 months	10.5	10.9
3 months	9.4	10.5
4 months	20.9	19.5
5 to 7 months	18.5	17.1
8 to 11 months	16.9	18.0
12 months or longer	14.6	14.5

The text table above shows the distribution of months of unemployment by length of unemployment spell for spells that began in 1984. According to the limited definition, unemployment spells of 8 months or longer accounted for over 30 percent of all the months of unemployment. And short spells of one month duration or less made up just less than 10 percent of all the unemployment months. However, as was just shown in Table 3, only a small fraction of all the spells begun in that year were of a long duration, while over 30 percent of them lasted only one month. (Because the data for 1985 exclude a much larger proportion of censored spells, which would bias the distributions, only the data for 1984 are presented.)

VI. Unemployment Outcomes: Jobs or Labor Force Withdrawal?

One of the aspects of unemployment spells that labor economists have been concerned with is what happens when the unemployment spell ends? That is, does it end by finding a job or by giving up the job search and dropping out of the labor market. This has been a limitation of many estimates derived using statistical techniques on the CPS cross-sectional unemployment data (Sider, 1985), even though some researchers have developed "outcome" estimates using the CPS gross labor force flow data (e.g., Clark and Summers, 1979).

Under the limited definition of unemployment, the SIPP data in Table 4 show that of the approximately 21.0 million spells that began in 1984, 61.1 percent ended in employment. Under the comprehensive definition, in which almost 27.0 million spells were reported, 67.5 percent ended in jobs. The difference stems from inclusion of different ESR's in the definition; the comprehensive definition includes ESR's reflecting months in which not only was there some unemployment but also some employment. For example, a person who was laid off toward the end of one month and recalled to work in the beginning of the next would not be included under

the limited definition but would be under the comprehensive definition.

Table 4. Outcomes of Completed Spells of Unemployment Beginning in 1984 and 1985 by Age, Sex, and Race According to the Limited and Comprehensive Definitions

(Numbers in thousands)

Age, sex, and race	1984			1985		
	Spells	Outcomes (in percent)		Spells	Outcomes (in percent)	
		Employment	NILF		Employment	NILF
LIMITED DEFINITION						
Total	21,064	61.1	38.9	15,021	64.1	35.9
Total men	9,442	72.1	27.9	6,533	76.7	23.3
16 to 19	2,526	61.2	38.8	1,158	70.6	29.4
20 to 24	2,133	78.6	21.4	1,617	80.6	19.4
25 to 54	4,020	79.7	20.3	3,082	83.0	17.0
55 and over	762	50.3	49.7	675	49.3	50.7
Total women	11,622	52.2	47.8	8,488	54.4	45.6
16 to 19	2,545	54.6	45.4	1,228	56.1	43.9
20 to 24	2,532	54.6	45.4	1,855	57.6	42.4
25 to 54	5,766	51.4	48.6	4,832	54.3	45.7
55 and over	779	43.1	56.9	574	41.6	58.4
White	16,099	65.2	34.8	11,845	67.6	32.4
Black	4,243	46.4	56.9	2,668	50.5	49.5
COMPREHENSIVE DEFINITION						
Total	26,740	67.5	32.5	19,866	70.2	29.8
Total men	12,369	77.3	22.7	8,876	79.6	20.4
16 to 19	2,856	63.7	36.3	1,508	72.2	27.8
20 to 24	2,714	82.3	17.7	2,186	81.9	18.1
25 to 54	5,795	84.7	15.3	4,351	84.8	15.2
55 and over	1,004	59.7	40.3	830	62.7	37.3
Total women	14,371	59.0	41.0	10,990	62.5	37.5
16 to 19	2,889	57.2	42.8	1,558	63.4	36.6
20 to 24	3,091	61.0	39.0	2,335	63.3	36.7
25 to 54	7,293	59.1	40.9	6,292	60.7	39.3
55 and over	1,099	57.3	42.7	805	56.8	43.2
White	21,071	71.1	28.9	16,179	73.4	26.6
Black	4,885	52.5	47.5	3,069	55.0	45.0

The outcome average for all spells, of course, masks variations among age-sex groups and between Blacks and whites. For example, middle-age men, age 25 to 54, had a high probability of

finding employment compared to teenagers and older men. Further, men were much more likely to end their spells of unemployment with a job than women. Women who began spells of unemployment in 1984 had only a 52 percent chance of finding a job under the limited definition and a 59 percent chance under the comprehensive definition.

In many respects, the overall pattern among men and women is also evident among whites and Blacks. In 1984, despite an improving job situation across the Nation, Blacks who began spells of unemployment in that year had, roughly speaking, only a 50-50 chance of finding jobs compared to the much higher odds-approximately 2 out of 3--for whites.

The significance of our estimates is that with the other information collected in SIPP we could have gone even further in exploring the outcome of an unemployment spell. For example, for those finding employment it is possible to determine the characteristics of the job (e.g., the wage, hours, occupation, industry), whether or not the job was a short-term one, and how critical it was for the economic well-being of the family or household. Similarly, for those dropping out of the labor force we could determine their economic position also. In the following sections we will explore two issues related to the economic security and welfare of unemployed persons during spells of unemployment that began in 1984 and 1985.

VII. Health Insurance and Unemployment Insurance Coverage

An important dimension of the well-being of unemployed persons is whether-or not they have health insurance coverage during their spells of unemployment. This is a topical issue in public policy circles as reflected by the 1985 legislation requiring employers with 20 or more employees to make previously held employment-related health insurance available to workers who have been laid off (the Consolidated Omnibus Reconciliation Act of 1985, P. L. 99-272). Such unemployed workers can retain their insurance coverage at their own expense for up to 18 months. Research has shown that full-time workers in the nonagricultural sector who had been laid off during the 1979 to 1984 period faced a high risk of losing their health insurance coverage (.Podgursky and Swain, 1987). But, of course, this is only part of the pool of unemployed workers.

In an effort to broaden the scope of this issue to all unemployed persons we examined the health insurance status of unemployed persons a month before their spells of unemployment began and during their spells. (The SIPP data analyzed here, unfortunately, do not reflect health insurance coverage obtained through public sources, that is, through Medicare, Medicaid, CHAMPUS, and CHAMPVA, although this information is available in SIPP. Consequently, it is possible that some small portion of unemployed persons analyzed here who reported no private health insurance coverage, may indeed have been covered by one of the public programs.) The data shown in Table 5 relate to persons who began their first spell of unemployment in 1984 and completed it. Coverage status one month before the spell of unemployment started is cross-classified by whether or not the unemployed individuals had health insurance coverage in "all", "some", or no" months of their unemployment spell.

Using the comprehensive definition of unemployment for spells beginning in 1984, we find that of the nearly 11.0 million persons who had coverage one month before becoming unemployed, almost 1.0 million had no health insurance during the period of unemployment. Another 1.2 million had coverage for only some of the months in their unemployment spell. Together, this represents 20.1 percent of the unemployed persons who had coverage before they became unemployed. As has been pointed out elsewhere, however, persons who lose private health insurance reacquire it relatively quickly either by finding employment or some other means (Monheit and Schur, 1987). But the fact remains that for a significant number, one consequence of an unemployment spell is the loss of health insurance.

The probability of losing health insurance coverage, either partially or completely, rises as the length of a spell of unemployment increases. The text table below shows that for those persons with a one month spell about 8 percent had only some or no coverage, but for those with a spell between 5 and 8 months in length about 35 percent had some or no health insurance. This, of course, is another indication of how one's economic security can be jeopardized by a prolonged spell of unemployment.

Table 5. Health Insurance Coverage of Persons Beginning Their First Completed Spell of Unemployment in 1984 By Coverage Status One Month Before Spell Began According to the Limited and Comprehensive Definitions

(Number in thousands)

Status one month before spell began	Spells	Health Insurance Coverage in: All months	Some months	No months
LIMITED DEFINITION				
Total persons	14,389	6,855	1,010	6,524
Covered	8,374	6,579	621	1,174
In own name	3,252	2,098	353	801
Employer-provided	2,435	1,414	320	701
Other	818	685	33	100
In other name	5,122	4,478	270	374
Not covered	6,017	279	389	5,349
COMPREHENSIVE DEFINITION				
Total persons	17,314	9,093	1,723	6,498
Covered	10,969	8,764	1,219	986
In own name	5,140	3,657	821	662
Employer-provided	4,249	2,898	774	577
Other	891	758	48	85
In other name	5,830	5,111	397	322
Not covered	6,344	329	503	5,512

Unemployment duration	Previously covered	Some or no coverage
Total	10,969,000	20.1%
1 month	3,174,000	11.6%
2 months	2,244,000	16.3%
3 months	1,315,000	19.3%
4 months	1,887,000	22.4%
5 to 8 months	1,646,000	35.3%
9 months or more	703,000	48.5%

Table 6 contains data reflecting another aspect of economic security for persons

experiencing spells of unemployment, the receipt of unemployment insurance. In this table, unlike the precious one, we are examining all the completed spells of unemployment that began in 1984. Again, using the comprehensive definition of unemployment we find that of the 26.7 million spells of unemployment, 4.5 million, or 16.6 percent, had some unemployment insurance coverage. (This statistic should not be confused with unemployed persons who at a point in time received unemployment insurance.)

One aspect of interest is how coverage--and by this we mean actual receipt of unemployment insurance during a month--varies among unemployment spells of different lengths. According to the comprehensive definition, coverage amounted to 16 percent for persons with two month spells and almost 50 percent for spells lasting 13 to 15 months. Estimates were also made of the spells in which the receipt of unemployment insurance was terminated before the completion of the spell.[11] According to these estimates, of the 4.5 million spells in which some unemployment insurance was received, in almost 800,000 of them, or 17.8 percent, the receipt of unemployment insurance came to an end before the period of unemployment.

[11]If the spell of unemployment lasted at least one month longer than the monthly receipt of unemployment insurance, it was assumed that benefits had been exhausted.

Table 6. Unemployment Insurance Coverage of Completed Unemployment Spells Beginning in 1984 By Age and Sex According to the Limited and Comprehensive Unemployment Definitions

(Numbers in thousands)

		Number Of Spells Containing:										
Sex and race	Spells	1 mth.	2 mths.	3 mths.	4 mths.	5-7 mths.	8 mths.	9-11 mths.	12 mths.	13-15 mths.	16 mths.	17+ mths.
LIMITED DEFINITION												
Total	21,064	6,730	3,832	2,281	3,813	21249	926	489	230	253	8	172
None	17,887	6,730	3,227	1,813	3,121	1,387	695	340	191	151	82	150
Some	3,177	-	604	468	692	863	231	149	39	102	6	22
Stopped	520	-	-	23	88	171	79	51	14	67	6	22
Men	9,442	2,720	1,695	1,063	1,683	1,110	520	270	94	152	33	102
None	7,606	2,720	1,334	747	1,254	666	387	206	75	105	33	81
Some	1,836	-	362	316	429	444	133	64	19	48	-	22
Stopped	271	-	-	23	61	53	54	18	8	33	-	22
Women	11,622	4,010	2,136	1,219	2,130	1,139	406	219	136	100	55	69
None	10,281	4,010	1,894	1,067	1,868	721	308	134	115	46	49	69
Some	1,341	-	243	152	263	419	98	85	20	54	6	-
Stopped	249	-	-	-	27	118	25	33	6	34	6	-
White	16,099	5,372	2,980	11822	2,738	11863	555	307	158	171	52	82
None	13,458	5,372	2,475	1,413	2,167	1,078	380	208	137	109	46	72
Some	2,641	-	505	409	570	785	175	99	20	61	6	10
Stopped	353	-	-	-	63	143	47	44	6	34	6	10
Black	4,243	1,111	761	379	908	333	357	154	58	74	25	82
None	3,841	1,111	668	349	838	273	302	117	47	41	25	71
Some	401	-	93	31	70	60	56	37	11	33	25	11
Stopped	117	-	-	-	13	28	32	-	-	33	-	11

Table 6 Continued

(Numbers in thousands)

Sex and race	Spells	Number Of Spells Containing: 1 mth.	2 mths.	3 mths.	4 mths.	5-7 mths.	8 mths.	9-11 mths.	12 mths.	13-15 mths.	16 mths.	17+ mths.
COMPREHENSIVE DEFINITION												
Total	26,740	8,727	4,960	3,192	4,451	2,600	1,230	657	297	261	129	237
None	22,281	8,727	4,182	2,381	3,576	1,529	827	385	223	131	117	205
Some	4,459	-	778	811	875	1,072	403	273	73	130	12	32
Stopped	795	-	-	58	195	227	84	99	27	77	6	22
Men	12,369	3,751	2,234	1,612	2,001	1,297	635	340	143	141	68	148
None	9,715	3,751	1,769	1,078	1,450	663	421	204	101	94	68	116
Some	2,654	-	466	533	550	635	214	136	42	46	-	32
Stopped	478	-	-	42	162	109	48	40	20	35	-	22
Women	14,371	4,976	2,725	1,580	2,450	1,303	595	317	154	120	61	89
None	12,566	4,976	2,413	1,302	2,125	866	406	180	122	36	49	89
Some	1,805	-	312	278	325	437	189	137	32	84	12	-
Stopped	317	-	-	15	33	118	36	59	7	42	6	-
White	21,071	7,020	4,039	2,581	3,275	2,234	855	468	185	192	74	147
None	17,222	7,020	3,330	1,867	2,564	1,228	501	278	138	109	62	127
Some	3,849	-	709	713	711	1,007	355	191	47	84	12	20
Stopped	644	-	-	58	147	209	52	99	12	51	6	10
Black	4,885	1,459	800	541	973	325	351	159	90	60	44	82
None	4,424	1,459	737	455	874	277	313	94	79	22	44	71
Some	460		63	86	99	48	38	66	11	38	-	11
Stopped	101	-	-	-	13	18	32	-	-	26	-	11

The table also shows that the receipt of unemployment insurance during a spell of unemployment varies across demographic groups. For example, 21.5 percent of the men's spells had unemployment insurance coverage, compared to 12.6 percent of the women's, and 18.2 percent of whites had their spells covered versus 9.4 percent of the Black's spells. Whether or not one's spell is covered, of course, depends on factors such as if one has worked long enough to earn rights to unemployment insurance and if one had worked in a covered industry.

VIII. Limitations of SIPP Unemployment Duration Data

One problem of the SIPP unemployment duration data is response error. This was mentioned earlier in the context of the large proportion of unemployment spells, defined either by the limited or comprehensive definition, which respondents reported to be of four months in duration, a length of time that coincides with the length of SIPP's reference period. Response error involving unemployment duration estimates, of course, is not unique to SIPP. In the CPS a significant amount of response error has been identified and much research has been devoted to understanding it.

A substantial amount of change in various SIPP survey estimates takes place between the end of one four month reference period and another as compared to within a reference period. This has frequently been referred to as the "seam problem" and has been observed in SIPP's income and program participation estimates (Burkehead and Coder, 1985). With respect to labor force status, Ryscavage and Short (1986) found that the average transition rate in seam months (in the early months of the panel) amounted to 13.1 percent compared to 7.2 percent in nonseam months. Obviously, for unemployment duration estimates, this would have a biasing effect because some changes in labor force statuses have been incorrectly reported. Much more needs to be learned about this unusually large amount of change between survey reference periods, and its effect on the unemployment duration estimates.

Another problem about which little is known but could have an impact on unemployment duration estimates is panel conditioning. Repeated interviews, such as in SIPP, may cause respondents to change their behavior regarding certain questions which affect the quality of the data. In the case of unemployment durations, for example, after a few interviews an individual may simply tell the enumerator that they were unemployed for the entire four month period, rather than identify the weeks or months they were looking for work or on layoff. SIPP is a lengthy interview covering a variety of topics. In addition, because of the topics covered, for example, participation in government welfare programs, respondents may alter their responses to conform to social expectations. Again, the impact of conditioning on SIPP's unemployment duration estimates is unknown, but it is likely to be present.

Panel attrition, in which a sample member drops out of the panel, is especially troublesome when the nonrespondents differ in systematic ways from respondents. McArthur (1988) has investigated attrition in the 1984 panel and its impact on various characteristics, including the

ESR'S. She compared the distributions of ESR's at the time of the first interview for all those sample members who were fully interviewed and for those who missed at least the last two interviews of the panel. Persons who were unemployed for the entire month--ESR 6--represented 3.8 percent of the fully interviewed but 6.3 percent of those who missed interviews. Weighting adjustments are used to account for attrition, but whether or not they fully compensate for missing respondents who had spells of unemployment is unknown.

Finally, the 1984 SIPP panel, as well as subsequent SIPP panels have small sample sizes relative to the CPS and, because of SIPP's longitudinal design, the SIPP data are not as current as data from the CPS. These two factors might reduce the possible usefulness of SIPP for addressing certain policy issues of the day.

IX. Conclusions

This paper has discussed and demonstrated the applicability of SIPP data for the analysis of issues relating to unemployment duration and the well-being of unemployed persons. The focal point of the paper was the large number of unemployment spells beginning in 1984 and 1985 (and eventually completed) that were monitored through SIPP interviews. Three conclusions emerge from the paper.

1. The unemployment information collected in SIPP is a source of data that could be used in conjunction with analyses that have been based on CPS unemployment data. Not only could SIPP continuation rates, or the probabilities of remaining unemployed, be compared to those derived from the CPS, but other labor force transitions could be observed to study the dynamic relationships between labor force "stocks" and "flows."

2. Although SIPP's sample size is small relative to the CPS, its fully longitudinal design and broad subject coverage makes it an attractive data source for addressing issues relating to the well-being of unemployed persons. Some of the findings from a descriptive analysis of unemployment spells that began in 1984 and were completed are:

-- the average length of a completed spell of unemployment (limited definition) was 3.46 months, or 14.9 weeks;

-- more women than men began unemployment spells;

-- men were more likely than women to end a spell of unemployment by finding a job;

-- about 20 percent of the persons who had health insurance coverage before a spell (both definitions) either lost their coverage or had only partial coverage during the

spell;

-- and in less than 20 percent of the spells (,both definitions) begun in 1984, unemployment insurance benefits were received.

3. The labor force information obtained through SIPP has limitations as does all survey data. More research is required to understand these limitations.

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