

**THE SURVEY OF INCOME AND  
PROGRAM PARTICIPATION**

**RECENT DEVELOPMENTS IN THE  
SURVEY OF INCOME AND PROGRAM  
PARTICIPATION**

**No. 106**

**C. Bowie  
Bureau of the Census**

RECENT DEVELOPMENTS IN THE SURVEY OF  
INCOME AND PROGRAM PARTICIPATION

Chet Bowie  
Demographic Surveys Division

ABSTRACT

Since its introduction in October 1983, the Survey of Income and Program Participation (SIPP) has provided both cross-sectional and longitudinal data broadly applicable to analysis of various aspects of economic well-being. Many developments have taken place in the SIPP since October 1987, the last time the program was an agenda item for the Joint Advisory Committee. This paper summarizes these developments including sample restructuring, budget initiative activity, cognitive research, event calendar experiment, computer assisted personal interviewing, marketing campaign, liason with external groups, and the Committee on National Statistics evaluation of the SIPP.

## Background

The Survey of Income and Program Participation (SIPP) is a longitudinal survey designed to provide information needed to study the status and dynamics of program participation and eligibility and their concomitants, and to provide improved information on the income distribution of the population. A general introduction to the SIPP can be found in Nelson, McMillen, and Kasprzyk (1985). That paper describes the design features, survey content and operational procedures and is available through the Center for Demographic Studies of the Census Bureau.

The SIPP program has been an agenda item for the Census Bureau Advisory Committees several times during the last 6 years, the last being in October 1987. The purpose of this paper is to summarize the important developments that have occurred in the program since then. These recent developments include:

1. Sample restructuring
2. Budget initiative activity
3. Cognitive research
4. Event Calendar experiment
5. Computer Assisted Personal Interviewing (CAPI)
6. Marketing campaign
7. Liason with external groups
8. Committee on National Statistics (CNSTAT) evaluation of the SIPP
9. Quality profile
10. 1995 questionnaire and processing system redesign activity
11. On-line database

## Sample Restructuring

The SIPP was originally designed to introduce annual overlapping panels of 20,000 households that are interviewed every 4 months over a 32-month period (a total of eight visits). As a result of various budget constraints, we have been unable to achieve this design goal. Consequently, the Census Bureau, based on discussions with the Federal data user community, has implemented a change in its overlapping panel design beginning with the 1990 Panel. This change involved introducing a larger 1990 Panel, merging part of the 1989 Panel with the 1990 Panel, and truncating both the 1988 and 1989 Panels. In February 1990, we introduced a 1990 Panel of approximately 21,500 households. This included 18,000 new households and 3,500 households retained from the 1989 Panel. The households from the 1989 Panel included all Black, Hispanic, and female-headed no spouse present households, plus a randomly selected sample of other household types to keep the 1989 subsample representative of the population. To accommodate a panel of this size it was necessary to terminate the 1988 Panel at the end of the 6th interview (January 1990). Households in the 1989 Panel that were not part of the 3,500 households selected for inclusion with the 1990 Panel were dropped after their 3rd interview (January 1990).

### Budget Initiative Activity

As a result of the analytical problems encountered by the data user community with the SIPP panels' small sample size (approximately 11,500 households since the 1986 Panel), the Census Bureau began budget initiative actions, starting in fiscal year 1987, to increase the SIPP budget to allow a return to the original sample size and length. Those actions were unsuccessful during the 1987-1990 budget cycles. We are continuing our effort to obtain a budget enhancement for fiscal year 1991 which would begin the process to return the survey to its original design. This process would start by introducing a new panel of 14,000 households in February 1991. This restoration activity would build on the survey restructuring that we introduced in fiscal year 1990. In fiscal year 1992, we would introduce the first of a continuing series of new panels of 20,000 households. The full implementation of the sample restoration process will require additional and increasing funding over a 4-year period.

If our fiscal year 1991 budget initiative is not approved, we will not be able to introduce a new panel in February 1991.

### Cognitive Research

Recognizing the potential that the cognitive sciences can contribute to understanding how respondents manage a questionnaire and an interview situation, the SIPP has undertaken parallel research projects in this area.

One project involves a contract with WESTAT, via an interagency agreement with the Bureau of Labor Statistics, for a large-scale effort. The parallel project is a small Census Bureau effort designed to explore a wide range of issues quickly and informally.

SIPP staff received training in the use of think-aloud and hypothesis testing methods to uncover the principal cognitive processes used by respondents to answer questions. Then they accompanied experienced SIPP interviewers to selected households to observe SIPP interviews and to use the cognitive probing procedures to understand respondents' thoughts and behavior. Approximately 40 Wave 1 interviews were conducted in the Washington, D.C. area during the period June - November 1989. Currently, follow-up interviews are being conducted with some of these households.

A rough draft report on this project has been prepared and the final report is planned for March 1990. The thrust of the report is that SIPP respondents often lack a clear idea of what we want them to do because either we do not tell them or we supply conflicting cues.

The second project, being conducted by WESTAT, involves a more structured, formal approach to generate information about the cognitive processes that respondents use in answering SIPP questions. WESTAT is currently developing a research design that includes:

- an emphasis on describing the response processes and problems associated with reporting information about earnings and program participation.

- data collection to support the major conclusions and recommendations resulting from this project.
- respondent recruitment to obtain diversity on the basis of employment status, age, race, sex, income, and program participation, and
- coordination with the ongoing parallel project at the Census Bureau.

We have already received and commented on WESTAT's preliminary research design and expect to obtain the final plan by March 30 which will include a time schedule for the data collection and analysis phases.

#### Event Calendar Experiment

The event calendar is a new survey aid which field representatives (FRs) began using in the Chicago region in February 1989 with the start of the 1989 Panel. The calendar is being used as an aid to the respondent and FR in correctly placing specific events which occur during the 4-month reference period. Our hypothesis was that by using the calendar, specific events could be observed over time and should produce data which are more accurate and consistent.

The event calendar was developed in response to the seam problem. The seam problem is a phenomenon in the data which occurs between the last month of a reference period and the first month of the next reference period. The problem is the tendency to observe in the data many more transitions or changes in an event (e.g., work status or program participation) at the junction between reference period months than for months within the reference period.

Based on a preliminary analysis of the data based on two waves (one seam), it appears that while the calendar did not pose a functional problem in the interview, it has not significantly improved the dating of events.

We believe a higher level of integration of the calendar with the interview is necessary if it is to aid the respondent. Based on the comments of the Chicago region FRs and office staff, we plan to continue the research project in Chicago in the 1990 Panel. At points in the interview where the calendar can be of aid, the FR will remind the respondent of the calendar (by mentioning it and directing the respondent's attention to it). We also plan to add amounts for programs to the calendar, given the strong support by the FRs for this change. For the 1989 Panel, we did not record amounts for programs; we only recorded an indication of program participation. Finally, we also plan to improve training for using the calendar, provide rules for use in situations where the respondent changes from wave to wave, and to measure the proportion of cases where the calendar is not used at all.

Analysis of the 1989 Panel data will continue with the results scheduled for spring/summer 1990. A similar analysis activity will be conducted for the 1990 implementation.

Copies of the 1989 and 1990 Panel's event calendars are attached.

### Computer Assisted Personal Interviewing (CAPI)

The SIPP is one of the most complex and comprehensive of our current surveys. The questionnaire alone is 50+ pages. It requires a number of special entries and a number of skip patterns based both on responses to previous questions and to items on the control card.

Due to the complexity of the survey instrument, we know that the FR can make one or more errors during the course of an interview. Such errors are discovered in subsequent mainframe edit processing. We use various editing and imputing techniques to compensate for the errors, but the survey data would be better if these errors were eliminated.

Realizing the potential CAPI would bring to the SIPP interviewing environment, we have begun an initiative to acquire a prototype SIPP survey instrument so that a laptop computer can guide the interview. The prototype will combine an authoring language, interviewing module, hyper-relational database, and report generating system into one package that can be loaded on a portable computer.

This initiative will enable the Census Bureau to:

- o evaluate, in a research environment, the effectiveness of using CAPI technology as an alternative data collection method for the SIPP;
- o evaluate a different authoring language and processor for creating a computer assisted interview; and
- o expedite the research and planning activities required to develop an operational plan for introducing CAPI technology into the SIPP.

We have completed the procurement process to acquire the prototype and expect to receive it to begin our evaluation in the next 2-3 months.

### Marketing Campaign

Last fall the Census Bureau approved the development and implementation of a program of paid advertising for SIPP products. This marketing tool will promote SIPP as a viable program with useful products which may be used as an alternative to other data sources. A by-product of this effort will be the gathering of input for our computerized database of SIPP data users and uses.

Our initial ads focus on raising awareness of SIPP, improving name recognition, and providing information on what SIPP can do for the user. Therefore, they are general rather than announcements about the availability of specific products. The ads also contain a source numbered coupon which, when returned, allows the requestor to obtain more information on such things as microdata files, printed reports, and working papers. This also helps us evaluate the effectiveness of the various ads.

To date, we have placed ads in the Journal of Policy Analysis and Management, Journal of Human Resources, American Economic Review, Demography, and AMSTAT News. A copy of one of our ads is attached.

### Liason with External Groups

Census Bureau staff actively participate and assist in the work of four committees specifically interested in the design, content, data products, analytical uses, and methodological issues of the SIPP. First, the SIPP Interagency Committee, chaired by a representative from the Office of Management and Budget, advises and recommends to the Census Bureau changes in SIPP content, particularly as these changes relate to data required for policy analysis. The Interagency Committee includes representatives from over twenty Federal agencies.

The second group with which Census Bureau staff actively work is called the American Statistical Association Survey Research Methods Section Working Group on the Technical Aspects of the SIPP. This working group was organized in late 1986 as a result of discussions held at the April 1986 Census Advisory Committee meetings. The primary focus of this group is to discuss and comment on SIPP research and evaluation projects and methodological issues. This group meets twice a year.

Third, the D.C. Users Group, was formed in 1985 to share information on methodology and results from analyzing SIPP data. This is an informal group of data users in the Washington metropolitan area who meet monthly to exchange views and hear reports on SIPP research. A mailing list of over 75 data users, for purposes of announcing place and date of meeting, is maintained by the Department of Health and Human Services. On average, 20 to 25 users attend the monthly meetings.

Finally, there is a new committee, formed in 1989, called the Special Interest Group on SIPP of the Association of Public Data Users. The primary focus of this group is to assist the Census Bureau in assessing the optimum strategies for data product design, content, and documentation. The committee consists of 12 members who are experts in the fields of social science data base design, access, dissemination, and documentation. This committee meets twice a year.

### Committee on National Statistics (CNSTAT) Evaluation of the SIPP

In the fall 1988, 5 years after the initiation of SIPP, the Census Bureau and the Office of Management and Budget (OMB) requested CNSTAT to undertake an independent evaluation of SIPP. In an era of constrained budget resources, it is critical to determine that a new survey operation such as the SIPP is on target toward meeting its goals and that funding and staff resources are being allocated to the right priorities. A review at this time, furthermore, is opportune in light of the scheduled redesign of household surveys following the 1990 decennial census.

OMB and the Census Bureau posed five questions in the charge to CNSTAT:

1. To what extent is SIPP serving the goals that were originally identified for the survey?
2. What are the current and potential uses of the SIPP data? To what extent can the survey serve user needs that are not now being met?

3. What are the methodological problems confronting SIPP and to what extent can they be resolved?
4. What is the quality and utility of the SIPP data products, including printed publications and machine-readable files?
5. How best can SIPP, other household surveys, particularly the monthly Current Population Survey, and administrative record systems be coordinated and integrated into a comprehensive, cost-effective national system of personal and household income and wealth statistics?

The study is being conducted in two phases. The first phase, which has already been completed, resulted in an interim report that was restricted to selected issues due to the limited time available. (The sponsoring agencies requested a preliminary report by August 1989.) The report identifies the goals of SIPP and how they are being met. It identifies the uses of SIPP by Federal agencies. Finally, it considers the quality and utility of SIPP data products and discusses the methodological problems confronting SIPP. This interim report also identifies issues needing further examination during the second phase of the study.

The interim report stated that SIPP is fulfilling in large part the major goals for which it was established but a more in-depth study will help focus the project for the 1990s.

The second phase is designed to address two major uses of the data--the use of longitudinal measures for policy analysis and the use of cross-sectional and longitudinal data to improve the nation's statistical series on the distribution of income. The second-phase effort will undertake a much more comprehensive and in-depth review of the program than was possible during the first phase and will cover a 2-year period.

The first phase of the study was conducted by a subcommittee of CNSTAT; the second phase is being conducted by a panel to be appointed under the aegis of CNSTAT.

### Quality Profile

The purpose of the SIPP quality profile is to summarize, in convenient form, what is known about the sources and magnitude of errors in estimates based on SIPP. It draws on a large body of literature and provides references for readers who want more detailed information. The report covers both sampling and nonsampling error; however the primary emphasis is on the latter.

The quality profile is addressed to two kinds of readers: users of SIPP data and those who are responsible for or have an interest in the SIPP design and methodology. For the data user, it provides information about the levels of error associated with the specific categories or classes of estimates that they are using in their analysis. For those interested in improving the SIPP design and procedures, it provides information on the magnitude of errors associated with different features of the design, such as length of reference period, procedure for following movers, respondent rules, and quality control procedures for data collection and processing operations.

The initial version of the quality profile was issued in July 1987 (King, Petroni, and Singh, 1987). We expect to update it at intervals of about 2 years in order to incorporate new information about the quality of SIPP data obtained from performance statistics, evaluation studies, methodological experiments, and other sources. The first update has been written and is planned for release in March.

1995 Questionnaire and Processing System Redesign Activity

In conjunction with the 1990 Sample Redesign activity, the Census Bureau is also reexamining the focus of the survey's basic design including the panel design and length, content, questionnaire structure, interviewing mode, and processing system. Our goal is to identify and evaluate potential improvements in these areas for implementation with the redesigned sample in February 1995.

We are soliciting proposals for content changes through the SIPP Interagency Committee. We have requested that their proposals be sent to us by October 1, 1991. This should give us ample time to evaluate the proposals and conduct a pretest if required.

Input from our Working Groups, the second phase CNSTAT evaluation, and the results from our telephone, event calendar, CAPI, and cognitive research efforts will be filtered into our decisions on improving the survey's design and interviewing features.

We also have established an internal committee to generate new ideas about how the SIPP data should be edited, imputed, and structured for ease of analysis. This group will also investigate new hardware and software options that are available.

On-Line Database

The Census Bureau is conducting a feasibility study of providing on-line access to data from the SIPP. Microdata records from the survey will be stored in an Ingres database on a SUN workstation and will be accessible by phone. To protect the integrity of confidential data, this computer will not be connected to any other Census Bureau computer; will have no confidential data on it; and will be located in a separate building.

Interactive access to a sample of cases will provide analysts the ability to test concepts and programs. Overnight batch processing will provide the capability to build custom extracts from the most current SIPP data. This mode of access will reduce the file management and space burden that accompanies working with SIPP data. Using the strength of database design and efficient storage, the 30 tapes of data from the 1984 Panel can be stored on a single disk.

The goal is to have three panels of data--1985, 1986, and 1987--available when the system goes on line in October. Database access to SIPP data was begun at the University of Wisconsin with funding from the National Science Foundation. This project is using many of the concepts developed by that project.

Questions for the Committee

Based on the preceding information, we take this opportunity to address questions to the committee.

1. Does the structure that we have in place for obtaining external advice on the SIPP seem adequate for the 1990s? Are there any missing pieces?
2. How can the interests in SIPP of users outside the Federal government best be conveyed to the Census Bureau?
3. If we are not successful in obtaining a budget initiative to return to SIPP's original panel design, would you propose a design that had only one large panel in the field at once?
4. Do you have any suggestions for modifying or implementing the event calendar to make it more useful as an aid to the respondent and field representative during the interview?
5. Are there other evaluation studies that should be conducted to aid us in our 1995 redesign effort?

List of Attachments

- Attachment 1: 1989 Panel Event Calendar
- Attachment 2: 1990 Panel Event Calendar
- Attachment 3: Copy of AMSTAT News Marketing Ad

Form SIPP-9030 U.S. DEPARTMENT OF COMMERCE  
BUREAU OF ECONOMIC ANALYSIS

# EVENT CALENDAR

## INCOME SOURCE LIST

- Social Security
- U.S. Government Railroad Retirement pay
- Federal Supplemental Security Income (SSI)
- State Supplemental Security Income (State administered SSI only)
- State unemployment compensation
- Supplemental Unemployment Benefits
- Other unemployment compensation (Trade Adjustment Act benefits, strike pay, other)
- Veterans compensation or pensions
- Black lung payments
- Workers' compensation
- State temporary sickness or disability benefits
- Employer or union temporary sickness policy
- Payments from a sickness, accident, or disability insurance policy purchased on your own
- Aid to Families with Dependent Children (AFDC, ADC)
- General assistance or General relief
- Indian, Cuban, or Refugee Assistance
- Foster child care payments
- Other welfare
- WIC (Women, Infants, and Children Nutrition Program)
- Food stamps
- Child support payments
- Alimony payments
- Pension from company or union
- Federal Civil Service or other Federal civilian employee pensions
- U.S. Military retirement pay
- National Guard or Reserve Forces retirement
- State government pensions
- Local government pensions
- Income from paid-up-life insurance policies or annuities
- Estate and trusts
- Other payments for retirement, disability, or survivor
- G.I. Bill
- Other VA educational assistance
- Income assistance from a charitable group
- Money from relatives or friends
- Lump sum payments
- Income from roomers or boarders
- National Guard or Reserve pay
- Incidental or casual earnings
- Other cash income not included elsewhere

1. R.O. Code	1980												Segment									
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
2. Control number																						
3. PSU																						
4. Description of event																						
5. Date of event																						
6. Amount of event																						
7. Source of event																						
8. Other information																						

1. The SIPP survey studies the changes in persons' lives and their financial situation over time. For most people, important changes only occur now and then. However, it is extremely important that we know exactly in which month it happened. This calendar records the answers given in the past year or another household member for some of the most important events in the survey, to help you think about the answers for the current interview period.

- 1. Incident person number
- 2. Date of change?
- 3. Number of persons in household
- 4. Status
- 5. Year 1:
- 6. Age/Salary
- 7. Year 2:
- 8. Age/Salary
- 9. Employed (Income)
- 10. Insurance coverage:
- 11. Site
- 12. Health
- 13. Income:
- 14. Health compensation
- 15. Employment payments
- 16. Support
- 17. Food stamps
- 18. DC/ADC
- 19. General assistance
- 20. C
- 21. Other/Retirement:
- 22. Social Security Retirement
- 23. Other pension
- 24. Local govt. pension



# Need Monthly and Longitudinal Socioeconomic Data?

## Consider: The Survey of Income and Program Participation

By The Bureau of the Census



### SIPP Provides Users with National Monthly Data on:

- Income
- Labor Force Participation
- Government Program Participation

### Some Current Uses

Determination of Household Wealth, Labor Force Activity, Family Characteristics, Number and Characteristics of Families Receiving Benefits, How Program Changes Affect Recipients and Benefit Levels

### Data Source

National Sample of 12,000 households entering sample each year--interviewed every 4 months for 2-1/2 years

### Current Users

Government Program Analysts, Congress, Policy Makers, Planners, Social Scientists

### Data Media

Computer Files (Microdata)  
Printed reports in P-70 Series  
Research Working Papers

### SIPP Data Items include:

Income Amounts and Sources  
Assets, Liabilities  
Demographics-Age, Race, etc.  
Program Participation, AFDC  
Supplemental Security Income  
WIC, Food Stamps,  
Medicaid, Medicare  
Social Security  
Fertility History  
Marital History  
Employment History  
Disability-Home Health Care  
Migration  
Health Insurance and Pensions  
Child Care



(Please detach along this dotted line)

For more information about SIPP, complete this coupon and return.

Please Type or Print

(Company or personal name)

(Additional address/attention line)

(Street address)

(City, State, ZIP Code)

(Daytime phone including area code)

Form 015

### Information Requested On:

- The design and content of SIPP
- How to order published reports.
- List of working papers
- Computer files
- Research files
- Other (please specify)

Return to:  
Customer Services  
Bureau of the Census  
Washington, DC 20233