

**THE SURVEY OF INCOME AND  
PROGRAM PARTICIPATION**

**WAGES AND EMPLOYMENT AMONG  
THE WORKING POOR: NEW EVIDENCE  
FROM SIPP**

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## 1. Introduction

Of the 11 million persons aged 18 to 64 years who were in poverty in 1984, approximately 40 percent worked at some point during the year and 3.4 million were the sole or primary wage earner in the family. Among the latter group, about one in four worked year-round but were still unable to move their families out of poverty. While these full-year working poor represent a small fraction of the total labor force, as well as a small fraction of the population in poverty, the very fact that such workers cannot earn enough to support a family above the poverty line undermines the foundation of the American work ethic--the belief that "hard work pays off." Furthermore, at a time when welfare reform efforts are requiring recipients to join the workforce, the working poor are a reminder that moving off welfare is not necessarily a move to self-sufficiency. Clearly, if the earnings from full-time work are not adequate to move the worker's family out of poverty, much less to compensate for the loss of in-kind benefits associated with welfare receipt (particularly health care benefits under Medicaid), work is not necessarily a viable alternative to welfare.

In this paper we use the detailed labor force information available from the Survey of Income and Program Participation (SIPP) to examine wages, employment patterns, and sources of income among the working poor.<sup>(1)</sup> The paper is essentially descriptive. We make no attempt to identify the structural determinants of economic hardship among the working poor.<sup>(1)</sup> Existing theories and explanations for the persistence of poverty in the U.S. have been extensively reviewed by Sawhill (1988). Our goal is to exploit a new data source -- the SIPP -- to answer three questions:

1. Among workers who have low annual earnings, which factors are associated with remaining in or escaping from poverty?
2. What types of wage and employment patterns produce low earnings? In particular, what is the relative importance of low wages versus low annual hours of work?
3. Can this type of analysis offer background information that could aid in the design of labor market and income support programs and policies which more effectively target the working poor?

This paper is organized as follows. The next section addresses some methodological issues in defining the working poor population, while Section 3 illustrates the advantages of the SIPP relative to other data sources which are available for this type of analysis. Section 4 examines the relationship between low earnings and poverty status. Section 5 examines the wages and employment patterns among low earners, trying to identify the role played by low wages versus low annual hours of work. Section 6 conducts simple simulations of hypothetical changes in the wage and employment patterns observed among the working poor in order to examine the impact of these changes on poverty status. Finally, Section 7 summarizes our results

and discusses directions for future research.

## **2. Methodological Issues In Defining the Working Poor**

Despite the fact that the term “working poor” is widely used both in the popular press and in the policy research literature, there is little consensus as to who should be included in the population of workers in poverty. While an exact definition is not essential in the context of a broad policy discussion, it becomes necessary if one is to measure the size and characteristics of this population.

There are five issues that must be addressed in measuring the population of working poor: the unit of analysis, the definition of “working,” the inclusiveness of the measure of earned income, the standard for determining inadequate income, and the accounting period over which work and income are measured. We consider each issue in turn.

Unit of analysis. Alternative units of analysis include the individual, the household or family head, and the household or family unit itself. Because employment is inherently an individual activity and because we want to distinguish between those individuals who are the sole or primary earner in their family and those who are secondary earners, we have chosen to use the individual as the unit of analysis in this study. Information on secondary earners (which would be lost in an analysis based on the household or family head) is particularly important in the discussion of the targeting efficiency of increases in the minimum wage. More generally, family and household composition can change significantly over the course of time making it difficult to define a sample based on family and household characteristics.

Definition of “working”. A second issue in defining the working poor concerns the definition of “working.” Some studies define the working population as all persons who were in the labor force for some period of time regardless of whether they actually worked, while others restrict their analysis to individuals who worked full-time for the entire year. For example, Klein and Rones (1989) considers as workers those individuals who were in the labor force for at least six months, thus excluding from the analysis individuals with marginal or intermittent attachment to the labor market. We focus our analysis on individuals with any earnings during the year because we are interested in the differences between workers with marginal attachments to the labor force who live in poverty and those who escape from poverty.

Measuring earned income. At the most inclusive level earnings would include wage and salary income and income from self-employment and farm activities. Because of the large component of property income that is included in self-employment and farm income and the problems with the misreporting of such income, we constrain our analysis to wage and salary workers with positive earnings. In other words, we exclude self-employed workers from our analysis and do not include farm income in our measure of earnings.

Determining adequate income. As with the other issues in the definition of the working

poor, there is little agreement as to the appropriate standard for determining the "adequacy" of income. In this paper we use the official poverty threshold as our standard of need to determine whether a worker achieves an income that is sufficient to support his or her family.(2) I N recognition of concerns about the stringency of the official poverty guidelines and because most means-tested assistance programs use eligibility standards which are higher than the poverty threshold, we also present some of our estimates using a higher standard of need -- income at or above 150 percent of the poverty threshold. We refer to persons with income between 100 and 150 percent of the poverty threshold as the "near poor."

In classifying workers as poor (or near poor), one option is to take the entire sample of workers, irrespective of their earnings, and simply determine whether they are poor or non-poor on the basis of their total income and family size. A conceptual difficulty with this approach lies in the fact that if the number of dependents becomes large enough, almost any worker could be counted among the working poor.(3) We believe that before classifying workers on the basis of their own poverty status it is useful to identify workers whose earnings are "low" by some standard that is independent of the worker's family status.

Alternative measures that could be used to identify low or inadequate earnings include absolute measures -- earnings less than those which would be earned by a full-time full-year worker earning the minimum wage -- and relative measures - earnings less than the median earnings of a relevant group of workers or some fraction of the median earnings of those workers.

For this paper, we define low or inadequate earnings as earnings which are less than 50 percent of the median earnings of full-year full-time wage and salary workers. In 1984, 50 percent of the median earnings for those workers was \$9,639, which is between the poverty line for a family of three (\$8,277) and that for a family of four (\$10,609,). Thus, an individual who earned 50 percent of median earnings would earn enough to move a family of three out of poverty, but would not earn enough to remove a family of four from poverty.

By combining the two adequacy standards -- income above the poverty threshold based on family income and earnings above 50 percent of median earnings based on the worker's own labor market performance -- we obtain a profile of the working poor which captures both their own labor market outcomes and their family circumstances,

Accounting Period. The choice of the reference period has implications for the definition of both poverty and employment status. By using an annual accounting period short-term fluctuations in income are smoothed out over the course of the year so that households that are temporarily poor (or non-poor) are not classified as having been below (or above) the poverty threshold for the entire year. However, the longer time period creates difficulties in defining "workers" since individuals may move in and out of the labor force and in and out of employment over the course of the year. As noted above, there is little consensus as to the appropriate definition of a 'worker' over the course of a year. Nevertheless, we use an annual accounting period in this study.

### 3. Advantages of SIPP for the Analysis of the Working Poor

Many of the existing studies on the working poor are based on the March supplement to the Current Population Survey (CPS). This data set has two very attractive features: a large sample size (about 60,000 households), and annual replication of the survey for many years. This allows the analyst to construct long time series of cross-sectional observations. For example, in their study of the working poor, Danziger and Gottshalk (1986) compare annual data spanning from 1967 to 1984.

The SIPP is a relatively recent survey (it began in 1983) and has a substantially smaller sample size than the CPS (20,000 households in 1984). SIPP respondents are interviewed three times a year for a total of two and a half years. Income and labor force information is collected for all adult household members at every interview. The SIPP survey and questionnaire design provide three major advantages relative to the March CPS for the analysis of the working poor, as well as for the analysis of poverty issues in general:

1. While no information is collected in the March CPS about changes in the family composition that take place during the previous year, this information is collected in SIPP at every round of interviews. The analyst using the March CPS data has little choice other than assume that the family composition during the reference year was the same as that observed in March of the subsequent year.
2. Information on hourly wages workers paid by the hour is collected in SIPP at every interview for up to two jobs held during the survey's four month reference period. To the user of the March CPS information on hourly wages is available only for one-fourth of the sample (the rotation group leaving the survey in March) and it is collected only with reference to the primary job that is currently held. Consequently, the wage information does not match the other labor force data (hours and weeks of work) which are collected with reference to the previous year.
3. The recall period for income and labor force participation in the March CPS is as long as 15 months, while for each SIPP interview is at most 4 months. For a discussion of the quality of the CPS work and unemployment retrospective data see Ryscavage and Martini (1990).

Together with these evident advantages, the SIPP survey design carries some disadvantages relative to the CPS (in addition to the smaller sample size, which is a budget-related characteristic of SIPP, rather than a structural disadvantage.) The major problems are related to the existence of incomplete observations due to attrition from the survey. In fact, in order to construct meaningful annual estimates from SIPP, data from three or four consecutive interviews must be utilized for each respondent. This requires that observations with missing interviews be deleted from the sample. The Census Bureau has constructed longitudinal weights to compensate for the observations that are lost because of attrition. However, these weights cannot eliminate

the effect of unobserved individual characteristics that are related to both the probability of attrition and to the variable of interest.

The estimates presented in the paper are based on the longitudinal sample obtained from the first 4 interviews in the 1984 panel, that cover the 1984 calendar year. In future work we hope to extend this analysis to more recent years and to combine overlapping SIPP panels, in order to obtain a larger sample size. We also intend to investigate the sensitivity of the estimates to restricting the sample to completed observations (Le., observations with data for all four waves.)

#### **4. Low Earnings and Poverty**

We begin the analysis by providing an overview of the relationship between low earnings and poverty status (Table 1). Of the 121 million working age persons in the United States in 1984 (excluding the self-employed), approximately 26 million had no earnings for the year, 36 million had earnings below 50 percent of the median earnings of (full-time year-round) wage and salary workers (hereafter referred to as 'low earners'), and the remaining 59 million had earnings above 50 percent of the median. Since half of the median earnings in 1984 was sufficient to raise a family of three above the poverty line, it is not surprising that a level of earnings above such threshold, along with any other family income, was sufficient to raise virtually all workers in the higher earnings category above poverty, as shown in Table 1. Less than one-half of one percent of these workers lived in poverty in 1984, and only about 2 percent were in the near poverty (between 100 and 150 percent of the poverty line).

**TABLE 1**  
**DISTRIBUTION OF THE WORKING AGE POPULATION**  
**BY INDIVIDUAL EARNINGS AND POVERTY STATUS**

Individual Earnings	Poverty Status			Total
	Family Income Less Than 100% of Poverty	Family Income Between 100% and 150% of Poverty	Family Income Above 150% of Poverty	
Number of Persons (thousands)				
Zero Earnings	6,337	3,434	16,719	26,490
Earnings Below Half of the Median	4,393	4,983	26,625	36,001
Earnings Above Half of the Median	216	1,371	57,187	58,774
Total	10,947	9,788	100,531	121,266
Distribution by Poverty Status (percentages)				
Zero Earnings	23.9	13.0	63.1	100.0
Earnings Below Half of the Median	12.2	13.8	74.0	100.0
Earnings Above Half of the Median	0.4	2.3	97.3	100.0
Total	9.0	8.1	82.9	100.0
Earnings Distribution (percentages)				
Zero Earnings	57.9	35.1	16.6	
Earnings Below Half of the Median	40.1	50.9	26.5	
Earnings Above Half of the Median	2.0	14.0	56.9	
Total	100.0	100.0	100.0	

SOURCE: 1984 SIPP Full Panel Longitudinal File, 1984 calendar year.



If earnings above half of the median signify escaping poverty in virtually all cases, earnings below that threshold do not necessarily imply poverty. The majority of low earners do manage to escape poverty. Of the 36 million workers with low earnings during 1984, only 14 percent lived near poverty, and 12 percent lived in poverty.

Before moving to the analysis of the employment patterns and the wage distribution among workers in poverty (Section 4), it is useful to add another dimension to the relationship between low earnings and poverty, namely the relative contribution of low earners to total family earnings. We distinguish between low earners who are the sole earner in the family, those who are the primary earner (the source of the largest share of the family's earned income), and those who are a secondary earner (the source of smaller shares of the family's earned income). Table 2 provides the distribution of these three categories of workers among the low earners, as well the poverty rates within each category.

**TABLE 2**

	Populations (In 000's)	Percent of Low Earners	Poverty Rate
AU Low Earners	36,001	100.0	12.2
Sole Earners	6,951	19.3	36.4
Primary Earners	4,040	11.2	21.0
Secondary Earners	25,010	69.5	4.0

Table 2 illustrates two important facts. First, almost 70 percent of the 36 million low earners are secondary earners. Second, the poverty rate varies greatly according to the role of the worker in supporting the family. Of the 25 million secondary earners, 4 percent, or approximately 1 million, are poor. The poverty rate jumps to 21 percent among primary earners and to 36 percent among sole earners. Taken at face value, the last two figures imply that there are about 3.4 million families where the breadwinner is a low earner and is unable to lift his or her family out of poverty. However, it is important to note that 21 percent of sole earners are living alone at some point during the year. Therefore, the count of multiperson families in poverty where the breadwinner is a low earner reduces to 3.1 million.

The fact that secondary earners represent 70 percent of low earners, while primary earners represent only 11 percent, implies that the majority of secondary earners live with a person who is earning above 50 percent of median earnings. A reflection of this is the fact that, among secondary earners who escape poverty, 87 percent do so via the earnings of other family members (Table 3)(4) In addition, 8 percent of secondary workers have earnings high enough to lift their

family out of poverty with their own earnings. The overall picture that we gather from Tables 2 and 3 of the low earners who are secondary earners in the family is a reassuring one: only 4 percent live in poverty, and, of those who escape poverty, only 1 percent rely on means-tested programs in order to do so.

The picture is different for the low earners who are sole and primary earners. Among the primary low earners who escape poverty, about 70 percent do so either with their own earnings or with those of the other family members. Of the remaining 30 percent, almost half rely on other private income or on social security income. Only 2 percent of the primary earners rely on means-tested programs to escape poverty. (5)

Reliance on unearned income is larger among the sole low earners, although over half of those escaping poverty do so via their own earnings. Reliance on welfare income is limited to 6 percent of the cases.(6)

**TABLE 3  
DISTRIBUTION OF PERSONS ACCORDING TO  
THE WAY THEY ESCAPE POVERTY**

	Total Population Escaped (,000)	Total Poverty (,000)	Own	Percentage Escaped Poverty by Way of:				Tested Transfers	Total
				Others(1) Earnings	Other Earnings	Social Private Income	Means Security		
Zero Earnings	26,491	20,154		0.0%	65.8%	15.6%	14.4%	4.2%	100.0%
Earnings Below Half of the Median	36,001	31,608		17.4	69.6	5.6	5.5	1.8	100.0
Sole Earner	6,952	4,422		53.3	0.0	22.3	18.4	6.0	100.0
Primary Earner	4,040	3,192		38.7	32.4	13.9	12.9	2.0	100.0
Secondary	25,010	24,010		8.0	87.4	1.5	2.1	1.0	100.0
Earnings Above Half of the Median	58,774	58,558		95.4	4.3	0.1	0.1	0.1	100.0

SOURCE: 1984 SIPP Full-Panel Longitudinal File, 1984 calendar year.

In conclusion, low earnings and poverty are far from synonymous, since 88 percent of low earners are able to escape poverty. Although counterintuitive at first glance, this finding is largely explained by the fact that the majority of low earners are secondary workers within the family. For the sole or primary earners in the family who have low earnings, the poverty rate is, not unexpectedly, much higher.

## 5. Wages and Hours of Work Among the Working Poor

In this section we examine more closely the two components of earnings--hourly wage and hours of work--in order to determine their relative contribution to the low earnings of the working poor. We begin by examining average wages, hours of work, and earnings among the population with low earnings, classified according to poverty status and contribution to family earnings (Table 4). The differences in wages, hours and earnings across the rows in Table 4 do not imply causality, since these subgroups are defined in a way that depends largely on the variables being examined. The purpose of this comparison is to provide a very general picture of the labor market performance of these groups.

A finding that clearly emerges from Table 4 is the positive correlation between low wages and low hours of work. Secondary workers in poverty earn on average \$3.47 an hour, and on average work a mere 576 hours a year, the M-time equivalent of three months of work. Annual hours of work almost double (to 1,047 hours) for sole/primary earners in poverty, who have an average wage just above \$4 an hour. Low earners with family income above poverty work an average of about 1,200 hours per year, at a wage of \$4.75 an hour. The positive correlation between hours and wages thus produces large differences in average earnings among the three groups.

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**TABLE 4**

**AVERAGE EARNINGS, WAGES, AND HOURS OF WORK  
AMONG LOW EARNERS**

	Total Population (‘000)	Average Hourly Wage	Average Annual Hours	Average Annual Earnings
Low-Earners with Family Income Below Poverty	4,393	\$3.90	938	3,044
sole/primary earners	3,382	4.03	1,047	3,545
secondary earners	1,011	3.47	576	1,367
Low-Earners with Family Income Above Poverty	31,608	4.75	1,178	4,903

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TABLE 5

DISTRIBUTION OF LOW WAGES AND LOW HOURS  
AMONG LOW EARNERS

	Total Population (’000)	Low Wage Only (w < \$4.65) (H > 1750)	Low Hours Only (w > \$4.63) (h < 1750)	Low Wage and Low Hours (w < \$4.63) (h > 1750)	Neither (w > \$4.63) (h > 1750)
Low-Earners with Family Income Below Poverty	4,393	13.4	19.0	65.3	2.3
sole/primary earners	3,382	16.1	20.8	60.2	2.9
secondary earners	1,011	4.5	13.0	82.5	0.0
Low-Earners with Family Income Above Poverty	31,608	18.1	32.3	43.6	6.0

SOURCE: 1984 SIPP Full-Panel Longitudinal File. 1984 calendar year.

No structural interpretation of such correlation can be given on the basis of these data alone. The positive correlation between hours and wages might reflect: (1) a positive wage elasticity of labor supply (with the wage rate assumed as exogenous) and/or (2) the dependence of the wage rate on hours worked (part-time and occasional jobs providing a lower wage than full-time, stable jobs). Disentangling these alternative explanations is beyond the scope of this descriptive analysis.

Another perspective on this issue is offered by Table 5, where the population of low earners is classified according to whether they have low hours (less than 1750 hours a year)(7), and/or low wages (less than \$4.63 an hours).(8) Among secondary earners living in poverty, 82 percent experience both low hours and low wages (Table 5). The percentage of low earners with both low wages and low hours is also very high among sole/primary earners in poverty (60 percent), but it declines to 43 percent among low earners living above poverty.

We take a closer look at the distribution of hourly wages among the working poor in Table 6. We distinguish between workers at or below the legal minimum wage (\$3.35 in 1984), and the larger group of workers earning low wages (\$4.63 or less). These are the main findings in Table 6:

Our classification of low earners includes almost all minimum wage workers. A minimum wage worker must work year-round for 55 hours a week in order to earn above median earnings: only 2.5 percent of minimum wage workers manage to do so.

The overall prevalence of minimum wage workers among low earners is 19 percent, 6.7 million workers out of 36 million. They are a much larger share of low earners in poverty (34 percent) and are 50 percent of the poor secondary earners.

TABLE 6

MINIMUM WAGE AND LOW WAGES  
AMONG THE WORKING AGE POPULATION

	Total Population	Workers Earning Minimum Wage (\$3.35) or Less	Workers Earning Minimum Wage (\$3.35) or Less (Less Than \$4.63 <sup>1</sup> )	Workers Earning Minimum Wage (\$3.35) or Less (Less Than \$4.63 <sup>1</sup> )	Workers Earning Minimum Wage (\$3.35) or Less (Less Than \$4.63 <sup>1</sup> )	Workers Earning Minimum Wage (\$3.35) or Less (Less Than \$4.63 <sup>1</sup> )	Workers Earning Minimum Wage (\$3.35) or Less (Less Than \$4.63 <sup>1</sup> )
Low-Earners with Family Income Below Poverty	4,393	1,488	33.9	21.5	3,460	78.71	4.3
sole/primary earners	3,382	984	29.1	14.2	2,580	76.3	2.7
secondary earners	1,011	504	49.8	7.3	880	87.0	0.0
Low-Earners with Family Income Above Poverty	31,608	5,255	16.6	76.0	19,506	61.78	0.4
Total Low-Earners	36,001	6,728	18.7	97.5	22,966	63.8	94.7
Workers with Earnings Above Half of the Median	58,774	174	0.29	2.5	1,286	2.2	5.3
Below poverty	216	7	3.3	0.10	33	15.2	0.1
Above poverty	58,558	167	0.28	2.4	1,253	2.1	5.2
Total Wage and Salary Workers	94,775	6,917	7.3	100.0	24,252	25.6	100.0

SOURCE: 1984 SIPP Full-Panel Longitudinal File, 1984 calendar year.

<sup>1</sup> A wage of \$4.63 represents the ratio between half of the median earnings (\$9,639) and annual hours of work corresponding to a full-time full-year schedule (2,080 hours).

Only a minority of minimum wage workers live in poverty, about 1.5 million workers out of the total 6.9 million, or 21.5 percent. Of these poor minimum wage workers, about a million are sole/primary earners. and half a million are secondary earners.

These figures imply that only 1 in 7 of all minimum wage workers are the main breadwinner in poor families. Of these breadwinners, only a small minority work full-time year-round.

The latter two points imply that policies which raise the minimum wage will not necessarily target benefits at either the poor or the primary breadwinner of families. @ finding has been documented in a number of studies based on the CPS (for example, Burkhauser and Finegan, 1988, Smith and Vavrichek, 1987). Smith and Vavrichek, using March 1985 wage data and 1984 income data, find that 19 percent of hourly paid minimum wage workers lived in poverty in 1984. Given the many differences between the two surveys, this result is remarkably close to our estimate of 21.5

percent. (9)

The right-most portion of Table 6 focuses on the broader group of low-wage workers, where low wage is taken as less than \$4.63, the wage needed to achieve half of median earnings when working full-time year-round. The prevalence of low wages is dramatically higher than that of minimum wages strictly defined: 64 percent among all low earners earn a low wage, while only 19 percent earn the legal minimum wage. This result is not entirely surprising, given the dependence of the definition of low wage on that of low earnings. However, among the overall population the prevalence of low wages is also much higher (26 percent) than that of minimum wages (7.3 percent). This implies that a very large number of workers, more than 17 million, are concentrated in the relatively narrow range between the \$3.35 and \$4.63. Of these 17 million, almost 16 are low earners and almost 2 million live in poverty.

Table 7 turns attention to the patterns of labor force participation among the working poor. Recent research based on the 1988 March CPS (Klein and Rones, 1989) finds that about 1.9 million workers living in poverty work full-time year-round. We find a much smaller number working at least 2080 hours per year--less than half a million (based on the percentage in the last column in Table 7). If the lower threshold of 1750 hours is used to define full-time year-round work (as in Table 5), we still obtain a total count of less than .7 million. We identified three factors that may account for this discrepancy: (1) the Klein and Rones study includes the self-employed: however, even assuming that 15 percent of 1.9 million are self-employed, the CPS-based count remains as high as 1.6 million). (2) Our estimate refer to 1984, while the Klein and Rones study uses 1987 data. The improvements in the economy between 1984 and 1987 might account for part of the difference. (3) SIPP tends to count fewer full-time year-round workers than the CPS, as shown in Coder and Ryscavage (1989).

Another interesting finding in Table 7 is the similarity in average weekly hours (as well as in the fraction working full time) between poor and non-poor low earners. This implies that the difference in annual hours between these two groups noted in Table 4 is essentially due to the difference in weeks worked during the year: poor low earners work on average 30 weeks (and 22 percent of them work year-round), while non-poor low earners work 37 weeks on average (and 40 percent work year-round). When we compare sole/primary earners with secondary earners, we also find that lower weeks account for most of the difference in annual hours of work.

Because only a small percentage of low earners work year-round (50 or more weeks) it becomes important to look at the weeks without a job for those who are employed part-year. We first identify those who are reported as looking for work in every week in which they were not working. We find that 28 percent of poor low earners, or 1.2 million persons, fit this profile, versus 16 percent of non-poor low earners, or 5.1 million (column 6 in Table 7). By adding the percent employed year-round (column 5), we obtain the proportion of persons in each group with year-round attachment to the labor force: 50 percent for poor low earners, and 56 percent for non-poor low earners. Among poor low earners, 55 percent of sole/primary earners, and 33 percent of secondary earners, are in the labor force year-round. These figures should be

compared with the percent of year-round workers (column 5) and full-time year-round workers (last column). While poor sole/primary earners have on average less employment than non-poor low earners according to both of these measures, a larger percentage of sole/primary earners are in the labor force year-round.

Admittedly, reported unemployment is often different from actual job search. "Looking for work" is a more socially acceptable response to a question on labor force activity than is non-participation. Also, some persons might be unemployed because their "reservation wage" is too "high": they have expectations about wages that are not in line with the reality of their labor market. With these caveats in mind, we still believe that the count of persons who are in the labor force (whether employed or looking for work) continuously for a year offers a useful perspective on the labor market situation of the working poor, and one that is different from the count of persons employed full-time year-round.

TABLE 7

PATTERNS OF LABOR FORCE PARTICIPATION  
AMONG LOW EARNERS

	Total Population average (.000)	Weekly Hours		percent weeks of work	Weeks of Work always employed full-year (50+ weeks)	percent employed looking for work while not employed (6)	percent full-time full-year (7)
		percent weekly hours	average employed full-time (35+ hrs.)				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Low-Earners with Family Income Below Poverty	4,393	31.1	45.6%	29.8	21.9-%	28.3-%	10.6%
sole/primary earners	3,382	32.2	49.2	32.4	26.0	29.3	12.8
secondary earners	1,011	27.3	33.6	21.3	8.0	25.2	2.8
Low-Earners with Family Income Above Poverty	31,608	31.6	48.2	37.2	39.8	16.3	18.8

TABLE 8

DEMOGRAPHIC COMPOSITION OF LOW-EARNERS WITH LESS THAN FULL-YEAR ATTACHMENT TO THE LABOR FORCE

	Total Population Force Less (,000)	In the Labor		Percentage Distribution			
		Than Year-Round (,000)	College Students	Women with Small Children	Reporting a Work Disability	Teen-Disability	Residual
Low-Earners with Family Income Below Poverty	4,393	2,187	27.9	26.7	13.7	3.9	27.7
sole/primary earners	3,382	1,512	31.5	19.8	15.0	3.2	30.5
secondary earners	1,011	675	19.8	42.2	10.8	5.6	21.6
Low-Earners with Family Income Above Poverty	31,608	13,888	39.2	18.1	9.1	3.0	30.7

SOURCE: 1984 SIPP Full-Panel Longitudinal File, 1984 calendar year.

NOTE: Table 8 excludes persons employed 50 or more weeks and persons employed less than 50 weeks but continuously looking for work when not employed.

One of the uses of the "year-round in the labor force" measure is to identify its complement, that is, persons who are not continuously in the labor force. We look at the composition of this population in Table 8. We explicitly identify four demographic subgroups of this population: persons enrolled in post-secondary education (for brevity, college students), women with children less than 6 years old, persons reporting a work disability (i.e., a limitation in the kind or amount of work they can do because of a health condition), and teenagers (persons aged 18 and 19 years).(10)

College students account for almost 40 percent of non-poor low earners with part-year attachment to the work force. More surprisingly, they account for 31 percent of sole/primary earners in the labor force part-year who live in poverty. In absolute terms, this amounts to about half a million persons.

Women with small children account for a large share of the low earners with limited labor force attachment only for secondary earners. Their relatively small presence among sole/primary earners probably reflects the fact that women heads of household with a limited earning potential have the option of complete non-participation in the labor force and reliance on cash assistance.

Finally, while both persons with a work disability and teenagers account for less than 20 percent of all low earners subgroups, the residual is close to 30 percent in most cases. This residual represents adults who are not constantly in the labor force during the year, but do not report any of the most common "socially accepted" reasons for non-participation (disability, school attendance, child care). Because of sample size and data limitations, we were unable to explore other possibilities, such as discouragement, or the need to provide home care to disabled elderly.



## 6. Hypothetical Changes in Wages and Work Patterns

In this section we simulate the impact of addressing the three factors associated with low earnings -- low wages, low hours of work, and low weeks of work. Focusing only on income from earnings we consider the effects on the worker's ability to earn his or her way out of poverty of (1) an increase in the wage rate, (2) an increase to full-year employment, and (3) an increase to full-time work.

It is important to note that this approach ignores the behavior of other family members, the availability of unearned income, and any barriers to employment (e.g., young children or a disability) in examining the impact of changes in wages and employment on the worker. We also assume that there will be no changes in the worker's employment behavior in response to the wage and employment changes (e.g., we assume that the worker will not choose to work fewer hours if he or she earns a higher wage).

Although we ignore the earnings of other family members and unearned income in our simulations, we continue to classify workers by their status relative to the poverty threshold for their family size in order to focus on the group that we have identified as the working poor. However, in order to control for the effects of differences in family size on the worker's ability to earn his or her way out of poverty we also consider the worker's earnings relative to the poverty threshold for a family of three.**(11)**

As shown in Table 9, 85 percent of all low-earners do not earn enough on their own to remove their families from poverty based on their earnings alone. In the remainder of this section we will focus on these low-earners.

The changes in labor market outcomes that we will examine are:

- An increase in the worker's wage rate to \$4.63 - the wage required to earn 50 percent of median earnings when working 40 hours per week for 52 weeks;
- An increase in the usual number of hours worked per week to 35 hours - the minimum required to be classified as a full-time worker; and
- An increase in the number of weeks worked per year to at least 50 weeks -- the minimum required to be classified as a full-year worker.

Those workers whose wage rate, hours of work, or weeks of work already exceed the value of the simulated increase would not be affected by the hypothetical change. For example, a worker who was earning \$5.00 an hour would not be affected by the increase in the wage rate to \$4.63 per hour. Overall, 79 percent of the low-earners below poverty would be affected by the increase in the wage rate, 54 percent by the hours of work increase, and 78 percent by the increase in the number of weeks of work.

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**TABLE 9****PERCENT OF LOW EARNERS BELOW OWN POVERTY THRESHOLD  
AND BELOW POVERTY THRESHOLD FOR A FAMILY OF THREE  
BASED ON OWN EARNINGS ALONE**

	Percent of Low Earners with:	
All Low Earners	84.7	85.9
Low-Earners with Family Income Below Poverty	100.0	96.7
Low-Earners with Family Income Above Poverty	82.6	84.6

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SOURCE: 1984 SIPP Full-Panel Longitudinal File. 1984 calendar year.

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Increasing the wage rate. Of the low-earners in poverty who have earnings which are below the poverty threshold for their family, a wage increase, in and of itself, would have a relatively small impact on the number of workers able to earn their way out of poverty, as shown in Table 10. Holding the number of weeks of work and the usual hours of work constant, an increase in the wage rate of all workers to at least \$4.63 would move only 13 percent of those low-earners out of poverty based on their earnings alone.

Despite the fact that secondary workers are more likely than the sole or primary workers to have low wages, the impact of the wage increase is particularly small for such workers. This occurs because the secondary workers are much more likely to work part-time and part-year so that the wage increase has a relatively small impact on total earned income. Furthermore, the average family size for secondary workers, at 4.9 persons, is larger by almost 2 persons than that of the sole/primary earners. Nevertheless, if we control for family size by comparing the worker's simulated earnings to the poverty threshold for a family of three, the share of sole/primary earners who would have earnings in excess of that target is still three times that of secondary earners (Table 11). Thus, although the majority of those affected by the wage increase would be secondary workers, the reduction in poverty for those workers would be relatively small.

Increasing weeks of work. As noted in Section 5, the primary source of differences in annual hours between the poor and non-poor low-earners is the difference in weeks of work -- poor low-earners work significantly fewer weeks than do the low-earners who escape poverty.

Thus, it is not surprising that eliminating periods of nonemployment would have a larger impact than would the increase in the wage on the proportion of low-earners escaping poverty. In particular, full-time work of at least 50 weeks (combined with the existing wage rate and usual hours of work per week) would provide sufficient earnings to move 23 percent of the sole and primary earners out of poverty.

**TABLE 10**  
**SIMULATIONS OF THE IMPACT OF INCREASING**  
**THE WAGE RATE, HOURS OF WORK, AND WEEKS OF WORK**  
**ON THE PROPORTION OF LOW EARNERS WITH EARNINGS**  
**ABOVE THE POVERTY THRESHOLD**

	Total	<u>Below Poverty</u> Sole/Primary	Secondary Poverty	Above Low Earners	Total
Percent of Those with Earnings Below Poverty Moved Above Poverty by Own Earnings with:					
Wage of \$4.63	13.0	16.0	2.9	7.7	8.5
Full-Year Work (50 weeks)	18.0	22.6	2.6	18.3	18.3
Full-Time Work (35 hours)	9.6	12.5	0.0	10.7	10.5
Full-Year and Full-Time Work (1750 hours)	31.0	38.4	6.4	30.9	30.9
Wage of \$4.63 and Full-Year Work	37.4	45.3	11.0	29.1	30.3
Wage of \$4.63 and Full-Year Full-Time Work	53.8	63.6	21.0	46.1	47.2

SOURCE: 1984 SIPP Full-Panel Longitudinal File. 1984 calendar year.

TABLE 11

**SIMULATIONS OF THE IMPACT OF INCREASING  
THE WAGE RATE, HOURS OF WORK, AND WEEKS OF WORK  
ON THE PROPORTION OF LOW EARNERS WITH EARNINGS  
ABOVE THE POVERTY THRESHOLD  
FOR A FAMILY OF THREE**

	Total	Below Poverty Sole/Primary	Secondary Poverty	Above Low	Total Earners
Percent of Those with Earnings Below Poverty for a Family of Three Moved Above Poverty by Own Earnings with:					
Wage of \$4.63	12.5	15.0	4.5	14.9	14.6
Full-Year Work (50 weeks)	17.3	18.8	12.6	24.0	23.1
Full-Time Work (35 hours)	4.9	6.1	1.1	14.5	13.2
Full-Year and Full-Time Work (1750 hours)	25.5	27.9	17.9	41.1	39.0
Wage of \$4.63 and Full-Year Work	45.7	49.5	33.5	45.4	45.5
Wage of \$4.63 and Full-Year Full-Time Work	61.6	67.5	42.9	72.9	71.3

SOURCE: 1984 SIPP Full-Panel Longitudinal File, 1984 calendar year.

Like the wage increase, the impact of an increase in weeks of work on secondary workers is quite low -- only 3 percent would escape poverty based on their own earnings. However, this difference is due in part to the larger families of the secondary earners, since 13 percent would earn enough to move a family of three out of poverty (Table 11).

Increasing the wage rate, weeks of work, and hours of work. Given that 79 percent of the low-earners in poverty experience two or more of the circumstances we are considering -- low wages, low weeks of work, or low hours of work -- it is not surprising that addressing a single problem has relatively little impact on the ability of the worker to earn his or her way out of poverty. However, addressing all three problems -- assuming an increased wage rate combined with full-year full-time employment -- would only move slightly more than half of the poor low-earners above poverty based on their earnings alone.**(12)** Since by definition a wage rate of \$4.63 for 35 hours of work for 50 weeks per year is not sufficient to raise a family of three out of poverty, those low-earners who do escape poverty under this simulation are either (1) from smaller families and/or (2) already have a wage rate in excess of \$4.63, work more than 35 hours per week, and/or work more than 52 weeks per year.

If we control for family size, we see that 62 percent of the poor low-earners would obtain sufficient earnings at the higher wage, weeks, and hours of work to move a family of three out of poverty (Table 11). The substantially higher figure for sole and primary earners (68 percent)

relative to the secondary earners (43 percent) reflects the greater likelihood that the secondary earners start with low wages, low weeks, and low hours of work. Fifty-five percent of the secondary workers have low values for all three labor market outcomes as compared to 28 percent of the sole and primary earners.

Summary. Because so many of the poor low-earners have low values for multiple labor market outcomes, addressing any of those outcomes individually has only modest impacts on the ability of the worker to earn his or her way out of poverty (under the fairly restrictive assumption that there would be no behavioral responses to a change in the wage rate, hours of work, or weeks of work). An increased commitment to the labor force consistent with full-year full-time work combined with a higher wage would produce a larger impact on poverty, although 38 percent of the poor low-earners would still have earnings below the poverty threshold for a family of three. For such earners, a higher wage and/or work beyond the 35 hours per week for 50 weeks minimum for full-year full-time work would be required to earn enough to move a family of three out of poverty.

## **7. Summary of Our Findings and Directions for Future Research**

There is substantial evidence that the U.S. labor market exhibits a relatively high degree of earnings inequality, and that this inequality has been increasing in recent years (Blackburn and Bloom, 1987). The evidence is less clear on the relationship between earnings inequality and the distribution of family income, and in particular on how earnings inequality affects the prevalence of families in poverty. The degree of earnings inequality affects the incidence of poverty to the extent that workers who occupy the bottom of the earnings distribution are the main support for their families.

The SIPP data, along with the results from previous research, show that the lower tail of the individual earnings distribution coincides only to a very limited extent with the population in poverty. During 1984, of the 94 million wage and salary workers, 36 million had earnings below half of the median earnings for full-year full-time workers, which would not enable a worker to maintain a family of four out of poverty. Despite their low earnings, more than 31 million of the 36 million low earners escaped poverty. This was mainly due to the 25 million secondary workers who were moved above the poverty threshold in large part by the earnings of the primary workers in their families. Only 1 million of the secondary workers with low earnings were poor.

The picture is different for the 11 million low-earners who were the main source of support for their families: more than 30 percent of them were in poverty. This represents a pool of about 3 million families where the main or sole breadwinner is trapped, for a variety of reasons, at the low end of a very unequal earnings distribution.

The data presented in this paper are still too coarse to provide specific policy prescriptions. One very general implication of these findings is the importance of "targeting efficiency": if labor market and income support policies are to help the working poor, they need to be targeted to those who are the sole or primary breadwinner for their family. The question is how to provide the means and incentives to increase the earnings for this relatively small population, while avoiding the daunting task of altering the entire distribution of earnings. For example, as has been discussed in other studies, policies which increase the minimum wage target greater shares of secondary earners than of sole or primary earners in the family, and target greater shares of non-poor than poor workers.

We have identified four potential areas for future research that would exploit the richness of SIPP data for studies of the working poor. The first area would simply expand the analysis to include multiple panels of SIPP. This is necessary because the working poor are a relatively small component of the labor force and of the population in poverty, so that the sample size of each panel of SIPP limits the analyst's ability to examine subgroups of that population. The remaining three areas are more substantive:

1. There is a great deal of concern about the impact of the income and Social Security taxes on the working poor. One of the aims of the tax reform of - 1986 was to alleviate that tax burden. SIPP data will soon cover a period of time spanning 1984 to 1990, and will permit an analysis of the distribution of the tax burden among the working poor before and after tax reform. The information on changes in family composition during the year, as well as on expenses such as on child care, available in SI--PP make it a better data base for tax simulation than the CPS.
2. Another potential area of research is the targeting of employment and training (E&T) programs. A claim is often made that E&T funds should go to those with the least amount of labor force experience. By the same token, existing programs, such as JTPA, are often criticized because their services are targeted to the most "job ready" among the eligible. This position tends to imply that the working poor should have the lowest priority in the delivery of E&T services, and possibly should be excluded from them. Descriptive information on the pattern of employment among the working poor, and on their characteristics, as compared to those of non-employed welfare recipients, could be useful for this debate.
3. Additional research is needed on the accuracy of the wage data in the SIPP. While in principle SIPP provides better information than the CPS, much remains to be discovered about the quality of SIPP wage data.

## REFERENCES

Blackburn, McKinley, and David Bloom. "Earnings and Income Inequality in the United States" Population and Development Review, 134, December 1987.

Burkhauser, Richard, and Aldrich Finegan, "Me Minimum Wage and the Poor: The End of a Relationship". Journal of Policy Analysis and Management, Vol. 8, No. 1, 1989

Code, John, and Paul Ryscavage. "Longitudinal versus Retrospective Measures of Work Experience", paper presented at the 1989 Winter Meeting of the American Statistical Association, San Diego, CA., January 1989.

Danziger, Sheldon, and Peter Gottshalk, "Work, Poverty, and the Working Poor: a Multifaceted Problem". Monthly Labor Review, September 1986.

Ruggles, Patricia. Drawiniz the Line. Urban Institute Press: Washington, DC: 1990.

Ryscavage, Paul, and Alberto Martini, "Measuring the Extent of Unemployment: Retrospective Versus Longitudinal Data" , presented at the 1990 Meeting of the American Statistical Association, Anaheim, CA, August 1990.

Sawhill, Isabel. "Why is Poverty So Persistent in the U.S." Journal of Economic Literature 1988

U.S. Bureau of the Census. SIPP User's Guide. Washington DC: U.S. Department of Commerce, 1987.

**TABLE A-1**  
**Selected Individual and Family Characteristics**

	Low Earners			Higher Earners			
	Total	<u>Below Poverty</u>		Sole/Primary Earner	<u>Above Poverty</u>		
		Total			Secondary Earner		
Age							
18-26	43.0%	36.6%	33.2%	47.9%	43.9%	15.6%	
26-45	37.6%	47.6%	49.0%	42.7%	36.2%	58.3%	
46-64	19.4%	15.9%	17.8%	9.4%	19.9%	26.1%	
Gender							
Male	34.4%	43.4%	44.4%	40.1%	33.2%	63.7%	
Female	65.6%	56.6%	55.6%	59.9%	66.8%	36.3%	
Race							
Black	15.2%	30.1%	29.6%	31.8%	13.1%	9.1%	
Whit*	82.0%	66.4%	67.1%	63.9%	84.2%	88.1%	
Other	2.8%	3.5%	3.3%	4.3%	2.7%	2.8%	
Ethnicity							
Hispanic	8.2%	13.2%	10.5%	22.4%	7.5%	5.9%	
Non-Hispanic	91.8%	6.8%	\$9.5%	77.6%	92.5%	94.1%	
Marital Status							
Never Married	41.5%	40.7%	40.2%	42.4%	41.6%	19.2%	
Married	45.8%	32.1%	28.6%	43.7%	47.7%	67.4%	
Separated, Divorced, Widowed	12.7%	27.2%	31.2%	13.8%	10.7%	13.5%	
Education							
LT High School	25.1%	46.8%	42.4%	61.6%	22.1%	14.2%	
HS Graduate	37.9%	29.7%	31.1%	24.9%	39.1%	37.0%	
Some College	28.6%	17.4%	19.0%	11.9%	30.2%	24.5%	
College Grad	8.4%	6.1%	7.5%	1.6%	8.7%	24.3%	
Current Student	27.5%	21.6%	22.5%	18.7%	28.3%	14.6%	
Reported Work Disability	11.9%	18.0%	17.8%	18.6%	11.1%	6.4%	
Income Sources							
Other Earners	80.7%	42.3%	25.1%	100.0%	86.0%	70.7%	
Unearned Private Inc	81.7%	49.1%	49.6%	47.6%	86.2%	\$9.5%	
Social Insurance	37.0%	31.8%	31.4%	33.3%	37.7%	22.7%	
Need-Tested Trans	13.1%	36.9%	35.3%	42.5%	9.8%	4.3%	
Family Structure							
Ever Single-Female	24.3%	42.9%	43.7%	40.2%	21.7%	15.4%	
Ever Male-Present	79.6%	52.4%	47.1%	70.1%	83.3%	\$5.8%	
Ever Individual	5.2%	13.2%	17.0%	0.6%	4.1%	3.5%	
Changed over Year	9.0%	9.1%	8.5%	10.9%	8.9%	5.0%	
Avg. Family Size	3.49	3.44	3.00	4.93	3.50	3.06	
Presence of Child							
1-3	19.8%	33.6%	29.9%	45.8%	17.8%	19.9%	
1-6	25.1%	42.2%	39.5%	51.2%	22.8%	24.9%	
12-18	44.9%	51.4%	45.2%	72.1%	44.0%	39.5%	
Type of Earner							
Sole	19.3%	57.7%	74.9%	0.0%	14.0%	29.3%	
Primary	11.2%	19.3%	25.1%	0.0%	10.1%	43.9%	
Secondary	69.5%	23.0%	0.0%	100.0%	75.9%	26.8%	

**NOTES**



(1) Among workers who have low annual earnings, which factors are associated with remaining in or escaping from poverty?

(2) The official poverty threshold is based on a statistical convention -- the cost of a nutritionally adequate diet for a household of given size multiplied by the ratio of income to food expenditures -- which has been subject to much criticism. (See Ruggles (1990) for a discussion of the problems with the current poverty threshold and suggestions for alternative measures.)

(3) For example, a worker with earnings equal to the median earnings of full-time wage and salary workers in 1984 (\$19,277) would be in poverty if he/she had to support a family of nine or more persons (and received no other income).

(4) In assigning the way of escaping poverty we used the hierarchy reflected by the order of the columns in Table 3 (i.e., we begin with own earnings, add other earnings, etc.).

(5) A larger proportion, 12 percent, actually receive means-tested cash transfers.

(6) The share of sole low earners escaping poverty who receive cash assistance is 13 percent.

(7) Annual hours of 1750 correspond to working 35 hours per week for 50 weeks.

(8) \$4.63 represents the ratio between half of the median earnings (\$9638) and 2080 hours, that is, is the wage needed to achieve half of median earnings when working full-time year-round.

(9) Smith and Vavrichek restrict their analysis to hourly paid workers and estimate total of 990,000 minimum wage workers in poverty. We find 850,000 poor workers who were paid by the hour (for most of the time they worked during 1984.)

(10) The four groups are mutually exclusive, and are defined in the sequence presented in the text (e.g., a college student with a work disability is classified here as a college student).

(11) The average family size for the low-earners is 3.5 persons, as reported in Appendix Table A.1.

(12) It is important to note the increase to full-year full-time work ignores any behavioral response to the labor market changes and any barriers to employment that are faced by the worker, such as child care needs for young children or constraints because of disabilities.