

## **The Under-Reporting of Transfers in Household Surveys: Its Nature and Consequences**

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### **Abstract**

Benefit receipt in major household surveys is often under-reported. In recent years, as many as half of the dollars received through Food Stamps, Temporary Assistance for Needy Families (TANF) and Workers' Compensation has not been reported in the Current Population Survey (CPS). High rates of understatement are found for many other government transfer programs and in datasets such as the Survey of Income and Program Participation (SIPP) and the Panel Study of Income Dynamics (PSID). These datasets are among our most important for analyzing incomes and their distribution as well as transfer receipt. Thus, this understatement has major implications for our understanding of the economic circumstances of the population and the working of government programs. We provide estimates of the extent of transfer under-reporting for the main transfer programs and the major nationally representative household surveys. We obtain estimates by comparing weighted totals reported by households for these programs with those published by government agencies. Our results show sharp differences across programs and surveys as well as over time. These differences are informative as to the relative importance of the various reasons for under-reporting. The estimates indicate the magnitude of bias in existing estimates and can also be used to adjust estimated program effects on incomes and estimates of program take-up.

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## 1. Introduction

There are many types of analyses for which accurate information on benefit receipt is important and under-reporting of benefit receipt (or misreporting in general) would have important consequences. First, it is common to analyze features of the income distributions of the entire population and various demographic groups, such as the aged. For example, the official income and poverty report for the U.S. (U.S. Census, 2008, is the most recent example) reports such statistics. Second, it is common to analyze the effect of income transfer programs or taxes on that distribution. For example, Engelhardt and Gruber (2006) analyze the effects of social security on poverty and the income distribution. U.S. Census (2007) and Joint Economic Committee Democrats (2004) analyze the mechanical effects of a wide variety of programs and taxes on features of the income distribution. Third, it is common to analyze the fraction of those eligible for a program who decide to apply and are successful, the takeup rate. For example, Blank and Ruggles (1996) examine the takeup of Aid to Families with Dependent Children (AFDC) and Food Stamps, while McGarry (2002) analyzes the takeup rate for Supplemental Security Income. All of these analyses are badly biased if the receipt of the major transfer programs is greatly under-reported. In particular, the income distribution would look less favorable, the effects of transfer programs on income would be understated, and it would appear that many more people who are eligible do not receive transfer program benefits.

This paper provides information on the quality of individual reports of receipt of program benefits for the major transfer programs in the major household surveys. We calculate the ratio of weighted survey reports of benefits received to administrative totals for benefits paid out, the reporting rates. These reporting rates (when subtracted from one) generally provide a lower

bound on the extent of under-reporting. We calculate these reporting rates for a wide range of programs, datasets and years. We relate the degree of under-reporting to survey and program characteristics, such as form of interview and type of questionnaire. This information is informative for both survey designers and data users. We consider ways our results can be used to correct various types of data analyses. For example, the reporting rates we calculate, under certain circumstances, can be used to make under-reporting adjustments to survey estimates of benefit takeup rates.

The programs we examine are Unemployment Insurance (UI), Workers' Compensation (WC), Social Security Retirement (OASI) and Disability (SSDI), Supplemental Security Income (SSI), Food Stamps, the Earned Income Tax Credit (EITC), Aid to Families with Dependent Children (AFDC)/Temporary Assistance for Needy Families (TANF), and the Women, Infants and Children (WIC) program. We calculate reporting rates in five large household surveys that are approximately random samples of the entire U.S. population to facilitate the accuracy of these calculations. The datasets are the Current Population Survey (CPS), the Survey of Income and Program Participation (SIPP), the Panel Study of Income Dynamics (PSID), the American Community Survey (ACS), and the Consumer Expenditure (CE) Interview Survey. We calculate reporting rates for as many years as is feasible. We account for definition and universe differences as well as other data issues.

The datasets that we analyze are among the most important for social science research and government policy. Income numbers from the CPS are the source of the official U.S. poverty rate and income distribution statistics. The SIPP was specifically designed to determine eligibility and receipt of government transfers. The PSID is the main source for information on changes in income and poverty over a lifetime and for changes in income and inequality across

generations. The PSID is also the only survey dataset that allows the longitudinal analysis of the income and consumption of a random sample of the disabled (Charles 2003; Stephens 2001; and Meyer and Mok 2008). The ACS is the replacement for the Census Long Form data and is the largest basic economic survey. The CE Survey is the main source of consumption information in the U.S. These datasets are among our most important for analyzing incomes and their distribution as well as transfer receipt. Thus, the understatement of transfer in these data would have major implications for our understanding of the economic circumstances of the population and the working of government programs. Since there are many indicators of data quality, we also consider some other measures of noncooperation with surveys, including the fraction of responses that are missing and imputed.

## **2. Research Design and Methods**

Past work on the extent of transfer under-reporting has used two approaches. The first approach is the one taken here, the comparison of weighted microdata to administrative aggregates. A second approach compares individual micro data to administrative microdata. Neither approach has been used on a broad scale. The first approach, comparisons to administrative aggregates, has been used more widely, but results are only available for a few years, for a few transfer programs and for some of the key datasets. For some of the key papers, see Roemer (2000), Coder and Scoon-Rogers (1996) and Duncan and Hill (1989). These papers tend to find substantial under-reporting that varies across dataset and program. The use of the second approach, comparisons to administrative microdata, is even more limited in the data. It has often been restricted to a single state, program and dataset (Card, Hildreth and Shore-

Sheppard 2001). Examples of studies that look at more than one program (but still a single dataset) include Moore, Marquis and Bogen (1996) and Sears and Rupp (undated) and Hyuhn et al. (undated). The latter two papers examine Social Security Administration programs.

A third way to examine under-reporting is to compare the characteristics of program recipients in administrative and survey data. This approach has been applied to under-reporting in the Food Stamp program (Meyer and Sullivan 2007). Intuitively, the differences between the characteristics in the two data sources can be used to determine how those characteristics affect reporting. To see how one can formally estimate the determinants of reporting, suppose we want to estimate the probability that a person  $i$  with characteristics  $X_i$  reports receipt in the survey dataset conditional on truly receiving benefits. We might estimate a logit equation for this probability of the form  $P[y_i = 1] = \Lambda(X_i\beta)$  where  $\Lambda(\cdot)$  denotes the cumulative logistic function. If one has a random sample of recipients from an administrative dataset and a random sample of reporting recipients from a survey dataset, one can obtain an estimate of  $\beta$ , by finding the value that solves the moment condition,  $k\sum_j X_j = \sum_i X_i \Lambda(X_i\beta)$ , where  $j$  indexes the observations in the survey dataset and  $i$  indexes the observations from the administrative data source.  $k$  accounts for the difference in sampling rates across the two data sources. This method follows the approach applied in Guell and Hu (2006) to a slightly different problem (but one that is formally very similar). This approach can be used for many datasets and programs and many years, but relies on the survey data and the administrative data representing the same population. Biases in the estimated determinants of reporting could come from imputations, inaccurate weights and false positive reporting in the survey data.

We would like to know how under-reporting has changed over time, how it differs across programs and datasets, and how it varies with individual recipient characteristics. We focus here

on the comparison of weighted survey data to administrative aggregates because this approach can be used for the widest range of transfer programs, the longest time period and many datasets. We would also like to know how reporting varies with individual characteristics, but matches to micro data have been quite limited in their scope. Furthermore, the use of information from microdata matches is likely to be combined with the aggregate data described here to adjust for changes over time, for example. This combination of data could be used to extrapolate results from a one-year microdata match to other years.

## **2A. Calculating Reporting Rates**

A dollar reporting rate can be defined as the following ratio

$$\frac{\text{dollars reported received in a survey weighted to predict population totals}}{\text{dollars paid out as reported in an administrative data source.}}$$

Similarly, one can define a month reporting rate as

$$\frac{\text{months reported received in a survey weighted to predict population totals}}{\text{months paid out as reported in an administrative data source.}}$$

We should emphasize that one can calculate dollar and month reporting rates for sub-groups if one can find administrative totals for geographic areas or demographic groups defined by characteristics such as age and gender. The weaknesses of this approach are that it relies on the

accuracy of weights and the comparability of sample universes. The approach may understate non-reporting by true recipients because of false positive reporting by non-recipients, though some evidence suggests this is small.<sup>2</sup> We calculate dollar and month reporting rates for our nine programs for as many years as are available for the CPS, the SIPP, the ACS, the CE Survey and the PSID. We calculate these reporting rates for program-year-dataset cells.

## **2B. Making the Numerator and Denominator Comparable**

In many cases some adjustments are required to make administrative and survey data comparable. A full description of the data sources and methods can be found in the Appendix. We exclude receipt by those in the U.S. territories from the administrative data when possible since the survey datasets generally do not include individuals in the territories. For some programs, the institutionalized can receive benefits but such individuals are excluded from all of our survey datasets. Sometime programs are combined in the data. In a couple of cases Railroad Retirement Income is combined with Social Security Retirement Income. In addition, the PSID sample weights are not appropriate for weighting to the universe in some years. We adjust them in a manner suggested by the PSID staff. In the PSID, benefit receipt by family members besides the head and spouse is not recorded in some years. We account for these other family members using data from the years when their benefit receipt is available.

The most significant difficulty is that in several of the datasets there are at least some cases where Social Security Disability benefits are combined with Social Security Retirement benefits. In these circumstances, we will use the data published in the various issues of the Annual Statistical Supplement to the Social Security Bulletin to calculate for each year, age,

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<sup>2</sup> See Bollinger and David (1997, 2001) for the case of the Food Stamp program.

schooling status, and gender, the proportion of social security dollars that is paid to OASI and SSDI recipients. We will use these proportions to allocate combined SSDI and OASI benefits to the separate programs whenever we have incomplete information about which program was received and whenever a combined amount was reported for the programs.

### **3. Results**

Table 1 indicates the years and programs available for each dataset. In Tables 2 through 11, we report dollar reporting rates for our nine programs. Since it is often hard to separate out OASI and SSDI reporting, we have a table for the combination (Table 7) as well as the separate programs. Tables 12-17 report average monthly participation reporting rates for six of the programs (Food Stamps, AFDC/TANF, SSI, OASI, SSDI, and WIC). Tables 18 and 19 report imputation rates for the CPS and the SIPP, respectively, while Table 20 reports Social Security imputation rates for both datasets.

Appendix Tables 1 and 2 report very useful summaries of the benefits available by year and respondent type for the PSID and the CPS, respectively. Each table reports reporting rates by year. At the bottom, a simple average over all years available is reported for each dataset.

Reporting rates of all programs, measured as dollars reported in a household survey divided by administrative reports of dollars of benefits paid out, are in almost all cases considerably below one. Household surveys fail to capture a large share of government transfers received by individuals.

Reporting rates vary sharply across programs. Social Security Old Age and Survivors Insurance (OASI) payments and Social Security Disability payments are reported at a reasonably high rate. Over eighty percent of OASI benefits are reported every year in the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP) and over seventy percent in recent years in the Panel Study of Income Dynamics (PSID). The reporting rates for disability insurance tend to be higher. Nevertheless, typically more than ten percent and frequently a higher share of Social Security retirement benefits are not reported.

Reporting rates are especially low for certain programs. Only about forty percent of Workers' Compensation benefits are reported in the SIPP and CPS and an even smaller share is reported in the PSID. Reporting rates for Aid to Families with Dependent Children (AFDC) and its replacement Temporary Assistance for Needy Families (TANF) average about seventy percent as do reporting rates for Unemployment Insurance and Food Stamps. The reporting rates for Supplemental Security Income differs sharply across surveys with over 85 percent reported in the SIPP, but typically under half in the PSID.

The reporting rates for monthly receipt are quite similar to those for dollars for Food Stamps and AFDC/TANF. Assuming that the monthly benefit of those who report and those who do not is similar, this result suggests that individuals report about the right amount on average, conditional on reporting. For the other programs (SSI, OASI, SSDI and WIC) reporting rates for monthly receipt tend to be lower than dollar reporting. This result suggests that individuals that do report receiving benefits, are those that receive

higher monthly benefits, or those that do report, report more on average than they truly receive.

Surveys differ systematically in their ability to capture benefit receipts. The SIPP typically has the highest reporting rate for government transfers, followed by the CPS and the PSID. There are programs, however, that the other surveys do seem to capture somewhat better. Unemployment Insurance and Workers' Compensation are reported at a slightly higher rate in the CPS than in the SIPP.

Some caveats are in order. The reporting of benefit receipt certainly contains some individuals who mistakenly report receipt despite not receiving the benefit. Such mis-reporting means that the fraction of dollars received by true recipients is strictly less than the calculated reporting rates, i.e. our reporting rates if applied to true recipients are biased upward. Second, in the situation where we have incomplete information about the type of social security received, we apply the OASI and SSDI dollar proportions to determine participation of these programs. A more desirable method would calculate these proportions based on participation rather than dollars. Applying these proportions essentially assumes that an individual can only receive benefit from either SSDI or OASI, but not both, in a particular year. Strictly speaking, individuals can receive benefits from both programs in a year, most commonly for those whose SSDI benefit switches automatically to OASI when they reach retirement age. Consequently, our social security participation estimates may be understated.

Third, in certain years of the PSID we do not have information about benefit receipt of non-head and non-spouse family members. Although we have attempted to alleviate this issue by looking at the share of total benefits received by these non-head, non-spouse family members

and scale up the aggregates accordingly, such method assumes that these shares are relatively stable over time. Fourth, adults may receive social security and SSI benefits on behalf of their children. Since administrative data are based on awardees, calculating weighted total benefits based on payees rather than awardees may introduce biases. Unfortunately, most of the household surveys provide little information about exactly who is the true awardee of the benefit. Fifth, and probably most importantly, we need to more fully account for the institutionalized and we need to account for decedents.

We should also note that the validity of these comparisons depend on the weights in the surveys being approximately unbiased. We are encouraged in this regard since one check on the reporting rates is comparisons to administrative microdata which often also show very low reporting rates. Our AFDC, Food Stamps and SSI monthly reporting rates can be compared to those from microdata in Marquis and Moore (1990) for the 1984 SIPP. The two sets of numbers are fairly similar for these programs, though we should note that the administrative microdata are only from four states.

#### **4. Possible Reasons for Under-reporting**

Benefit receipt in household surveys may be underreported for reasons such as imperfect interviewer recall, a desire to reduce interview burden, the stigma of program participation, and the sensitivity of income information. Information on the extent of under-reporting, how it varies across programs and surveys and with characteristics of the interview and the respondent should be informative about the plausibility of different explanations for under-reporting.

The different explanations for under-reporting suggest different approaches to improve reporting. We expect that by comparing programs with different degrees of stigma, and surveys with different question timing and wording we will learn about the explanations for mis-reporting. If the pattern of mis-reporting seems most consistent with recall biases, then changing the timing of the questions relative to the period of receipt may be warranted. If interviewee time burden seems to be the explanation, then the length of the interview may need to be altered. If the stigma of program participation is a major issue, then a focus on question wording and the way interviewers ask the questions may be warranted. The results could also suggest that some dollar items should be calculated based on reported receipt and demographic characteristics, or that respondents should be encouraged to obtain check stubs. Some items could also be obtained through matching to administrative data.

Our findings indicate that dollar reporting rates and month reporting rates (when available), are in almost all cases considerably below one. Household surveys fail to capture a large share of government transfers received by individuals. These reporting rates vary sharply across programs. Social Security Old Age and Survivors Insurance (OASI) payments and Social Security Disability payments are reported at a reasonably high rate. Over eighty percent of OASI benefits are reported in every year in the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP) and over seventy percent in recent years in the Panel Study of Income Dynamics (PSID).

Some of the patterns of reporting by program do not fit with a stigma explanation for under-reporting. Workers' Compensation has the lowest reporting rate but is presumably not high stigma. There have been noticeable declines over time in AFDC/TANF and Food Stamp

reporting, which is broadly consistent with stigma as it has become less accepted for single mothers to be on welfare.

The frequency of receipt or public knowledge of a program seems to matter. Workers' Compensation is received by a small fraction of the population and has the lowest reporting rate. Workers' Compensation may also be the program of which the general public has the least knowledge. It may also be hard for an interviewer to guess that a given person is a recipient and probe further on the questions about receipt of Workers' Compensation. On the other hand, an interviewer will know that anyone 65 or older is likely to be an OASI recipient.

We also find the puzzling result that the EITC is sharply under-imputed in the CPS. This result suggests a problem with weights, misreporting of earnings or children, or tax noncompliance. However, evidence from an analysis of a CPS-IRS microdata match (Liebman, 2001) suggested that noncompliance was not the main explanation.

The finding that SIPP has higher reporting rates than the other surveys is consistent with the focus of the survey, but the methods that lead to higher reporting merit exploration.

## **5. Comparisons to Earlier Studies**

Coder and Scoon-Rogers (1996) report reporting rates for five of our programs for 1984 and 1990 for the CPS and the SIPP. Roemer (2000) reports reporting rates for the same five programs for 1990-1996 for the CPS and the SIPP also. Our reporting rates differ from Roemer's in a number of ways. Roemer combines OASDI with Railroad Retirement. His reporting rates are about four percentage points higher than our OASDI numbers, due to his accounting for decedents and the institutionalized. His SSI and WC reporting rates are each about ten

percentage points higher. The SSI difference appears to be due to Roemer's adjustment for the institutionalized and decedents, while the WC difference seems to be due to his exclusion of lump sum payments from the administrative data. Our UI and AFDC/TANF numbers tend to be within a few percentage points, with his UI numbers lower and the AFDC/TANF numbers generally higher than ours. Nevertheless, both our results and Roemer's do suggest a decline in survey quality over time as measured by benefit reporting.

Duncan and Hill (1989) have also studied the extent of benefit underreporting in the CPS and PSID. They report that for 1979, the CPS accounts for about 69% of SSI, 77% of AFDC income, and 91% of Social Security/Railroad Retirement income. They have also reported that in 1980, the PSID accounts for about 77% of AFDC income, 84% of SSI income and about 85% of Social Security Income. For Social Security and AFDC, their numbers are quite similar to ours. For SSI, however, our reporting rates are somewhat lower for PSID. This difference might possibly be due to the difference in the re-weighting algorithm employed, and that we have not accounted for those who receive benefit but die during the survey year. To account for this latter issue, Duncan and Hill adjust the reporting rate up 5 percent.

## **6. Some Adjustment Methods**

Reporting rates calculated as above can be used to adjust existing raw data analyses. In particular, the reporting rates we will provide can also be used to adjust estimated program effects on income distribution as well as estimates of program takeup. A takeup rate is typically measured as the fraction of eligible individuals or families that receive a given transfer. A conservative adjustment to the typical takeup rate can be obtained by multiplying the takeup rate by the inverse of the reporting probability. This adjustment is conservative because some non-

recipients may report receipt. Other adjustments are possible in more complicated situations. When estimating the effect of a program on the income of a group, one can consider scaling up benefit receipt by one over the reporting rate. As long as non-recipients have the same distribution of characteristics as recipients (where the set of characteristics is those that are used as conditioning variables), the approach is unbiased. An example of such an adjustment in the case of unemployment insurance can be found in Anderson and Meyer (2006) and in the case of UI, Food Stamps, WC, AFDC/TANF, SSI, SSDI and OASI in Meyer and Mok (2008).

## **7. Conclusions and Extensions**

We have taken the first step in understanding under-reporting by calculating reporting rates for many programs, years and datasets. The results indicate substantial under-reporting of benefit receipt in nearly all years for all data sources and programs. There are distinct patterns with some programs reported badly, such as workers' compensation, while others, such as OASI are reported relatively more completely. The SIPP seems to have the highest reporting rates for most programs. Over time, the reporting of many programs has deteriorated. The pattern of under-reporting does not seem to be consistent with a simple story of stigma or the sensitivity of income reporting. Our own preferred explanations are that the ease of reporting determines how well a program is reported and that a desire to reduce the length of interviews is often responsible for under-reporting.

We can extend these results by calculating aggregate based reporting rates for demographic groups, regions or states to make more refined adjustments. Ideally one would also use microdata to match these surveys to program data. It would be useful to analyze such

matches to understand differential mis-reporting and the extent of false positive reporting by nonrecipients.

## Appendix

### 1. The Household Surveys and Technical Details

#### Surveys and Sample Selection

We use the following surveys:

**Panel Study of Income Dynamics (PSID)** – 1968-1997, 1999, 2001, 2003, 2005 (First release) waves are used. The initial sample of the PSID consists of two independent samples: 1) A National Sample (2930 families) of civilian non-institutionalized population of the 48 coterminous states and 2) The SEO (Survey of Economic Opportunity) sample, which consists of 1972 low income families resided in Standard Metropolitan Statistical Areas (SMSAs) and the non-SMSAs in the southern regions. In the 1990 wave, a sample of 2043 Latino households was added, but we do not include them in this study. However, we do include the 1997 immigrant sample, which consists of 441 families.

**Survey of Income Program Participation (SIPP)** – 1984-1993, 1996, 2001 and 2004 panels are used.

SIPP Survey Period, by Panel

SIPP Panel	Begin (reference month)	End (reference month)	Number of Waves
1984	June 1983	July 1986	9
1985	October 1984	July 1987	8
1986	October 1985	March 1988	7
1987	October 1986	April 1989	7
1988	October 1987	December 1989	6
1989	October 1988	December 1989	3
1990	October 1989	August 1992	8
1991	October 1990	August 1993	8
1992	October 1991	December 1994	9
1993	October 1992	December 1995	9
1996	December 1995	February 2000	13
2001	October 2000	December 2003	9
2004	October 2003	Still Ongoing	4 (as of Sept. 2008)

The SIPP sample consists of individuals residing in the United States except people who are:

- a) Living in a household on a temporary basis and have a residence elsewhere.
- b) Armed forces members who are in the household on a temporary basis.
- c) Students whose living quarters are held elsewhere
- d) Inmates in an institution, nursing home residents.
- e) Citizens of foreign countries.

**Current Population Survey – Annual Demographic File/Annual Social and Economic Supplement (CPS-ADF/ASEC)** – 1976-2008 surveys are used. The CPS-ADF/ASEC sample is based on civilian non-institutional population living in the US and members of the Armed Forces living in civilian housing units on a military base or in a household not on a military base.

**American Community Survey (ACS)** – 2000-2006 surveys are used. The coverage of this survey is the non-institutionalized households, also excludes those in college dormitory and other group quarters.

**Consumer Expenditure Survey (CES)** – The 1980-2006 surveys are used. The eligible population is the US civilian non-institutionalized persons, therefore people such as patients, inmates and those who live in camps, communes, convents, monasteries, flophouses, halfway houses, nonstaff units in homes for the aged, infirm, or needy, transient quarters in hotels or motels and missions are excluded.

### **Weighting Schemes**

Weights are needed to compute a population estimate.

- a) PSID – In an email correspondence with the staff at the PSID Statistical Design Group, it is found that although PSID weights in the publicly available datasets are suitable to compute scaling invariant statistics like the weighted mean, they are nevertheless unsuitable for the computation of weighted population totals. This is simply because PSID weights have never been exactly calibrated to external population totals for families and individuals. The recommended approach is to scale linearly the PSID weights using an external dataset, based on characteristics such as age and gender. Doing so will make the sum of the revised PSID weight equals to the total population of the United States in any given year.

We use the CPS-ADF/ASEC as the basis for revising the PSID weights. This is done so for two simple reasons: First our calculation shows that the sum of the weights in the CPS-ADF/ASEC matches the US population very well in any given year. Second, the sample frame of the CPS-ADF/ASEC is very similar to that of the PSID. Third, CPS-ADF/ASEC data are available every year since 1968, the year that the PSID survey began.

An important decision to make in this scaling strategy is what characteristics one should choose to scale up the weights. Choosing too few characteristics is sub-optimal if there is considerable heterogeneity across the population. Choosing too many characteristics is not ideal either because the PSID is not a very large dataset and having no PSID observations in a particular stratum (combination of characteristics) makes scaling impossible. In addition, the PSID has emphasized already that the original PSID weights are designed to provide the correct proportionate representation of individual characteristics and family types in the US household population. Thus the marginal precision gain of introducing an extra characteristic may well be small.

We choose age and gender as the basis of scaling, simply because they are the two most unequivocal characteristics in both the PSID and the CPS-ADF/ASEC datasets<sup>3</sup>. We define 19 age groups (0-4, 5-9, 10-14, 15-19, 20-24, 25-29, ..., 80-84, 85-89 and 90 and above) and two gender groups. Together they constitute 38 strata that our scaling will be based upon. To scale up the PSID individual weights, first we compute the original weighted PSID population (using original PSID individual weights) and weighted CPS-ADF/ASEC population in a particular stratum  $k$ , denote as  $N_{p,k}$  and  $N_{c,k}$  respectively. Then we compute the ratio of these populations in this stratum  $R_k$ , i.e.  $R_k = N_{c,k}/N_{p,k}$ . Finally, for each person  $i$  in this stratum, we multiply his original PSID individual weight  $W_{i,k,p}$  with this ratio, yielding his revised PSID individual weight  $\hat{W}_{i,k,p}$ , i.e.

$\hat{W}_{i,k,p} = W_{i,k,p} R_k$ . We use this revised PSID weight to compute the PSID weighted totals in this paper.

#### b) CPS-ADF/ASEC

Individual weights are used. The only exception is in the calculation of total Food Stamps (1988 survey onwards) where we use household weights because Food Stamp receipts are reported on a household basis.

#### c) SIPP

Calculating weights for the SIPP is not a simple matter because of the overlapping panels. We follow an approach similar in nature to that in the SIPP Users' Guide 2001 (p, 8-19 to 8-23). Essentially, for each program we compute the total weighted receipts (individual monthly weights are applied) in each month. Then for the overlapping months, we weight each of the monthly in proportion to the number of individuals included in that estimate. For example, there are 3 monthly estimates for January 1986, one each from the 1984, 1985 and 1986 panels. The number of individuals who were interviewed in the waves covering these months is 32007.75<sup>4</sup>, 33043, and 30566, respectively. Thus, the weights are: 0.335, 0.346 and 0.32. These are then the weights we use in combining the three January 1986 estimates into one<sup>5</sup>. In other words, when there is more than one national estimate, we weight them based on the number of people behind each of these estimates.

#### (d) ACS

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<sup>3</sup> On the other hand, race is not an unequivocal characteristic. First, the PSID only has race of the head and the spouse (beginning in 1985). Second, both the CPS and the PSID are not very clear about people of multiple racial backgrounds.

<sup>4</sup> This number is not an integer because there were only 3 rotation groups in this month, two of which were from wave 8 and one from wave 9. We divide the number of interviewees by the number of rotation groups in the wave to get the number of interviewees representing one rotation group.

<sup>5</sup> Prior to applying these weights to the estimates, we have adjusted each of these estimates according to the number of rotation groups it represents to obtain a population estimate for that panel. For example, a monthly estimate which was based on 3 rotation groups will be multiplied by 4/3 so it becomes a population estimate for that panel (since each rotation group represents 1/4 of the population). See page 8-14 in the SIPP user manual for a precise explanation.

Individual weights are used throughout.

(e) CES

Consumer Unit weights are used. For social security and SSI benefits (these benefits come from the Member Files), we first obtain the consumer unit total (sum across family members) then apply the consumer unit weights.

**Other Assumptions**

a) We only have 7 months of data for SIPP in the calendar year 1983 (June-December), thus we annualize the weighted totals by taking the average of these 7 months and multiply it by 12.

b) Since not all months in 2000 are covered by the SIPP, we use the 5 months of benefit receipts available and obtain an annualized value by multiplying the average benefit from these 5 months by 12.

c) Administrative data for AFDC and UI (1974-1975, 1977-2004) were originally reported in a fiscal year basis. The adjustment from fiscal to calendar year is done as follows: For the fiscal year 1977 onwards, we take a quarter of the amount in the next fiscal year and three quarters of the amounts in the current fiscal year. For the fiscal year before 1977, we take a half from each of the current and the next fiscal year.

d) Those who answered “don’t know” or “refused” are treated as missing data and hence they are treated as non-recipients.

e) Note that in the CPS-ADF/ASEC, from the 1988 surveys, there was also a question asked at the end of the income section regarding “other income” received and the type of this other income. The possible types of “other income” include AFDC, Social Security, Worker’s Compensation and Unemployment Compensation, amongst many other private income types. We therefore use these responses and add them to the amount they reported in the sections preceding the other income question. We do not add the Unemployment Compensation because there is no indication as to whether it is state unemployment insurance. These additions are generally small, for Unemployment Compensation, it is usually less than 1% in a typical year.

(f) In certain years of the PSID, certain benefits are only reported of the head and the spouse. To partially rectify this survey issue, we consider the share of benefits received by non-head, non-spouse family members (in the years when they are available). We apply these shares to scale up the benefits estimates in the years when appropriate.

## **Identifying recipients in the PSID**

One of the major shortcomings of the PSID is the lack of individual data in certain waves of the survey. In this section, we explain how we obtain aggregates when there is incomplete information regarding individual reciprocity. Readers may find it helpful to read this section in conjunction with appendix table 1 which tabulates, by survey and benefit year, the availability of benefit data.

Survey years 1968-1970: Most benefits are only reported for the head of the family. Thus the aggregates calculated will understate the actual amounts received by all PSID families.

Survey years 1971-1974: During these survey years, AFDC and Social Security are reported as the combined amounts received by the head and the spouse. In order to decide who actually received the said benefits, we use the response to the type of income question in the PSID individual file. The main possible responses are: Labor Income Only, Transfer Income Only, Asset Income Only, Combination including Labor Income, Combination excluding Labor Income. An individual is assumed to receive AFDC and Social Security if the answer to the above question suggests that transfer income is received. After we determine whether the head and/or the spouse received transfer income, we divide the reported amount of benefit equally. Suppose only the head of the family is reported to receive transfer income, all AFDC and Social Security income received by this family will be allocated to the head. If both the head and the spouse are reported to receive transfer income, both the head and the spouse will each get half of the reported AFDC and Social Security Income.

Survey Years 1975-1993: In these survey years, there are two issues to confront. First, again we see that AFDC, SSI and Social Security benefits are reported as the combined amount received by the head and the spouse in 1975-1985. Secondly, all benefits (except Social Security in 1984-1992 waves) received by the OFUMs are also reported as combined amounts. Both issues can be tackled by using the type of transfer received question in the PSID individual file. The question asks what type of transfer was received and the main possible responses are: 1) AFDC only, 2) Other welfare only, 3) Social Security only, 4) Other retirement pay, pensions, annuities only, 5) Unemployment, Worker Compensation only, 6) Alimony, child support only, 7) Help from relatives only, 8) Supplemental Security Income Only, 9) Any combination. Thus we assess what types of benefit each person in the family received using the response to the above question. In the event that the individual answered “Any Combination”, we assume he received all kinds of transfers. Again we divide the reported benefit amount equally between the number of recipients if more than one individual reports reciprocity of the benefit.<sup>6</sup>

Survey years 1994-2003: Most benefits (except Food Stamps, Social Security and SSI (for 2 years)) are reported separately for the head and the spouse only. See the Social Security and SSI sections for more detail on how aggregates are obtained. In addition, the data format has

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<sup>6</sup> If the benefit is reported as the combined amount received by the head and the spouse (denoted as (H+W)), then we divide this amount only between the head and the spouse. If more than one OFUM received a particular type of benefit, we divide the total amount received by the OFUMs by the number of OFUMs who received the benefit. In other words, reported amount received by the head and the spouse is always distributed between the head and the spouse only. Similarly, the amount received by the OFUMs is always distributed between the OFUMs.

changed beginning in the 1994 wave, most benefits are reported in the following format: First, how much benefit was received (the amount question). Second, the frequency (per year, per month, per week, per two weeks etc) of the said amount (the frequency question). Third, during which months were the benefit received. Two sets of these responses are available, one for the head and one for the spouse. To determine the annual amount received based on these questions, we first determine the monthly amount received using the amount and the frequency questions. We then multiply the result by the number of months this benefit was received. However, if the individual answered “per year” in the frequency question, we assume the reported dollars in the amount question as the annual amount he received. The reason for doing so is that the individual may have received the entire reported amount in one month and obtaining the annual amount by the preceding method will understate the actual amount received.

Survey year 2005: The public release of this wave contains the benefit amount received by the head and the spouse separately for 2004, reported just like the 1994-2003 waves.<sup>7</sup> In addition, the amount received by the entire family for 2003 is also available for all benefits. The individual file also includes indicator variables regarding individual reciprocity of a particular type of benefit in 2003. Thus for 2003, we divide the reported family amount equally between the number of persons in the family who reported receiving a particular type of benefit.

Based on these rules, we determine the amount of each type of benefit each member of the family received. The annual aggregate is obtained simply by multiplying the individual amount by the individual revised weight, and then sum the result across all individuals in the year. In the case of Food Stamps and SSI (in 1997 and 1999), annual aggregate is obtained by multiplying the family amount by the revised family weight (average revised weight of the head and the spouse), and then summed across all families.

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<sup>7</sup> The first public release of this wave also includes variables representing the benefit amounts received by the OFUMs in 2004 but their values are zeroes. It is likely that these variables will be made available in future public releases.

## **2. Administrative Data Sources and Details of the Calculations by Program**

### **A. Benefit Dollars**

#### **Aid to Families with Dependent Children and Temporary Assistance for Needy Families (AFDC/TANF)**

##### Administrative Data Sources

(1970-2004) – Fiscal Year Data

U.S. Department of Health and Human Services. 2008. *Indicators of Welfare Dependence*. Annual Report to Congress 2007.

(1970-2004) – Data on territories

U.S. Social Security Administration. Various Years. Annual Statistical Supplement to the Social Security Bulletin. Office of Research, Evaluation and Statistics.

Note: The administrative estimates have been adjusted to exclude amounts paid to Guam, Puerto Rico and Virgin Islands using various years of Annual Statistical Supplement of the Social Security Administration.

##### Technical Notes

PSID: For the 1968 survey, the amount of AFDC is the family total. For the 1969-1970 surveys, we have only the amount of AFDC received by the head of the family. For the 1971-1974 surveys, AFDC is the combined amount received by the head and the spouse. For 1975-1985 surveys, the head and spouse combined amount, and the other family members combined amount are available. For the 1986-1993, the dataset has the amount of AFDC received by the head and the spouse separately. But for other family members, only the combined amount is available. Beginning in the 1994 survey, only the amount received by the head and the amount received by the spouse are recorded, except in the 2005 survey when the amount received by the family is recorded for 2003. We therefore scale up the benefits to account for the non-head, non spouse family members in 1970-1973, 1993-2002, and 2004.

SIPP: Reported consistently.

CPS-ADF/ASEC: For the 1968-1975 surveys, AFDC is combined with old age assistance, aid to the blind and disabled. There are no variables that indicate which benefit the person received. We exclude these years in calculating the average reporting rate. From the 1976 survey, AFDC/TANF is combined with General Assistance, but there are variables indicating whether the person received each of these benefits. We use these variables to exclude those who only received General Assistance. Nevertheless it should be noted that in the case that the interviewee received both General Assistance and AFDC/TANF, we cannot discern the amount of these benefits separately. In this case, we include it as if all amounts received are AFDC/TANF.

ACS: The ACS reports the amount of Public Assistance received.

CES: The CES reports the amount of public assistance, welfare, and money received for job training grants.

## **Unemployment Insurance**

### **Administrative Data Sources**

(1976-2004) – UI Data and Extended Programs Data (States and Territories)  
U.S. Department of Labor. Various Years. *Unemployment Insurance Financial Data Handbook*. Employment and Training Administration. ET Handbook No. 394

(2005-2007) – UI Data and Extended Programs Data (States and Territories)  
Unemployment Insurance Data Summary. 2008. U.S. Department of Labor – Employment and Training Administration. <http://workforcesecurity.doleta.gov/unemploy/content/data.asp> (accessed September 12, 2008)

Note: The administrative aggregates have been adjusted to exclude payments to Puerto Rico and Virgin Islands.

### **Technical Notes**

PSID: Unemployment Insurance and Workers' Compensation are combined in the 1968-1974 waves. In addition, they are not reported for every family member. See Appendix Table 1 for more information. In calculating the average reporting rate, we only include the 1976-2004 years. We also scale up the benefits to account for the non-head, non spouse family members in 1993-2002, and 2004.

SIPP: Reported Consistently as “Amount of State Unemployment Compensation”. SIPP also has “Supplemental Unemployment Compensation” and “Other Unemployment Compensation”. The combined sum of these two non-state unemployment benefits never exceeds 5% of the total administrative state UI benefits payouts. In a typical year, total Supplemental Unemployment Compensation in the SIPP constitutes only about 2% of the administrative UI total. For Other Unemployment Compensation, that percentage is around 1%. We only count State Unemployment Compensation when computing UI weighted totals.

CPS-ADF/ASEC: For the 1968-1987 surveys, Unemployment Insurance and Workers' Compensation are combined into one category. In some of the years, the category also includes veterans benefits. See Appendix Table 2 for more detail. In calculating the average reporting rate, we only include the years 1987-2007.

CES: The CES reports the amount of unemployment compensation.

## **Workers' Compensation**

## Administrative Data Sources

(1976-1986)

Nelson Jr., William J. 1992. "Workers' Compensation: 1984-88 Benchmark Revisions." *Social Security Bulletin* 55, no. 3:41-58.

(1987-2006)

Sengupta, I., V. Reno, and J.F. Burton, Jr. (2003), *Workers' Compensation: Benefits, Coverage, and Costs* (National Academy of Social Insurance, Washington DC)

Note: We consider only cash payments, obtained by removing the medical portion of the total program cost.

## Technical Notes

PSID: Unemployment Insurance and Workers' Compensation are combined in the 1968-1974 waves. In addition, they are not reported for every family member. See Appendix Table 1 for more information. In calculating the average reporting rate, we only include the years 1976-2004. We also scale up the benefits to account for the non-head, non spouse family members in 1993-2002, and 2004.

SIPP: Reported consistently as "Amount of Workers' Compensation"

CPS-ADF/ASEC: For the 1968-1987 surveys, Unemployment Insurance and Workers' Compensation are combined as one category. In some of the years, the category also includes veterans benefits. See Appendix Table 2 for more detail. In calculating the average reporting rate, we only include the years 1987-2006.

CES: The CES reports the amount of Worker's Compensation, Veterans' Benefits (include education benefits but excludes military retirement benefits) combined.

## **Food Stamps**

### Administrative Data Sources

(1973-2002)

Administrative totals for 1967-2002 are specially provided to us (via email) by the Food and Nutrition Services.

(2003-2004)

Food Stamps Program Data. 2006. Food and Nutrition Services, U.S. Department of Agriculture <http://www.fns.usda.gov/pd/fspmain.htm> (accessed April, 2006)

(2005-2007)

Food Stamps Program Data. 2008. Food and Nutrition Services, U.S. Department of Agriculture <http://www.fns.usda.gov/pd/fspmain.htm> (accessed September 10, 2006)

Notes: The administrative aggregates have been adjusted to remove payments received by people in Puerto Rico, Guam and Virgin Islands. Note that Puerto Rico implemented Food Stamps beginning in Fiscal Year 1975 until June of Fiscal Year 1982.

### Technical Notes

PSID: There are Food Stamps questions in all surveys except the 1973 survey. Note that the earlier Food Stamps estimates are implausibly large and hence are excluded in the table. The reason being the possibility that free food is included (in the 1968 survey, the survey question was: Did you (family) get any free food, clothing, or food stamps worth more than \$50 in 1967? If yes, how much did that save you last year), the longitudinal nature of the survey may cause respondents in the subsequent waves to include free food when asked about food stamps. Since Food Stamps are reported on a family basis, we apply the revised family weights in obtaining the aggregate.

SIPP: Asked consistently.

CPS-ADF/ASEC: Food Stamp questions are asked beginning with the 1980 survey. These questions are asked at the household level and so are weighted by the household weight. Food stamps data in the 2008 survey are withheld.

CES: The CES reports the value of Food Stamps received. Food Stamps data for the 1982-1985 surveys are obtained from the Income File rather than from the Consumer Unit (Family) files. Food Stamps values beginning in the 2001 survey includes electronic benefits.

### **Supplemental Security Income**

#### Administrative Data Sources

(1974-2005)

U.S. Social Security Administration. 2005. 2005 SSI Annual Report. Office of the Chief Actuary. (Tables IV C1, C4, C5)

(2006-2007)

U.S. Social Security Administration. 2008. 2008 SSI Annual Report. Office of the Chief Actuary. (Tables IV C1, C4)

(1978-2006) – Territories Data

U.S. Social Security Administration. Various Years. Annual Statistical Supplement to the Social Security Bulletin. Office of Research, Evaluation and Statistics.

The administrative aggregates have been adjusted to remove SSI received by people living in Marianna Islands. Note that generally only US residents are eligible for SSI.

### Technical Notes

PSID: Beginning in the 1994 survey, SSI is only reported for the head and the spouse. However, in the 1999 and 2001 survey, SSI for the family is also reported for the year before the previous year (1997 and 1999 respectively). To calculate the weighted total SSI benefits in these two years, we apply the revised family weights since there is virtually no information regarding individual reciprocity. We also scale up the benefits to account for the non-head, non spouse family members in 1993-2002, and 2004.

SIPP: The SSI question only asks about federal SSI. We assume that reported amounts include state supplementation because there is not a separate question about state funded SSI, and we believe it is unlikely respondents understand the financing of the program.

CPS-ADF/ASEC: Questions about SSI are asked consistently beginning with the 1976 survey.

ACS: Amount of SSI received by the individual is available.

CES: The Member Files of the CES reports the amount of SSI received.

## **Social Security**

### Dividing Social Security Income

Social security income in the surveys we examine is often reported without specifying which program the income comes from and deducing whether it is SSDI or OASI becomes virtually impossible. Similarly, an individual may receive benefits for both social security programs but the annual amount he received for each program is never explicitly specified. In these circumstances, we use the data published in the various issues of Annual Statistical Supplements to calculate, for each year, age, schooling status, and gender, the proportion of social security dollars that is paid to OASI and SSDI recipients.<sup>8</sup> We use these proportions to determine the amount of SSDI and OASI the individual received whenever we have incomplete information about why he received social security or whenever he received money from both the SSDI and OASI programs.<sup>9</sup>

### Administrative Data Sources

(1967-2007)

Social Security and Medicare Benefits. 2008. U.S. Social Security Administration. <http://www.socialsecurity.gov/OACT/STATS/table4a4.html> (accessed September 10, 2008)

(1967-2007) – Data on the territories

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<sup>8</sup> To reduce computational burden, these proportions are calculated for the following age groups only: 0-17, 18, 19, 20, 21, 22, 23, 24, 25-29, 30-34, 35-39, 41-44, 45-49, 50-54, 55-59, 60, 61, 62, 63, 64, 65+. One set of these proportions are calculated for men and women separately. A separate set of proportions is also calculated for those students who were 18-24.

<sup>9</sup> Note that the demographic data published in the Annual Statistical Supplements represents what happened in December of each year. Thus in constructing the official proportions for each calendar year we take the average of these proportions in the two adjacent years.

U.S. Social Security Administration. Various Years. Annual Statistical Supplement to the Social Security Bulletin. Office of Research, Evaluation and Statistics.

Notes: The administrative estimates have been adjusted to exclude amounts paid to American Samoa, Guam, Puerto Rico, Virgin Islands and those living abroad using various years of Annual Statistical Supplements of the Social Security Administration.

### Technical Notes

#### PSID

For the 1968-1969 waves, benefit amounts are reported for the head only and are coded in bracketed form. We take the midpoint of each bracket as the amount the individual receives. For 1984-1993 waves, the type of social security is reported. If the individual reported receiving both SSDI and OASI, then his amount of social security income will be divided between the two programs using the Annual Statistical Supplements. For the 1994-2003 waves, in general we have only the total amount of social security income received by the family. To decide which member in the family received social security in these years, we adopt two approaches: First we use the panel structure of the PSID, if the individual received social security in the 1993 wave (1992 for OFUMs), we assume this individual always receive social security in the 1994-2003 waves. Secondly, if the individual is reported being permanently disabled or retired, we assume he receive social security. The amount of social security received by the family will be divided equally between family members who we determine as social security recipients and the amount of OASI and SSDI each member received is then determined using the proportions obtained from the Annual Statistical Supplements. For the 2005 wave, we only have the amount of social security the family received in 2003 but we also know which member of the family received social security in 2003, we divide the amount equally between recipients in the family and again determine OASI and SSDI amounts based on the proportions obtained in the Annual Statistical Supplements. We also scale up the benefits to account for the non-head, non spouse family members in 1970-1973.

SIPP: The individual amount of social security income received is recorded. There are two variables that indicate the first two reasons for receiving social security income but are only asked once (the first time the individual indicated receipt of social security) in the 1984-1993 panels. Hence we assume that the reasons for receiving social security are the same for all the waves in these panels. For the 1996 panel, the reasons for receiving social security are not asked in waves 2-8, thus we take the nearest answer available. Thus reasons for receiving social security from wave 2 to wave 5 (second month) are the same as those in wave 1. When the reasons for receiving social security imply that the individual may have received from both the SSDI and OASI program, we use the Annual Statistical Supplements to obtain the amount of SSDI and OASI for this individual.

CPS-ADF/ASEC: Only social security income received by the individual is available. For the 1968-1987 surveys, social security income is combined with railroad retirement. For the 1976-1987 surveys, two variables indicating whether the person received social security and railroad retirement benefits are available. However, we cannot perfectly distinguish the two benefits

when both benefits are received. If the person indicated he received both railroad retirement benefit and social security, we treat the entire sum as social security for these years. Since no information on type of social security received is available, we determine the amount of SSDI and OASI the individual received based on the age, gender and schooling status of this individual, using the Annual Statistical Supplements.

ACS: Only social security income the individual received is available. We use the Annual Statistical Supplements to determine the amounts of SSDI and OASI.

CES: The Member files of the CES reports, for each member in the Consumer Unit, the total amount of Social Security and Railroad Retirement income received. We use the Annual Statistical Supplements to determine the amounts of SSDI and OASI based on the individual's age, gender and schooling status.

### **Earned Income Tax Credit**

#### Administrative Data Sources

(1991-2003)

U.S. Government Printing Office (2004), 2004 Green Book. US House of Representatives Committee on Ways and Means. Washington DC (Table 13-14)

(2004-2006)

U.S. Office of the President of the United States. 2008. Historical Tables for the Budget of the United States Government – Fiscal Year 2009. Office of Management and Budget

#### Technical Notes

PSID: Does not have information on EITC

SIPP: Information on EITC is available in the topical modules as below:

EITC variable availability and Topcode in SIPP, by panel

Panel	Topical Module in wave	Year of EITC	Topcode
1991	8	1992	\$1000
1992	5	1992	\$1000
1992	8	1993	\$1000
1993	5	1993	\$1000
1993	8	1994	\$1000
1996	4	1996	\$3500
1996	7	1997	\$3500
1996	10	1998	\$3500
2001	4	2001	\$3500
2001	7	2002	\$3500
2004	4	2003	\$4000

The amounts of EITC reported in these topical modules suffer from two problems. First of all, the amounts are reported in categorical forms with many individuals' receipt topcoded.<sup>10</sup> For the non-topcoded value, we take the midpoint of the interval as the amount of EITC received. For the topcoded values, we rectify this by replacing the top-coded values by the mean of the conditional distribution of EITC amount reported in the CPS-ADF/ASEC. That is, we use the CPS-ADF/ASEC and select those individuals whose receipts of EITC are above the topcoded value in the SIPP, we take the average of EITC receipts of these individuals and replace the topcoded value in SIPP by these averages<sup>11</sup>. The second problem is the apparent low response rate of these EITC questions in the SIPP as Mikelson et al (2004) reported.<sup>12</sup>

CPS-ADF/ASEC: Reported consistently from the 1992 survey onwards. The survey aggregate is calculated based on individual weight.

### **Women, Infants and Children (WIC)**

#### Administrative Data Sources

(1973-2002)

Administrative totals for 1980-2002 are specially provided to us (via email) by the Food and Nutrition Services.

(2003-September 2004)

WIC Program Data. 2006. Food and Nutrition Service, U.S. Department of Agriculture. [http://www.fns.usda.gov/pd/WIC\\_Monthly.htm](http://www.fns.usda.gov/pd/WIC_Monthly.htm) (accessed April, 2006)

(October 2004-December 2007)

<sup>10</sup> As much as 55% of the recipients in the 1993 panel had their amounts received topcoded.

<sup>11</sup> These conditional means in the CPS are: 1264.58 (1992), 1338.74 (1993), 1776.56 (1994), 3553.61 (1995), 3634.98 (1997), 3709.19 (1998), 3855.40 (2001), 3954.76 (2002) and 4220.97 (2004).

<sup>12</sup> See Mickelson, K.S. and R. I. Lerman (2004): "Relationship between the EITC and Food Stamp Program Participation Among Households with Children", Washington, DC: The Urban Institute

WIC Program Data. 2008. Food and Nutrition Service, U.S. Department of Agriculture. <http://www.fns.usda.gov/pd/wicmain.htm> (accessed August 28, 2008)

### Technical Notes

SIPP: WIC Dollars amounts are also available but note that the structure of the question changed beginning with the 1996 panel. Prior to the 1996 panel, WIC receipt was recorded for children 0-4 years of age, as well as for the adult women in the family. But from the 1996 panel on, we only see amount of WIC receipt for those who were 15 or older (this is a restriction placed by the SIPP).

## **B. Average Monthly Participation**

### **AFDC/TANF Participation**

#### Administrative Data Sources

(1980-2007)

TANF Caseload Data. 2008. Administration for Children and Families, U.S. Department of Health and Human Services. [http://www.acf.hhs.gov/programs/ofa/data-reports/caseload/caseload\\_archive.html](http://www.acf.hhs.gov/programs/ofa/data-reports/caseload/caseload_archive.html) (accessed September 10, 2008)

#### Technical Notes

We compute average monthly participation at a family level. All numbers are weighted using family weights.

PSID: For the 1994 and later waves, it asks, for each month, whether AFDC/TANF were received, separately for the head and the spouse. We assume therefore that either participation of the head or the spouse constitutes family participation.

SIPP: Information on monthly reciprocity is available. Note again that we do not have complete calendar year coverage for 1983 and 2000. Specifically, SIPP does not cover January 1983 – May 1983 and March 2000-September 2000. Thus we adjust the administrative monthly average participation so they cover the same months for these two years as the SIPP.

CPS-ADF/ASEC: The CPS-ADF/ASEC asked the number of months Public Assistance was received<sup>13</sup> (1988-2008 surveys). Note that since public assistance included General Assistance, we have made adjustment so those who received only General Assistance are not counted.

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<sup>13</sup> In the codebooks, this question was phrased in many years as: “In how many months of 19.. did ... receive social security payments?” This question was asked under the public assistance section and was asked immediately after the question of whether AFDC was received. Thus we conjecture that the term “social security” in the above months question is a typographical error.

## **Food Stamps Participation**

We look at participation at a household level, this is primarily due to the limitations of the surveys. In the SIPP, the coverage indicator (i.e. whether a person is covered by food stamps) is not asked if the person is under 15 years of age. This issue becomes complicate when there are multiple families living in a household, and they can be related or not related. Note that Food Stamps are officially determined on a household basis. For the CPS-ADF/ASEC, it mainly asks only the number of children covered by food stamps. It is then not so clear whether the spouse is also covered by food stamps. Also note that administrative household participation data is not available prior to the 1980 fiscal year.

### Administrative Data Sources

(1973-2002)

Administrative totals for 1967-2002 are specially provided to us (via email) by the Food and Nutrition Services.

(2003-2004)

Food Stamps Program Data. 2006. Food and Nutrition Services, U.S. Department of Agriculture <http://www.fns.usda.gov/pd/fspmmain.htm> (accessed April, 2006)

(2005-2007)

Food Stamps Program Data. 2008. Food and Nutrition Services, U.S. Department of Agriculture <http://www.fns.usda.gov/pd/fspmmain.htm> (accessed September 10, 2006)

### Technical Notes

PSID: For the 1994 and later waves, it asks, for each month, whether food stamps were received. Prior to the 1994 surveys, it asked instead how many months in the previous calendar year did the individual use food stamps (monthly reciprocity also available for 1984-1993 waves). Basically we have information about how many months did the individual use/receive food stamps for the calendar years 1975-2002. The PSID also asked the number of persons in the family covered by food stamps, but we will not use them as we are comparing household participation.

SIPP: Information on monthly reciprocity is available. Note again that we do not have complete calendar year coverage for 1983 and 2000. Specifically, SIPP does not cover January 1983 – May 1983 and March 2000-September 2000. Thus we adjust the administrative monthly average participation so they cover the same months for these two years as the SIPP.

CPS-ADF/ASEC: The CPS-ADF/ASEC asked the number of persons covered, and the number of months covered by food stamps. These questions are asked in the 1980-2008 surveys.

## **SSI Participation**

### Administrative Data Sources

(1974-2007)

U.S. Social Security Administration. Various Years. Annual Statistical Supplement to the Social Security Bulletin. Office of Research, Evaluation and Statistics.

Note: Official Data give current participation of December of each year. We compute average monthly participation of year  $t$  by taking the average of participation numbers in December of year  $t$  and year  $t-1$ .

### Technical Notes

We compute SSI participation at the individual level. Since we can obtain only unique participation in the PSID, CPS-ADF/ASEC and the ACS, we use the SIPP and obtain the ratio of unique participation to average monthly participation estimates, then we convert unique participation in the PSID, CPS-ADF/ASEC and the ACS using these ratios.

PSID: These data give unique participation in a calendar year, and we convert to average monthly participation using the SIPP as described above. We also scale up the participation aggregates to account for the non-head, non spouse family members in 1993-2004.

CPS-ADF/ASEC: These data give unique participation in a calendar year, and we convert to average monthly participation using the SIPP as described above.

ACS: These data give unique participation in a calendar year, and we convert to average monthly participation using the SIPP as described above.

SIPP: SIPP data can give both unique and average monthly participation.

## **Social Security Participation**

### Administrative Data Sources

(1974-2007)

Social Security Beneficiary Statistics. 2008. U.S. Social Security Administration.  
<http://www.ssa.gov/OACT/STATS/OASDIbenies.html> (accessed September 15, 2008)

Note: Official Data give current participation of December of each year. We compute average monthly participation of year  $t$  by taking the average of participation numbers in December of year  $t$  and year  $t-1$ .

### Technical Notes

In the PSID, CPS-ADF/ASEC, ACS (and sometimes SIPP), we do not know the type of social security the individual received (OASI or SSDI). Using data from the Annual Statistical Supplements, we look at the fraction of dollars spent on SSDI/OASI for someone in the same

age and gender group, and we determine OASI/SSDI participations by splitting the individual's weight according to these fractions.<sup>14,15</sup>

Since we can obtain only unique participation in the PSID, CPS-ADF/ASEC and the ACS, we use the SIPP and obtain the ratio of unique participation to average monthly participation estimates, then we convert unique participation in the PSID, CPS-ADF/ASEC and the ACS using these ratios.

PSID: These data give unique participation in a calendar year, and we convert to average monthly participation using the SIPP as described above. Note that in the 1975-1983 surveys, the type of social security (SSDI or OASI) is unknown. We therefore split the weight of the individual according to the fraction of social security dollars spent on SSDI/OASI as described above.

CPS-ADF/ASEC: These data give unique participation in a calendar year, and we convert to average monthly participation using the SIPP as described above. Since the type of social security is unknown, we split the weight of the individual according to the fraction of social security dollars spent on SSDI/OASI as described above.

ACS: These data give unique participation in a calendar year, and we convert to average monthly participation using the SIPP as described above. Since the type of social security is unknown, we split the weight of the individual according to the fraction of social security dollars spent on SSDI/OASI as described above.

SIPP: SIPP data can give both unique and average monthly participation. In the event that we do not know the type of social security received, we split the weight of the individual according to the fraction of social security dollars spent on SSDI/OASI as described above.

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<sup>14</sup> In future revisions, we shall calculate these fractions by looking at the share of people (rather than dollars) who receive SSDI/SSDI for a given age and gender group.

<sup>15</sup> A major limitation of this method of determining OASI/SSDI participation is that certain individuals may receive both types of social security benefits in a given year. In future revisions, we can adjust our method by looking at the percentage of people who receive SSDI or OASI or both, using the SIPP.

## **Women, Infants and Children (WIC) Participation**

### Administrative Data Sources

(1973-2002)

Administrative totals for 1980-2002 are specially provided to us (via email) by the Food and Nutrition Services.

(2003-September 2004)

WIC Program Data. 2006. Food and Nutrition Service, U.S. Department of Agriculture. [http://www.fns.usda.gov/pd/WIC\\_Monthly.htm](http://www.fns.usda.gov/pd/WIC_Monthly.htm) (accessed April, 2006)

(October 2004-December 2007)

WIC Program Data. 2008. Food and Nutrition Service, U.S. Department of Agriculture. <http://www.fns.usda.gov/pd/wicmain.htm> (accessed August 28, 2008)

### Technical Notes

SIPP: Participation in WIC is determined by the survey variable: “Was the person covered by WIC for this month?”

PSID: Family participation in the WIC program is determined by the survey question “During the (previous year), did anyone in the family get food through the WIC program?” Note that this is a family question, so we cannot identify who in the family received WIC. The following assumption is made: If the family reported participating, then we assume that those in this family who were 1) Female who was 15-45 years of age in the survey year or 2) between 0-5 years of age (in the survey year), participated the WIC program.

The question response yields unique participation count, and we convert it to average monthly participation.

CPS-ADF/ASEC: The question structure is very similar to the PSID. Thus we proceed in the same fashion as we have done for the PSID. Though CPS-ADF/ASEC also asked the number of people in the household receiving WIC, we do not use this variable because it is not so clear whether this implies participation (an adult might receive WIC only because of his/her children).

Thus the way we determine participation in the CPS-ADF/ASEC and PSID will overstate the number of WIC participants.

### **3. Imputation Rates**

#### **Average Imputation Rates**

For each survey and each benefit type, we look at the percentage of the weighted total that was imputed or allocated. In the SIPP, from the 1996 panel, there was also something known as cold-deck and hot-deck imputations, we count these as imputations as well.

In the case of Social Security, SIPP has higher imputation rate because of: 1) Lack of program information about Children's Social Security benefits, which is about 4% in each year in the SIPP and 2) In SIPP, when the individual is asked to nominate up to two reasons of social security receipt, one possible response is "Spouse or Dependent Child" and such social security earnings will be subjected to imputation. While in the PSID, the possible responses are "Disability, Retirement, Survivor and any combination.

The SIPP imputation rates in 1998-2003 are lower because the reason for social security receipt is available in every wave (and it is subjected to change between waves). However, in the 1983-1995 years, these responses are typically available only once per panel (thus whether imputation is needed depends on this only response).

**Table 1: Benefit Programs and Periods Examined, by Survey**

Aggregate Dollars

Benefit	Survey and Calendar Years				
	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
AFDC/TANF	1970-2004	1983-2004	1975-2004	1999-2005	1979-2006
UI	1976-2004	1983-2005	1987-2007		1979-2005
WC	1976-2004	1983-2005	1987-2006		1979-2006
SSI	1974-2004	1983-2005	1975-2007	1999-2005	1979-2006
OASI	1970-2003	1983-2005	1975-2006	1999-2005	1979-2006
DI	1970-2003	1983-2005	1975-2006	1999-2005	1979-2006
Social Security	1970-2003	1983-2005	1972-2006	1999-2005	1979-2006
EITC		1992-2004	1991-2006		
WIC		1983-2005			
FS	1973-2004	1983-2005	1979-2006		1979-2006

Average Monthly Participation

Benefit	Survey and Calendar Years				
	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
AFDC/TANF	1993-2004	1983-2005	1987-2007		
SSI	1974-2004	1984-2004	1975-2007	1999-2005	
OASI	1974-2004	1984-2004	1974-2007	1999-2005	
DI	1974-2004	1984-2004	1974-2007	1999-2005	
WIC	1998-2004	1983-2005	2000-2007		
FS	1980-2004	1983-2005	1980-2006		

**Table 2**  
**Aid to Families with Dependent Children/Temporary Assistance to Needy Families**

Year	Admin Total (in millions of dollars)	Survey - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1970	4,750	4,379					0.922				
1971	5,984	4,703					0.786				
1972	6,747	4,413					0.654				
1973	7,155	4,306					0.602				
1974	7,861	5,716					0.727				
1975	9,016	6,035		6,630			0.669		0.735		
1976	10,004	6,644		7,234			0.664		0.723		
1977	10,417	6,522		7,832			0.626		0.752		
1978	10,631	6,938		7,658			0.653		0.720		
1979	11,003	7,116		8,117	9,266		0.647		0.738		0.842
1980	12,114	8,516		9,314	8,316		0.703		0.769		0.687
1981	12,770	9,196		9,673	8,210		0.720		0.757		0.643
1982	12,973	8,907		10,120	8,705		0.687		0.780		0.671
1983	13,727	9,803	10,830	10,786	9,287		0.714	0.789	0.786		0.677
1984	14,352	9,449	11,676	11,170	9,456		0.658	0.814	0.778		0.659
1985	14,676	8,768	11,452	11,419	8,952		0.597	0.780	0.778		0.610
1986	15,437	8,940	11,477	12,428	12,165		0.579	0.743	0.805		0.788
1987	16,336	9,179	11,926	12,156	12,804		0.562	0.730	0.744		0.784
1988	16,734	10,097	11,519	11,980	12,123		0.603	0.688	0.716		0.724
1989	17,486	10,098	12,359	12,167	11,965		0.577	0.707	0.696		0.684
1990	18,911	10,795	14,441	13,463	13,972		0.571	0.764	0.712		0.739
1991	20,743	12,937	15,405	14,813	16,241		0.624	0.743	0.714		0.783
1992	22,169	12,486	15,931	15,033	18,603		0.563	0.719	0.678		0.839
1993	22,318	11,614	18,191	16,712	19,103		0.520	0.815	0.749		0.856
1994	22,509	10,255	17,853	16,165	17,358		0.456	0.793	0.718		0.771
1995	21,534	10,349	18,359	14,940	15,295		0.481	0.853	0.694		0.710

*(continued)*

**Table 2 (continued)**  
**Aid to Families with Dependent Children/Temporary Assistance to Needy Families**

Year	Admin Total (in millions of dollars)	Survey - Weighted Total (in millions of dollars)					Reporting Rate					
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES	
1996	19,611	10,109	15,104	13,107		11,849	0.515	0.770	0.668		0.604	
1997	16,742		12,675	9,888		9,840		0.757	0.591		0.588	
1998	14,282	5,555	9,692	7,797		8,017	0.389	0.679	0.546		0.561	
1999	12,849		7,635	6,015	8,232	6,217		0.594	0.468	0.641	0.484	
2000	10,867	4,181	6,760	5,741	7,983	5,161	0.385	0.622	0.528	0.735	0.475	
2001	9,923		5,812	4,892	8,092	4,905		0.586	0.493	0.815	0.494	
2002	9,576	3,051	5,384	4,920	8,763	4,473	0.319	0.562	0.514	0.915	0.467	
2003	10,211	4,164	5,514	5,493	8,559	4,779	0.408	0.540	0.538	0.838	0.468	
2004	10,421	5,333	6,486	5,075	8,789	4,569	0.512	0.622	0.487	0.843	0.438	
2005			6,407	5,213	10,253	5,106						
2006				4,343		4,957						
2007				3,932								
							Average	0.597	0.712	0.679	0.798	0.656

Note: The average reporting rate for the CPS-ADF/ASEC is based on 1975-2004. From the 1976 survey, AFDC/TANF is combined with General Assistance, but there are variables indicating whether the person received each of these benefits. We use these variables to exclude those who only received General Assistance. Nevertheless it should be noted that in the case that the interviewee received both General Assistance and AFDC/TANF, we cannot discern the amount of these benefits separately. In this case, we include it as if all amounts received are AFDC/TANF.

**Table 3**  
**Unemployment Insurance**

Year	Admin. Total (millions of dollars)	Survey - Weighted Total (in millions of dollars)				Reporting Rate				
		PSID	SIPP	CPS- ADF/ ASEC	CES	PSID	SIPP	CPS- ADF/ ASEC	CES	
1976	11,141	8,772				0.787				
1977	9,989	6,046				0.605				
1978	8,318	5,631				0.677				
1979	8,703	5,213			8,022	0.599			0.922	
1980	15,364	10,527			10,191	0.685			0.663	
1981	14,392	10,388			9,216	0.722			0.640	
1982	24,146	20,321			11,124	0.842			0.461	
1983	24,726	15,495	15,065		14,787	0.627	0.609		0.598	
1984	14,760	8,660	11,447		11,100	0.587	0.776		0.752	
1985	14,763	10,998	11,990		8,581	0.745	0.812		0.581	
1986	15,425	11,546	12,584		9,553	0.749	0.816		0.619	
1987	13,584	9,839	11,151	10,417	8,401	0.724	0.821	0.767	0.618	
1988	12,490	10,197	9,801	9,476	8,108	0.816	0.785	0.759	0.649	
1989	13,529	10,263	10,170	10,310	7,624	0.759	0.752	0.762	0.564	
1990	17,195	13,502	14,237	14,172	10,087	0.785	0.828	0.824	0.587	
1991	25,435	18,768	22,064	21,652	16,392	0.738	0.867	0.851	0.644	
1992	37,239	25,352	30,858	27,786	20,021	0.681	0.829	0.746	0.538	
1993	32,357	23,275	28,343	25,811	18,167	0.719	0.876	0.798	0.561	
1994	21,761	18,983	18,192	20,497	15,219	0.872	0.836	0.942	0.699	
1995	19,909	13,804	16,080	18,808	11,762	0.693	0.808	0.945	0.591	
1996	20,418	16,454	14,222	17,591	8,920	0.806	0.697	0.862	0.437	
1997	18,375		11,687	15,856	9,092		0.636	0.863	0.495	
1998	18,187	19,805	10,417	15,728	8,787	1.089	0.573	0.865	0.483	
1999	19,027		12,007	14,606	8,168		0.631	0.768	0.429	
2000	19,218	15,384	14,713	14,469	7,937	0.801	0.766	0.753	0.413	
2001	30,143		19,365	24,291	11,718		0.642	0.806	0.389	
2002	51,086	36,234	28,903	37,912	19,394	0.709	0.566	0.742	0.380	
2003	50,163	21,822	31,047	36,932	21,881	0.435	0.619	0.736	0.436	
2004	33,512	30,978	25,405	25,058	15,907	0.924	0.758	0.748	0.475	
2005	31,104		27,073	22,290	13,728		0.870	0.717	0.441	
2006	29,885			20,650	12,425			0.691		
2007	32,213			21,876				0.679		
						Average	0.738	0.747	0.792	0.558

**Table 4**  
**Workers' Compensation**

Year	Admin. Total (millions of dollars)	Survey - Weighted Total (in millions of dollars)				Reporting Rate				
		PSID	SIPP	CPS- ADF/ ASEC	CES	PSID	SIPP	CPS- ADF/ ASEC	CES	
1976	5,204	1,788				0.344				
1977	5,950	2,343				0.394				
1978	6,816	2,854				0.419				
1979	8,507	2,573			9,076	0.302			1.067	
1980	9,671	3,420			9,770	0.354			1.010	
1981	10,623	4,081			8,239	0.384			0.776	
1982	11,349	3,728			6,902	0.328			0.608	
1983	11,894	4,777	5,536		10,011	0.402	0.465		0.842	
1984	13,261	4,139	5,484		10,348	0.312	0.414		0.780	
1985	14,719	5,210	5,822		8,024	0.354	0.396		0.545	
1986	15,971	7,521	5,728		9,631	0.471	0.359		0.603	
1987	17,405	7,155	7,313	8,375	12,927	0.411	0.420	0.481	0.743	
1988	19,196	7,214	7,054	10,726	13,611	0.376	0.367	0.559	0.709	
1989	20,892	8,893	8,582	12,822	12,103	0.426	0.411	0.614	0.579	
1990	23,050	7,510	9,684	13,005	11,885	0.326	0.420	0.564	0.516	
1991	25,355	9,512	9,958	14,412	11,839	0.375	0.393	0.568	0.467	
1992	25,996	11,141	9,989	13,660	12,168	0.429	0.384	0.525	0.468	
1993	24,422	7,352	9,687	13,434	14,855	0.301	0.397	0.550	0.608	
1994	26,288	9,987	9,773	13,554	15,104	0.380	0.372	0.516	0.575	
1995	25,389	8,447	8,465	11,752	13,223	0.333	0.333	0.463	0.521	
1996	25,221	6,843	11,946	10,263	12,740	0.271	0.474	0.407	0.505	
1997	24,574		10,949	12,417	12,675		0.446	0.505	0.516	
1998	25,365	9,589	10,659	11,089	10,947	0.378	0.420	0.437	0.432	
1999	26,258		11,678	11,799	12,105		0.445	0.449	0.461	
2000	26,766	10,597	9,807	12,944	11,750	0.396	0.366	0.484	0.439	
2001	27,690		9,930	12,246	9,515		0.359	0.442	0.344	
2002	28,094	5,935	10,905	12,943	8,999	0.211	0.388	0.461	0.320	
2003	29,147	5,491	11,223	13,926	9,577	0.188	0.385	0.478	0.329	
2004	29,719	10,202	9,859	13,658	9,683	0.343	0.332	0.460	0.326	
2005	29,228		11,541	15,323	11,051		0.395	0.524	0.378	
2006	28,207			14,870	11,787			0.527	0.418	
2007				12,820						
						Average	0.354	0.397	0.501	0.567

Note: The administrative totals refer to only cash payments, obtained by removing the medical portion of the total program cost.

**Table 5**  
**Food Stamps**

Year	Admin. Total (millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1973	2,202	3,047					1.384				
1974	3,313	3,297					0.995				
1975	4,558	3,586					0.787				
1976	4,729	3,505					0.741				
1977	4,507	3,436					0.762				
1978	4,706	3,671					0.780				
1979	6,392	5,055		4,828	4,503	0.791		0.755		0.705	
1980	8,116	6,246		6,064	4,799	0.770		0.747		0.591	
1981	9,852	7,586		6,343	4,689	0.770		0.644		0.476	
1982	9,832	8,239		7,141	5,322	0.838		0.726		0.541	
1983	11,083	9,011	9,003	7,477	6,192	0.813	0.812	0.675		0.559	
1984	10,638	8,920	9,009	7,573	6,436	0.838	0.847	0.712		0.605	
1985	10,672	8,776	8,760	7,369	6,658	0.822	0.821	0.690		0.624	
1986	10,558	8,687	9,032	7,542	8,077	0.823	0.856	0.714		0.765	
1987	10,603	9,433	9,106	7,863	8,430	0.890	0.859	0.742		0.795	
1988	11,230	9,814	9,317	8,095	8,094	0.874	0.830	0.721		0.721	
1989	11,635	11,609	9,927	8,582	8,883	0.998	0.853	0.738		0.763	
1990	14,100	12,287	11,769	10,301	11,100	0.871	0.835	0.731		0.787	
1991	17,264	13,053	14,044	12,370	13,661	0.756	0.814	0.717		0.791	
1992	20,843	14,455	15,866	13,340	14,749	0.694	0.761	0.640		0.708	
1993	21,940	13,719	17,909	14,921	15,043	0.625	0.816	0.680		0.686	
1994	22,680	14,897	17,581	15,261	14,775	0.657	0.775	0.673		0.651	
1995	22,696	14,680	17,822	14,487	14,482	0.647	0.785	0.638		0.638	
1996	22,373	13,759	17,664	14,108	13,095	0.615	0.790	0.631		0.585	
1997	19,490	9,967	15,260	12,219	10,905	0.511	0.783	0.627		0.559	

(continued)

**Table 5 (continued)**  
**Food Stamps**

Year	Admin. Total (millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1998	16,840	9,866	13,249	10,756		8,895	0.586	0.787	0.639		0.528
1999	15,722	10,446	12,167	9,449		8,537	0.664	0.774	0.601		0.543
2000	14,938	10,848	12,078	8,711		8,252	0.726	0.809	0.583		0.552
2001	15,501	8,651	13,712	9,655		6,922	0.558	0.885	0.623		0.447
2002	14,938	10,659	15,846	11,158		7,765	0.714	1.061	0.747		0.520
2003	22,205	20,199	17,771	12,823		10,003	0.910	0.800	0.577		0.450
2004	25,788	21,963	20,714	14,622	15,472	9,682	0.852	0.803	0.567	0.600	0.375
2005	29,540		22,572	16,132	16,000	10,998		0.764	0.546	0.542	0.372
2006	29,440			15,878		11,243			0.539		0.382
2007	30,988										
Average							0.783	0.823	0.665	0.571	0.597

Note: PSID Food Stamp receipt for 1967 is not included in the average reporting rate.

**Table 6**  
**Supplemental Security Income**

Year	Admin. Total (in millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1974	5,246	3,518					0.671				
1975	5,879	3,625		3,609			0.617		0.614		
1976	6,066	3,497		4,057			0.576		0.669		
1977	6,306	4,406		4,344			0.699		0.689		
1978	6,966	4,216		4,573			0.605		0.656		
1979	7,102	5,776		4,967		6,925	0.813		0.699		0.975
1980	7,996	5,733		6,055		6,471	0.717		0.757		0.809
1981	8,624	7,205		6,505		4,329	0.835		0.754		0.502
1982	9,003	6,928		6,597		4,410	0.770		0.733		0.490
1983	9,509	7,942	7,880	7,629		6,314	0.835	0.829	0.802		0.664
1984	10,407	7,818	9,211	8,445		6,305	0.751	0.885	0.811		0.606
1985	11,091	7,990	9,638	8,876		5,381	0.720	0.869	0.800		0.485
1986	12,103	9,046	10,325	9,005		6,484	0.747	0.853	0.744		0.536
1987	12,989	7,907	11,120	9,517		6,734	0.609	0.856	0.733		0.518
1988	13,794	9,347	12,076	10,244		8,611	0.678	0.875	0.743		0.624
1989	15,019	10,194	12,515	11,225		8,885	0.679	0.833	0.747		0.592
1990	16,646	10,020	12,853	12,050		9,927	0.602	0.772	0.724		0.596
1991	19,165	10,603	14,726	14,397		11,707	0.553	0.768	0.751		0.611
1992	23,009	11,938	16,904	15,351		13,796	0.519	0.735	0.667		0.600
1993	25,511	15,374	18,918	18,532		13,644	0.603	0.742	0.726		0.535
1994	26,761	13,908	20,323	18,174		15,944	0.520	0.759	0.679		0.596
1995	28,611	13,843	22,276	19,550		17,546	0.484	0.779	0.683		0.613
1996	30,025	15,116	26,772	22,261		18,998	0.503	0.892	0.741		0.633
1997	30,266	16,295	28,679	22,717		17,395	0.538	0.948	0.751		0.575

*(continued)*

**Table 6 (continued)**  
**Supplemental Security Income**

Year	Admin.Total (in millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate					
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES	
1998	31,503	15,984	29,138	22,309		18,971	0.507	0.925	0.708		0.602	
1999	32,363	20,719	29,805	22,583	25,099	18,995	0.640	0.921	0.698	0.776	0.587	
2000	33,049	17,252	31,501	22,468	25,847	21,209	0.522	0.953	0.680	0.782	0.642	
2001	34,884		33,188	25,652	26,920	28,881		0.951	0.735	0.772	0.828	
2002	36,344	17,037	35,161	25,924	28,901	25,957	0.469	0.967	0.713	0.795	0.714	
2003	37,854	18,445	37,231	28,022	29,537	22,533	0.487	0.984	0.740	0.780	0.595	
2004	39,271	23,857	39,901	30,634	32,350	21,749	0.608	1.016	0.780	0.824	0.554	
2005	41,069		43,139	31,150	37,815	26,095		1.050	0.758	0.921	0.635	
2006	42,950			31,977		21,808			0.745		0.508	
2007	44,903			33,008					0.735			
							Average	0.629	0.877	0.726	0.807	0.615

**Table 7**  
**Social Security Old Age, Survivors and Disability Insurance (OASDI)**

Year	Admin. Total (millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1967	21,123			19,270							
1968	24,598			21,538							
1969	26,382										
1970	31,415	24,223		26,593			0.771				
1971	36,617	29,277		31,382			0.800				
1972	40,948	37,569		36,988			0.917		0.903		
1973	50,664	38,323		44,511			0.756		0.879		
1974	57,607	47,884		51,299			0.831		0.890		
1975	65,895	54,770		57,049			0.831		0.866		
1976	74,502	63,846		62,774			0.857		0.843		
1977	83,240	70,157		70,004			0.843		0.841		
1978	91,379	77,771		78,118			0.851		0.855		
1979	102,581	87,688		87,375		92,946	0.855		0.852		0.906
1980	118,558	104,290		103,255		94,073	0.880		0.871		0.793
1981	138,723	122,729		119,447		95,666	0.885		0.861		0.690
1982	153,680	135,318		132,178		111,969	0.881		0.860		0.729
1983	164,426	142,173	143,821	139,037		132,241	0.865	0.875	0.846		0.804
1984	173,028	153,390	159,679	148,419		152,911	0.887	0.923	0.858		0.884
1985	183,277	165,506	169,838	157,284		147,737	0.903	0.927	0.858		0.806
1986	193,631	175,747	178,348	164,882		172,284	0.908	0.921	0.852		0.890
1987	200,995	181,834	185,756	173,887		186,857	0.905	0.924	0.865		0.930
1988	213,863	194,194	197,863	184,189		196,106	0.908	0.925	0.861		0.917
1989	227,288	221,691	210,534	197,162		208,473	0.975	0.926	0.867		0.917
1990	244,021	233,242	228,329	209,783		221,739	0.956	0.936	0.860		0.909
1991	264,050	243,246	243,941	221,757		243,525	0.921	0.924	0.840		0.922

*(continued)*

**Table 7 (continued)**  
**Social Security Old Age, Survivors and Disability Insurance (OASDI)**

Year	Admin. Total (millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1992	281,723	254,224	251,658	235,734		261,749	0.902	0.893	0.837		0.929
1993	297,824	261,601	262,309	248,143		268,894	0.878	0.881	0.833		0.903
1994	311,968	273,655	270,954	274,696		275,323	0.877	0.869	0.881		0.883
1995	327,456	294,829	285,338	287,378		289,730	0.900	0.871	0.878		0.885
1996	341,723	308,459	292,735	298,819		314,117	0.903	0.857	0.874		0.919
1997	356,380		303,966	315,494		320,145		0.853	0.885		0.898
1998	369,188	325,602	313,496	320,133		328,639	0.882	0.849	0.867		0.890
1999	379,757		323,984	333,311	310,442	339,417		0.853	0.878	0.817	0.894
2000	401,291	368,864	345,768	352,480	336,735	297,242	0.919	0.862	0.878	0.839	0.741
2001	425,127		366,612	375,663	353,229	357,090		0.862	0.884	0.831	0.840
2002	446,587	388,333	382,062	386,170	368,006	378,217	0.870	0.856	0.865	0.824	0.847
2003	463,267	329,149	405,925	405,366	382,034	395,177	0.710	0.876	0.875	0.825	0.853
2004	485,380		456,915	425,986	396,749	389,007		0.941	0.878	0.817	0.801
2005	512,439		482,380	444,002	435,673	449,621		0.941	0.866	0.850	0.877
2006	543,947			470,328		423,956			0.865		0.779
2007				492,700							
						Average	0.872	0.893	0.862	0.829	0.858

Note: The administrative totals include retirement benefits, survivors benefits and benefits paid to special age-72 beneficiaries and lump sum death payments. Survivor's benefits include payments to surviving children, widowed mothers and fathers, widows and widowers and parents.

**Table 8**  
**Social Security Disability Insurance (SSDI)**

Year	Admin. Total (millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1967	1,916										
1968	2,263										
1969	2,504										
1970	3,017	3,793					1.257				
1971	3,694	4,862					1.316				
1972	4,392	5,854					1.333				
1973	5,608	5,798					1.034				
1974	6,767	7,235					1.069				
1975	8,232	9,120		8,090			1.108	0.983			
1976	9,743	10,186		8,944			1.046	0.918			
1977	11,186	10,965		10,244			0.980	0.916			
1978	12,191	13,002		11,249			1.067	0.923			
1979	13,347	13,838		12,599		13,055	1.037	0.944		0.978	
1980	15,006	14,931		14,133		13,371	0.995	0.942		0.891	
1981	16,720	18,798		15,666		12,371	1.124	0.937		0.740	
1982	16,847	18,550		15,706		13,353	1.101	0.932		0.793	
1983	17,021	17,732	14,319	15,687		14,639	1.042	0.841	0.922	0.860	
1984	17,370	17,353	16,328	16,424		14,364	0.999	0.940	0.946	0.827	
1985	18,268	18,340	17,444	16,812		14,729	1.004	0.955	0.920	0.806	
1986	19,253	17,252	18,404	17,564		16,640	0.896	0.956	0.912	0.864	
1987	19,923	18,212	18,489	19,398		18,192	0.914	0.928	0.974	0.913	
1988	21,075	16,822	19,838	19,813		18,886	0.798	0.941	0.940	0.896	
1989	22,241	21,185	20,452	21,640		20,150	0.952	0.920	0.973	0.906	
1990	24,150	25,594	21,495	22,732		20,973	1.060	0.890	0.941	0.868	

*(continued)*

**Table 8 (continued)**  
**Social Security Disability Insurance (SSDI)**

Year	Admin. Total (millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1991	26,959	29,876	24,883	24,406		24,933	1.108	0.923	0.905		0.925
1992	30,322	31,488	25,818	27,857		26,835	1.038	0.851	0.919		0.885
1993	33,763	38,714	28,539	30,617		27,942	1.147	0.845	0.907		0.828
1994	36,750	39,993	31,275	33,686		28,641	1.088	0.851	0.917		0.779
1995	39,849	44,333	34,226	36,543		33,336	1.113	0.859	0.917		0.837
1996	43,041	44,867	32,986	38,206		39,987	1.042	0.766	0.888		0.929
1997	44,488		42,334	41,759		41,365		0.952	0.939		0.930
1998	46,937	44,334	51,974	41,383		42,331	0.945	1.107	0.882		0.902
1999	50,113		51,585	44,967	36,911	48,299		1.029	0.897	0.737	0.964
2000	53,626	46,547	42,836	48,227	40,290	42,763	0.868	0.799	0.899	0.751	0.797
2001	58,169		42,062	52,861	43,215	54,448		0.723	0.909	0.743	0.936
2002	64,117	55,887	44,636	55,716	47,258	52,976	0.872	0.696	0.869	0.737	0.826
2003	69,300	39,438	50,521	60,504	49,391	51,304	0.569	0.729	0.873	0.713	0.740
2004	76,514		62,458	67,491	53,254	55,610		0.816	0.882	0.696	0.727
2005	83,624		68,547	70,362	59,909	66,758		0.820	0.841	0.716	0.798
2006	90,522			76,121		59,017			0.841		0.652
2007				81,637							
						Average	1.030	0.876	0.916	0.728	0.850

Note: The administrative totals include payments received by the disabled workers, their spouse and their children.

**Table 9**  
**Social Security Old Aged and Survivors Insurance (OASI)**

Year	Admin. Total (millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1967	19,206			17,085							
1968	22,335			19,238							
1969	23,877										
1970	28,398	20,431		23,671			0.719				
1971	32,923	24,415		27,833			0.742				
1972	36,556	31,715		32,531			0.868				
1973	45,056	32,525		38,719			0.722				
1974	50,840	40,650		44,482			0.800				
1975	57,663	45,650		48,960			0.792		0.849		
1976	64,759	53,660		53,830			0.829		0.831		
1977	72,054	59,192		59,760			0.821		0.829		
1978	79,189	64,769		66,870			0.818		0.844		
1979	89,235	73,850		74,776		79,891	0.828		0.838		0.895
1980	103,552	89,359		89,122		80,702	0.863		0.861		0.779
1981	122,003	103,931		103,781		83,295	0.852		0.851		0.683
1982	136,833	116,768		116,472		98,615	0.853		0.851		0.721
1983	147,405	124,441	129,502	123,350		117,602	0.844	0.879	0.837		0.798
1984	155,658	136,037	143,352	131,994		138,546	0.874	0.921	0.848		0.890
1985	165,009	147,166	152,394	140,472		133,008	0.892	0.924	0.851		0.806
1986	174,378	158,495	159,944	147,319		155,644	0.909	0.917	0.845		0.893
1987	181,072	163,622	167,268	154,490		168,666	0.904	0.924	0.853		0.931
1988	192,788	177,372	178,025	164,376		177,220	0.920	0.923	0.853		0.919
1989	205,047	200,506	190,082	175,522		188,324	0.978	0.927	0.856		0.918
1990	219,871	207,648	206,833	187,052		200,766	0.944	0.941	0.851		0.913

*(continued)*

**Table 9 (continued)**  
**Social Security Old Aged and Survivors Insurance (OASI)**

Year	Admin. Total (millions of dollars)	Surveys - Weighted Total (in millions of dollars)					Reporting Rate				
		PSID	SIPP	CPS- ADF/ASEC	ACS	CES	PSID	SIPP	CPS- ADF/ASEC	ACS	CES
1991	237,091	213,370	219,058	197,351		218,592	0.900	0.924	0.832		0.922
1992	251,401	222,736	225,840	207,877		234,914	0.886	0.898	0.827		0.934
1993	264,061	222,887	233,770	217,526		240,952	0.844	0.885	0.824		0.912
1994	275,218	233,663	239,679	241,010		246,682	0.849	0.871	0.876		0.896
1995	287,607	250,496	251,111	250,835		256,395	0.871	0.873	0.872		0.891
1996	298,682	263,592	259,750	260,612		274,130	0.883	0.870	0.873		0.918
1997	311,892		261,631	273,736		278,780		0.839	0.878		0.894
1998	322,251	281,268	261,522	278,750		286,308	0.873	0.812	0.865		0.888
1999	329,644		272,399	288,344	273,532	291,118		0.826	0.875	0.830	0.883
2000	347,665	322,318	302,932	304,253	296,445	254,479	0.927	0.871	0.875	0.853	0.732
2001	366,958		324,550	322,802	310,013	302,642		0.884	0.880	0.845	0.825
2002	382,470	332,445	337,427	330,454	320,748	325,241	0.869	0.882	0.864	0.839	0.850
2003	393,967	289,711	355,405	344,862	332,643	343,873	0.735	0.902	0.875	0.844	0.873
2004	408,866		394,457	358,495	343,495	333,397		0.965	0.877	0.840	0.815
2005	428,815		413,833	373,640	375,763	382,863		0.965	0.871	0.876	0.893
2006	453,425			394,207		364,938			0.869		0.805
2007				411,063							
						Average	0.852	0.897	0.856	0.847	0.860

Note: The administrative totals include retirement benefits, survivors benefits and benefits paid to special age-72 beneficiaries and lump sum death payments. Survivor's benefits include payments to surviving children, widowed mothers and fathers, widows and widowers and parents.

**Table 10**  
**Earned Income Tax Credit**

Year	Admin. Total (in millions of dollars)	Survey - Weighted Total (in dollars)		Reporting Rate	
		SIPP	CPS- ADF/ASEC	SIPP	CPS- ADF/ASEC
1991	11,105		7,114,273,167		0.641
1992	13,028	3,040,099,607	8,557,786,177	0.233	0.657
1993	15,537	3,114,826,438	9,838,109,512	0.200	0.633
1994	21,105	4,776,710,693	15,657,377,258	0.226	0.742
1995	25,956		18,745,177,769		0.722
1996	28,825	4,061,467,531	21,759,768,835	0.141	0.755
1997	30,389	6,917,886,462	21,853,593,976	0.228	0.719
1998	32,340	6,431,281,229	22,746,758,857	0.199	0.703
1999	31,901		22,925,582,818		0.719
2000	32,296		22,114,667,940		0.685
2001	33,376	6,109,748,378	23,249,556,083	0.183	0.697
2002	35,784	6,267,823,329	25,758,259,544	0.175	0.720
2003	34,412		25,280,285,195		0.735
2004	33,490	7,545,618,526	26,180,929,642	0.225	0.782
2005	34,961		28,419,265,886		0.813
2006	36,693		30,332,485,115		0.827
			Average	0.201	0.722

**Table 11**  
**WIC Dollars Aggregates**

Year	Administrative Total (in dollars)	SIPP Weighted Total (in dollars)	Reporting Rate
1983	960,779,877	924,785,376	0.963
1984	1,136,541,195	1,062,768,759	0.935
1985	1,216,219,578	1,051,745,003	0.865
1986	1,278,526,570	935,712,645	0.732
1987	1,363,877,626	896,725,275	0.657
1988	1,459,963,258	860,536,943	0.589
1989	1,520,566,613	850,143,725	0.559
1990	1,644,374,467	986,229,299	0.600
1991	1,812,718,755	1,157,115,493	0.638
1992	1,992,533,764	1,263,647,899	0.634
1993	2,167,447,022	1,416,209,119	0.653
1994	2,391,268,115	1,464,121,756	0.612
1995	2,533,911,018	1,515,193,833	0.598
1996	2,761,776,022	2,182,663,814	0.790
1997	2,792,604,585	2,040,166,515	0.731
1998	2,827,889,166	1,970,072,919	0.697
1999	2,844,111,944	1,919,737,537	0.675
2000	2,873,578,368	1,935,742,103	0.674
2001	3,064,031,314	2,383,353,846	0.778
2002	3,129,184,228	2,457,415,252	0.785
2003	3,310,396,869	2,388,106,797	0.721
2004	3,596,428,602	2,785,938,700	0.775
2005	3,605,553,540	2,950,036,724	0.818
2006	3,614,504,829		
2007	4,054,018,894		
		Average	0.717

**Table 12**  
**AFDC/TANF Average Monthly Participation**

Year	Administrative Average Monthly Participation (Family Level)	Surveys – Average Monthly Participation (family level)			Reporting Rate		
		PSID	SIPP	CPS- ADF/ASEC	PSID	SIPP	CPS- ADF/ASEC
1980	3,712,309						
1981	3,835,489						
1982	3,541,525						
1983	3,686,163		2,851,592			0.773	
1984	3,713,929		3,040,356			0.819	
1985	3,701,033		2,900,857			0.784	
1986	3,763,252		2,801,266			0.744	
1987	3,775,573		2,871,043	3,025,954		0.760	0.801
1988	3,748,580		2,795,287	2,968,807		0.746	0.792
1989	3,798,348		2,902,077	2,816,732		0.764	0.742
1990	4,056,584		3,209,590	3,120,412		0.791	0.769
1991	4,497,186		3,436,155	3,419,110		0.764	0.760
1992	4,829,094		3,579,069	3,468,416		0.741	0.718
1993	5,011,827	3,099,655	4,020,104	3,713,955	0.618	0.802	0.741
1994	5,032,632	2,840,407	3,966,091	3,451,463	0.564	0.788	0.686
1995	4,790,749	2,603,520	3,942,927	3,124,368	0.543	0.823	0.652
1996	4,434,160	2,347,537	3,510,786	2,957,559	0.529	0.792	0.667
1997	3,740,179		3,001,523	2,275,387		0.803	0.608
1998	3,050,335	1,217,162	2,376,098	1,824,069	0.399	0.779	0.598
1999	2,554,069		1,866,543	1,401,124		0.731	0.549
2000	2,215,388	1,117,209	1,656,865	1,283,230	0.504	0.747	0.579
2001	2,103,852		1,519,928	1,173,244		0.722	0.558
2002	2,048,204	708,284	1,337,550	1,089,399	0.346	0.653	0.532
2003	2,023,778	1,369,355	1,397,108	1,290,115	0.677	0.690	0.637
2004	1,978,616	1,130,092	1,632,136	1,117,250	0.571	0.825	0.565
2005	1,894,515		1,527,558	1,189,858		0.806	0.628
2006	1,781,411			935,072			0.525
2007	1,669,076			875,565			0.525
				Average	0.528	0.767	0.649

**Table 13**  
**Food Stamps Average Monthly Participation**

Year	Administrative Average Monthly Participation (Households)	Surveys – Average Monthly Participation			Reporting rate		
		PSID	SIPP	CPS- ADF/ASEC	PSID	SIPP	CPS- ADF/ASEC
1980	7,763,714	5,659,991		5,130,682	0.729		0.661
1981	8,231,565	5,986,317		5,273,484	0.727		0.641
1982	7,817,518	6,341,138		5,351,906	0.811		0.685
1983	7,839,288	6,414,963	6,561,402	5,560,356	0.818	0.837	0.709
1984	7,515,342	5,921,546	6,656,248	5,533,007	0.788	0.886	0.736
1985	7,291,303	5,742,227	6,228,872	5,314,065	0.788	0.854	0.729
1986	7,202,921	6,063,710	6,272,349	5,239,128	0.842	0.871	0.727
1987	7,084,390	6,082,936	6,242,591	5,183,350	0.859	0.881	0.732
1988	7,092,014	6,039,197	6,133,158	5,249,217	0.852	0.865	0.740
1989	7,337,547	6,261,035	6,164,276	5,159,889	0.853	0.840	0.703
1990	7,999,990	6,200,845	6,582,906	5,697,878	0.775	0.823	0.712
1991	9,208,275	6,238,023	7,263,082	6,294,527	0.677	0.789	0.684
1992	10,282,358	6,982,771	7,891,822	6,816,542	0.679	0.768	0.663
1993	10,902,288	7,598,139	8,733,851	7,329,268	0.697	0.801	0.672
1994	11,093,566	7,796,566	8,561,080	7,420,375	0.703	0.772	0.669
1995	10,791,655	7,273,270	8,474,133	7,071,615	0.674	0.785	0.655
1996	10,395,150	6,912,900	8,751,572	6,896,048	0.665	0.842	0.663
1997	9,087,686	5,179,876	8,001,126	6,111,001	0.570	0.880	0.672
1998	8,068,051	4,884,314	7,075,561	5,374,420	0.605	0.877	0.666
1999	7,568,908	4,504,903	6,564,475	4,780,595	0.595	0.867	0.632
2000	7,326,583	4,441,331	6,304,656	4,606,152	0.606	0.861	0.629
2001	7,595,058	4,622,812	6,827,110	4,823,717	0.609	0.899	0.635
2002	8,402,369	5,017,984	7,393,731	5,149,868	0.597	0.880	0.613
2003	9,447,575	7,502,129	8,007,800	5,704,880	0.794	0.848	0.604
2004	10,566,039	8,464,400	8,914,594	6,002,098	0.801	0.844	0.568
2005	11,485,609		9,525,628	6,484,700		0.829	0.565
2006	11,592,557			6,147,814			0.530
2007	11,927,826						
				Average	0.725	0.830	0.675

**Table 14**  
**SSI Average Monthly Participation**

Year	Admin Average Monthly Participation (thousands)	Survey Aggregates (thousands)				Reporting rates			
		PSID	SIPP	CPS- ADF/ ASEC	ACS	PSID	SIPP	CPS- ADF/ ASEC	ACS
1974	3,638	2,733				0.751			
1975	4,194	2,395		2,545		0.571		0.607	
1976	4,322	2,103		2,565		0.487		0.593	
1977	4,286	2,333		2,562		0.544		0.598	
1978	4,276	2,252		2,553		0.527		0.597	
1979	4,234	2,447		2,527		0.578		0.597	
1980	4,198	2,272		2,715		0.541		0.647	
1981	4,131	2,586		2,631		0.626		0.637	
1982	3,988	2,410		2,431		0.604		0.610	
1983	3,932	2,499		2,618		0.636		0.666	
1984	4,025	2,165	3,499	2,714		0.538	0.869	0.674	
1985	4,147	2,228	3,611	2,708		0.537	0.871	0.653	
1986	4,273	2,284	3,705	2,761		0.535	0.867	0.646	
1987	4,402	2,201	3,771	2,641		0.500	0.857	0.600	
1988	4,500	2,515	4,247	2,914		0.559	0.944	0.648	
1989	4,607	2,708		3,024		0.588		0.656	
1990	4,780	2,437	3,919	3,032		0.510	0.820	0.634	
1991	5,044	2,426	4,383	3,263		0.481	0.869	0.647	
1992	5,423	2,639	4,631	3,474		0.487	0.854	0.641	
1993	5,856	3,204	4,758	3,768		0.547	0.813	0.643	
1994	6,221	2,920	5,050	3,601		0.469	0.812	0.579	
1995	6,476	3,009		3,623		0.465		0.559	
1996	6,626	2,708	5,169	3,728		0.409	0.780	0.563	
1997	6,621		5,948	3,472			0.898	0.524	
1998	6,607	2,893	5,972	3,574		0.438	0.904	0.541	
1999	6,645			3,641	3,088			0.548	0.465
2000	6,663	2,646		3,234	3,067	0.397		0.485	0.460
2001	6,730		5,879	3,453	2,897		0.874	0.513	0.431
2002	6,782	2,530	6,205	3,117	3,334	0.373	0.915	0.460	0.492
2003	6,845			3,609	3,259			0.527	0.476
2004	6,945	3,173	6,126	3,670	3,409	0.457	0.882	0.528	0.491
2005	7,051			3,528	3,894			0.500	0.552
2006	7,175			3,377				0.471	
2007	7,298			3,409				0.467	
					Average	0.524	0.864	0.584	0.481

**Table 15**  
**SSDI Average Monthly Participation**

Year	Admin Average Monthly Participation (thousands)	Survey Aggregates (thousands)				Reporting rates			
		PSID	SIPP	CPS- ADF/ ASEC	ACS	PSID	SIPP	CPS- ADF/ ASEC	ACS
1974	3,736	1,131		1,232		0.303		0.330	
1975	4,132	1,210		1,362		0.293		0.330	
1976	4,488	1,274		1,387		0.284		0.309	
1977	4,739	1,339		1,465		0.283		0.309	
1978	4,861	1,399		1,519		0.288		0.313	
1979	4,823	1,457		1,638		0.302		0.340	
1980	4,730	1,374		1,597		0.290		0.338	
1981	4,569	1,493		1,577		0.327		0.345	
1982	4,215	1,378		1,495		0.327		0.355	
1983	3,893	1,522		1,446		0.391		0.371	
1984	3,817	1,480	3,637	1,466		0.388	0.953	0.384	
1985	3,864	1,452	3,564	1,411		0.376	0.922	0.365	
1986	3,950	1,278	3,701	1,430		0.324	0.937	0.362	
1987	4,019	1,552	3,771	1,523		0.386	0.938	0.379	
1988	4,060	1,738	3,810	1,610		0.428	0.939	0.397	
1989	4,102	2,025		1,840		0.494		0.449	
1990	4,197	2,165	4,080	1,949		0.516	0.972	0.464	
1991	4,390	2,490	3,981	2,015		0.567	0.907	0.459	
1992	4,701	2,273	4,199	2,224		0.483	0.893	0.473	
1993	5,072		4,354	2,354			0.858	0.464	
1994	5,419		4,886	2,581			0.902	0.476	
1995	5,721			2,432				0.425	
1996	5,965		4,737	2,607			0.794	0.437	
1997	6,113		6,139	2,752			1.004	0.450	
1998	6,244		7,404	2,685			1.186	0.430	
1999	6,429			3,563	2,930			0.554	0.456
2000	6,599			3,381	3,038			0.512	0.460
2001	6,793		5,563	3,616	2,856		0.819	0.532	0.420
2002	7,067		5,717	3,408	3,203		0.809	0.482	0.453
2003	7,408			3,829	3,217			0.517	0.434
2004	7,772	4,101	6,864	3,977	3,365	0.528	0.883	0.512	0.433
2005	8,132			3,908	3,662			0.481	0.450
2006	8,467			3,960				0.468	
2007	8,770			4,143				0.472	
					Average	0.379	0.920	0.420	0.444

**Table 16**  
**OASI Average Monthly Participation**

Year	Admin Average Monthly Participation (thousands)	Survey Aggregates (thousands)				Reporting Rate			
		PSID	SIPP	CPS- ADF/ ASEC	ACS	PSID	SIPP	CPS- ADF/ ASEC	ACS
1974	26,308	15,799		17,102		0.601		0.650	
1975	27,086	16,125		17,456		0.595		0.644	
1976	27,860	16,833		17,827		0.604		0.640	
1977	28,640	17,538		18,620		0.612		0.650	
1978	29,327	18,188		19,603		0.620		0.668	
1979	29,910	18,593		20,470		0.622		0.684	
1980	30,540	19,835		21,452		0.649		0.702	
1981	31,159	20,579		22,135		0.660		0.710	
1982	31,639	20,924		22,298		0.661		0.705	
1983	32,013	22,379		22,678		0.699		0.708	
1984	32,419	23,206	29,031	23,003		0.716	0.895	0.710	
1985	32,868	23,816	29,522	23,462		0.725	0.898	0.714	
1986	33,405	24,812	30,039	23,431		0.743	0.899	0.701	
1987	33,908	25,551	30,723	24,377		0.754	0.906	0.719	
1988	34,333	26,710	31,165	25,471		0.778	0.908	0.742	
1989	34,775	29,480		26,176		0.848		0.753	
1990	35,285	28,443	32,199	26,523		0.806	0.913	0.752	
1991	35,816	27,856	32,364	26,629		0.778	0.904	0.743	
1992	36,344	27,027	32,264	27,328		0.744	0.888	0.752	
1993	36,802		32,632	26,647			0.887	0.724	
1994	37,144		32,553	27,181			0.876	0.732	
1995	37,413			26,660				0.713	
1996	37,596		31,577	25,807			0.840	0.686	
1997	37,741		32,888	25,153			0.871	0.666	
1998	37,864		32,013	25,093			0.845	0.663	
1999	37,991			26,317	24,753			0.693	0.652
2000	38,407			25,821	25,780			0.672	0.671
2001	38,853		36,408	26,507	25,203		0.937	0.682	0.649
2002	39,094		36,464	25,574	27,775		0.933	0.654	0.710
2003	39,333			28,156	27,532			0.716	0.700
2004	39,591	27,732	36,762	27,720	27,249		0.929	0.700	0.688
2005	39,929			27,442	28,845			0.687	0.722
2006	40,312			27,225				0.675	
2007	40,724			27,528				0.676	
					Average	0.695	0.896	0.697	0.685

**Table 17**  
**Women, Infants and Children (WIC) - Average Monthly Participation**

Year	Average Monthly Participation				Surveys			Reporting Rates		
	Women	Infants	Children	Total	PSID	SIPP	CPS- ADF/ASEC	PSID	SIPP	CPS- ADF/ASEC
1983	578,010	762,100	1,341,762	2,681,873		2,548,915			0.950	
1984	656,534	834,477	1,575,325	3,066,336		2,857,268			0.932	
1985	678,098	891,376	1,625,838	3,195,311		2,741,860			0.858	
1986	717,986	963,642	1,653,688	3,335,315		2,438,474			0.731	
1987	758,672	1,030,236	1,651,786	3,440,693		2,269,432			0.660	
1988	845,065	1,131,385	1,717,037	3,693,487		2,165,192			0.586	
1989	986,097	1,299,690	1,985,077	4,270,865		2,371,682			0.555	
1990	1,040,887	1,444,443	2,065,124	4,550,454		2,694,798			0.592	
1991	1,154,320	1,602,121	2,295,770	5,052,210		3,176,805			0.629	
1992	1,252,709	1,696,693	2,555,337	5,504,738		3,469,799			0.630	
1993	1,404,240	1,757,864	2,909,770	6,071,873		3,924,523			0.646	
1994	1,524,576	1,796,083	3,298,240	6,618,898		3,997,409			0.604	
1995	1,589,327	1,816,872	3,541,696	6,947,895		4,073,833			0.586	
1996	1,675,121	1,834,936	3,769,028	7,279,085		4,087,180			0.561	
1997	1,708,688	1,868,648	3,807,929	7,385,265		3,892,830			0.527	
1998	1,744,294	1,893,036	3,741,169	7,378,499	6,069,535	3,794,967		0.823	0.514	
1999	1,737,284	1,891,698	3,629,042	7,258,024		3,727,767			0.514	
2000	1,760,347	1,899,835	3,551,309	7,211,492	5,541,547	3,649,744	3,989,996	0.768	0.506	0.553
2001	1,788,958	1,925,665	3,648,665	7,363,287		4,132,639	4,056,445		0.561	0.551
2002	1,818,691	1,931,632	3,763,862	7,514,184	5,623,568	4,274,605	4,238,324	0.748	0.569	0.564
2003	1,874,606	1,959,486	3,850,275	7,684,367		4,132,526	4,746,937		0.538	0.618
2004	1,944,911	2,028,188	3,991,965	7,965,064	7,666,685	4,470,050	4,802,632	0.963	0.561	0.603
2005	1,975,405	2,053,280	4,001,781	8,030,466		4,671,507	4,538,515		0.582	0.565
2006	2,043,836	2,093,967	3,987,749	8,125,552			4,657,212			0.573
2007	2,110,410	2,185,447	4,080,116	8,375,973			4,555,619			0.544
							Average	0.825	0.626	0.571

**Table 18**  
**CPS-ADF/ASEC Average Dollar Imputation Rates, by Year and Program**

Survey Year	WC and UI (Combined)	AFDC/TANF	Social Security	SSI	WC	UI	FS
1980	0.178	0.962	0.173	0.155			0.163
1981	0.162	0.974	0.199	0.158			0.155
1982	0.180	0.149	0.210	0.171			0.104
1983	0.191	0.132	0.209	0.159			0.108
1984	0.205	0.139	0.204	0.176			0.122
1985	0.234	0.171	0.224	0.203			0.130
1986	0.210	0.139	0.200	0.175			0.108
1987	0.218	0.143	0.201	0.165			0.117
1988		0.060	0.100	0.063	0.139	0.066	0.118
1989		0.064	0.099	0.056	0.164	0.075	0.153
1990		0.077	0.099	0.069	0.135	0.082	0.155
1991		0.069	0.108	0.068	0.196	0.089	0.142
1992		0.060	0.112	0.079	0.134	0.101	0.135
1993		0.069	0.118	0.070	0.178	0.093	0.150
1994		0.086	0.145	0.132	0.164	0.112	0.162
1995		0.090	0.142	0.077	0.118	0.083	0.194
1996		0.097	0.166	0.090	0.173	0.102	0.204
1997		0.095	0.170	0.106	0.158	0.097	0.180
1998		0.088	0.188	0.103	0.156	0.116	0.192
1999		0.146	0.202	0.114	0.187	0.125	0.200
2000		0.160	0.206	0.125	0.209	0.129	0.180
2001		0.137	0.236	0.140	0.208	0.173	0.209
2002		0.148	0.232	0.154	0.220	0.143	0.219
2003		0.180	0.253	0.165	0.208	0.144	0.218
2004		0.135	0.249	0.185	0.203	0.151	0.220
2005		0.169	0.246	0.173	0.185	0.151	0.232
2006		0.145	0.235	0.161	0.213	0.136	0.209
2007		0.154	0.247	0.156	0.186	0.161	0.222
2008		0.139	0.253	0.177	0.230	0.147	

Note: The table above shows the dollars imputation rates in the CPS-ADF/ASEC, obtained by dividing the weighted total imputed benefit amounts by the unconditional weighted total.

**Table 19**  
**SIPP Average Dollar Imputation Rates, by Year and Program**

Year of Benefit	AFDC	UI	WC	FS	SSI	DI	OASI
1983	0.033	0.066	0.090	0.032	0.051	0.075	0.077
1984	0.046	0.089	0.071	0.035	0.061	0.090	0.102
1985	0.045	0.105	0.107	0.039	0.053	0.097	0.111
1986	0.037	0.112	0.082	0.040	0.061	0.099	0.111
1987	0.047	0.103	0.084	0.046	0.069	0.106	0.110
1988	0.037	0.135	0.121	0.044	0.080	0.119	0.124
1989	0.058	0.132	0.115	0.058	0.081	0.132	0.134
1990	0.068	0.142	0.143	0.054	0.095	0.116	0.142
1991	0.052	0.168	0.137	0.060	0.097	0.138	0.166
1992	0.069	0.177	0.146	0.066	0.098	0.146	0.181
1993	0.086	0.197	0.159	0.076	0.098	0.169	0.199
1994	0.097	0.241	0.190	0.090	0.113	0.180	0.223
1995	0.101	0.246	0.219	0.088	0.113	0.205	0.220
1996	0.216	0.239	0.387	0.140	0.152	0.176	0.192
1997	0.265	0.304	0.523	0.187	0.179	0.210	0.244
1998	0.235	0.275	0.601	0.191	0.187	0.214	0.257
1999	0.212	0.327	0.534	0.191	0.178	0.211	0.257
2000	0.178	0.269	0.406	0.130	0.147	0.195	0.228
2001	0.206	0.295	0.471	0.164	0.207	0.241	0.261
2002	0.196	0.287	0.486	0.192	0.228	0.258	0.297
2003	0.203	0.324	0.468	0.216	0.236	0.278	0.305

Note: The table above shows the dollars imputation rates in the SIPP, obtained by dividing the weighted total imputed benefit amounts in each year by the unconditional weighted total in that year.

**Table 20**  
**Social Security Imputation Rate, by Year and Survey**

Calendar Year	PSID	SIPP
1983	0.016	0.127
1984	0.011	0.170
1985	0.011	0.167
1986	0.012	0.165
1987	0.015	0.147
1988	0.026	0.114
1989	0.016	0.099
1990	0.028	0.080
1991	0.032	0.106
1992	0.047	0.110
1993		0.107
1994		0.131
1995		0.140
1996		0.075
1997		0.103
1998		0.066
1999		0.049
2000		0.050
2001		0.045
2002		0.044
2003		0.046
2004		0.048
2005		0.039

Note: This table shows, for each calendar year and each survey, the percentage of total Social Security Benefits that has to be subjected to the imputation algorithm to separately obtain SSDI and OASI.

**Appendix Table 1**  
**Summary of PSID Benefit Variable Information**

Benefit Year	Survey Year	SSI	OASI	DI	UI	WC	FS	AFDC
1967	1968		H only (a)		H only (a)		All	All
1968	1969		H only (a)		H only (a)		All	H
1969	1970		H only		H only		All	H
1970	1971		(H+W) only		H only		All	(H+W)
1971	1972		(H+W) only		H only		All	(H+W)
1972	1973		(H+W) only		H only			(H+W)
1973	1974		(H+W) only		H only		All	(H+W)
1974	1975	(H+W)+O	(H+W)+O		H+O		All	(H+W)+O
1975	1976	(H+W)+O	(H+W)+O		H+O		All	(H+W)+O
1976	1977	(H+W)+O	(H+W)+O		H+O	H+O	All	(H+W)+O
1977	1978	(H+W)+O	(H+W)+O		H+O	H+O	All	(H+W)+O
1978	1979	(H+W)+O	(H+W)+O		H+O	H+O	All	(H+W)+O
1979	1980	(H+W)+O	(H+W)+O		H+O	H+O	All	(H+W)+O
1980	1981	(H+W)+O	(H+W)+O		H+O	H+O	All	(H+W)+O
1981	1982	(H+W)+O	(H+W)+O		H+O	H+O	All	(H+W)+O
1982	1983	(H+W)+O	(H+W)+O		H+O	H+O	All	(H+W)+O
1983	1984	(H+W)+O	H+W+O (b)	H+W+O (b)	H+O	H+O	All	(H+W)+O
1984	1985	(H+W)+O	H+W+O (b)	H+W+O (b)	H+O	H+O	All	(H+W)+O
1985	1986	H+W+O	H+W+O (b)	H+W+O (b)	H+W+O	H+W+O	All	H+W+O
1986	1987	H+W+O	H+W+O (b)	H+W+O (b)	H+W+O	H+W+O	All	H+W+O
1987	1988	H+W+O	H+W+O (b)	H+W+O (b)	H+W+O	H+W+O	All	H+W+O
1988	1989	H+W+O	H+W+O (b)	H+W+O (b)	H+W+O	H+W+O	All	H+W+O
1989	1990	H+W+O	H+W+O (b)	H+W+O (b)	H+W+O	H+W+O	All	H+W+O
1990	1991	H+W+O	H+W+O (b)	H+W+O (b)	H+W+O	H+W+O	All	H+W+O
1991	1992	H+W+O	H+W+O (b)	H+W+O (b)	H+W+O	H+W+O	All	H+W+O
1992	1993	H+W+O	H+W+O (d)	H+W+O (d)	H+W+O	H+W+O	All	H+W+O
1993	1994	H+W	All	All	H+W	H+W	All	H+W
1994	1995	H+W	All	All	H+W	H+W	All	H+W
1995	1996	H+W	All	All	H+W	H+W	All	H+W
1996	1997	H+W	All	All	H+W	H+W	All	H+W
1997	1999	All					All	
1998	1999	H+W (e)	All		H+W	H+W	All	H+W
1999	2001	All					All	
2000	2001	H+W (e)	All		H+W	H+W	All	H+W
2001	2003						All	
2002	2003	H+W	All		H+W	H+W	All	H+W
2003	2005	All	H+W+O (g)		All	All	All	All
2004	2005(g)	H+W			H+W	H+W	All	H+W

Note: H - head, W - spouse, O - other family members, All - family, H+W - head and spouse reported separately, (H+W) - head and spouse amounts combined, H + W + O - head, spouse and all other family members reported separately (other family members amount combined as one). (a) These variables are reported in bracketed form; we take the midpoint of the interval in each case. (b) Amount of Social security income is recorded for each individual in the family. The type of social security (Disability, Retirement, Survivors, More than one of the above) is also recorded. (d) Amount of Social security income is recorded separately for the Head and Spouse. But for other family members, only the combined amount is available. The type of social security (Disability, Retirement, Survivors, More than one of the above) is also recorded only for the Head and the spouse. (e) SSI is reported also for the second year before the survey year and is for the whole family. (f) Based on the preliminary data release, the table here reflects only what is currently made available to the public, extra variables may be available in future data releases. (g) Each family is asked to nominate two types of social security received and each family member is asked about whether he received social security.

**Appendix Table 2**  
**Summary of CPS Annual Demographic File/Annual Social and Economic**  
**Supplement Benefit Variable Information**

Survey Year	SSI	OASI	SSDI	UI	WC	FS	AFDC/TANF	EITC
1968		Y (b)		Y (a)		N	Y (d)	
1969		Y (b)		Y (a)		N	Y (d)	
1970								
1971		Y (b)		Y (a)		N	Y (d)	
1972		Y (b)		Y (a)		N	Y (d)	
1973		Y (b)		Y (a)		N	Y (d)	
1974		Y (b)		Y (a)		N	Y (d)	
1975		Y (b)		Y (a)		N	Y (d)	
1976	Y (e)	Y(h,i)		Y(g)		N	Y(f)	
1977	Y (e)	Y(h,i)		Y(g)		N	Y(f)	
1978	Y (e)	Y(h,i)		Y(g)		N	Y(f)	
1979	Y (e)	Y(h,i)		Y(g)		N	Y(f)	
1980	Y (e)	Y(h,i)		Y(g)		Y (k)	Y(f)	
1981	Y (e)	Y(h,i)		Y(g)		Y (k)	Y(f)	
1982	Y (e)	Y(h,i)		Y(g)		Y (k)	Y(f)	
1983	Y (e)	Y(h)		Y(g)		Y (k)	Y(f)	
1984	Y (e)	Y(h)		Y(g)		Y (k)	Y(f)	
1985	Y (e)	Y(h)		Y(g)		Y (k)	Y(f)	
1986	Y (e)	Y(h)		Y(g)		Y (k)	Y(f)	
1987	Y (e)	Y(h)		Y(g)		Y (k)	Y(f)	
1988	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	
1989	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	
1990	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	
1991	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	
1992	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
1993	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
1994	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
1995	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
1996	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
1997	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
1998	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
1999	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2000	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2001	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2002	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2003	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2004	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2005	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2006	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2007	Y (e)	Y		Y (n)	Y	Y (k)	Y(f)	Y
2008	Y (e)	Y		Y (n)	Y	N (m)	Y(f)	N (m)

Notes:

- (a) Also includes Veterans benefits, government employee pensions.
- (b) Also includes railroad retirement benefits.
- (d) Old age assistance, AFDC and aid to the blind or disabled are combined; no variable for type of benefit.
- (e) Federal and state payments are included
- (f) AFDC and general assistance are combined; they can be partially separated (except when both benefit type variables =1).
- (g) Includes Veterans benefits.
- (h) Also includes railroad retirement benefits; they can be partially separated (except when both benefit type variables=1)
- (i) The variable is called "income from US government", the position of this variable though is the same as other years' social security.
- (k) Available at the household level only.
- (m) Data withheld by the Census Bureau.
- (n) May include union or strike benefit payments. The amount of unemployment compensation was asked after asking whether the individual received unemployment benefits, supplemental benefits or union and strike benefit payments.

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