

# Asset Poverty in the United States, 1984–1999: Evidence from the Panel Study of Income Dynamics

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## I. INTRODUCTION

The reduction of poverty is a non-controversial goal of nearly all societies. As anyone would agree, a fight against poverty has to start with a detailed description of poverty and the choice of a measure to be used in the identification of the poor. The most common way of measuring poverty is to compare the amount of resources owned by a family or a person to the minimum amount needed to satisfy basic needs. This minimum level is usually called the poverty line or the poverty threshold, and those remaining below the poverty line are considered poor.

Although this looks straightforward, there is no standard way of defining poverty. What is necessary to satisfy basic needs varies across time and place, depending on the level of development, societal norms and values. Moreover, scholars have different opinions about which economic variables best identify the people whose resources are less than the minimally acceptable level. So far, the typical variables of choice used to determine the poverty status of families or individuals have been either income or consumption.

A growing part of the poverty measurement literature emphasizes that poverty is not only a lack of income but a lack of assets as well. Assets provide an economic protection for the hard times and enable people to invest in their future. Even low levels of asset holdings can make a significant difference in the lives of low-income families. As stated in Shapiro and Wolff (2001, p.6), “assets provide a stake that income alone cannot provide.” Therefore, a poverty measure should take household wealth into consideration together with income in order to get a better assessment of well-being. Previous research, on the contrary, took for granted that income or consumption is sufficient to define well-being. These studies focused entirely on income or on consumption and left the issue of asset poverty out of the picture.

On the policy front, there have been changes too. Recently, the focus of the approach to dealing with poverty has shifted from an income-transfer policy that tries to maintain a sufficient level of income for everyone, to an asset-based policy that aspires to increase the asset holdings of the poor. As an example, in 1998, the Individual Development Account (IDA) Demonstration Act was signed into law<sup>1</sup>. By this, the government promised to provide matching funds to every dollar that a family saves and deposits to these accounts. In fact, there have already been a number of asset-based programs, mostly structured into the tax system, which became quite successful in creating incentives for many families to save. These include

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<sup>1</sup> <http://clinton6.nara.gov/1998/10/1998-10-27-fact-sheet-on-individual-development-accounts.html>

programs like corporate and individual retirement accounts and state-sponsored savings plans for higher education. However, such programs have benefited the non-poor almost exclusively, leaving families with few or no assets behind<sup>2</sup>. Assistance programs designed for the poor, until recently, focused only on supporting a minimum level of consumption while they ignored and even prohibited asset accumulation among the poor.

In this paper, we propose an asset poverty line, which, like the official poverty measure, sets the minimum requirements for survival. We then estimate the size and severity of asset poverty in the United States with respect to this asset poverty line, both for the entire population and for various demographic and labor market groups, using the Panel Study of Income Dynamics (PSID) data. Additionally, we provide an estimate of the impact of adding wealth to the official poverty definition. We attempt to identify the trends in asset poverty and the population groups that have become more or less prone to be asset-poor. We investigate the persistence of asset poverty in the U.S. and identify the major events that are associated with the transitions into and out of poverty.

The rest of the paper is organized as follows: Section 2 discusses the main themes in poverty measurement research and describes how poverty is defined in the official U.S. government statistics. It also talks about some of the shortcomings of the official measure as well as recommendations in the literature for improvement. Section 3 provides the definition of asset poverty used in this paper. The estimates of asset poverty are reported in section 4. Section 5 analyzes the effects of compositional changes on the overall asset poverty rates. Section 6 compares asset poverty rates in the PSID and the rates in the Survey of Consumer Finances (SCF). Section 7 compares asset poverty rates to official poverty rates. The difference between household-based and individual-based asset poverty rates is discussed in section 8. Section 9 looks into the composition of household portfolios. Section 10 provides descriptive statistics of the characteristics of households in asset poverty. Section 11 performs regression analyses to identify the trends in asset poverty. Section 12 estimates poverty rates using an alternative measure that combines income and wealth. We talk about the persistence of poverty in section 13. The role of changes in assets and changes in debts as well as the role of major lifetime events on the transitions into and out of asset poverty are discussed in this section. Section 14 summarizes the findings and concludes the paper.

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<sup>2</sup> See Sherraden (1991) and Shapiro and Wolff (2001).

## II. BACKGROUND

### A. Review of Poverty Measurement Research

This section reviews the literature on poverty measurement. First, we discuss the alternative ways of setting a poverty threshold or defining the “needs.” Second, we talk about the main ideas on how to define the “resources,” emphasizing the literature on the impacts of adding net worth to the poverty definition. Next, we summarize the main findings of poverty duration analyses.

There are three main ways of setting poverty lines. One could set an absolute poverty line, a relative one or a subjective one. An absolute poverty line remains fixed over time and is unaffected by changes in the average amount of resources available to the population. The official poverty measure currently being used in the U.S. is an absolute measure, in that it classifies families whose income fall below a certain level as poor. The poverty lines used by the World Bank to estimate world-wide income poverty are also absolute measures, set at \$1 and \$2 per person per day (World Bank 2001). A relative measure of poverty, on the other hand, makes the poverty line a function of the amount of resources owned by the median person or family in the population. The poverty standards developed by the OECD and currently being used to estimate the extent of poverty in western European and Scandinavian countries are relative measures. They are designed to identify individuals and families living in households with income below half of the national median for households of similar size<sup>3</sup>. Subjective measures of poverty rely on families’ own assessment of their economic well-being to judge on who is poor. Also known as the ‘Leyden School’ approach, the technique involves using people’s subjective evaluations of how much income would be ‘excellent’, ‘good’ and so on to maintain an adequate standard of living to build a national poverty line<sup>4</sup>. The poverty lines set by these measures have the advantage of being free from the judgement of a handful of politicians; however they are sensitive to question wording and the particular method used in their derivation.

An important part of the problem of setting poverty lines is how to take different family types into account. Usually, poverty lines are set for the ‘standard’ family first. In the U.S. it is composed of two adults and two children. Then, they are adjusted for different family types by

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<sup>3</sup> See Smeeding et al. (1993) for more on poverty in Europe.

<sup>4</sup> See Hagenaars and van Praag (1985).

equivalence scales to account for the economies of scale in shared expenditures. Family characteristics such as the family size, age of the head and the number of children should all be taken into consideration in building these scales. Exactly how poverty lines should vary to account for these characteristics is a controversial issue. Triest (1998) examines the sensitivity of the U.S. official poverty rate to alternative equivalence scales and shows that both the level and the trend of poverty depend on the type of scale used, so the choice of equivalence scales matters. In fact, one characteristic of the official poverty measure in the U.S. that is subject to criticism is the anomalous pattern of economies of scale implicit in the thresholds for families of different size. Some alternatives have been suggested (see Short 2001, but more work is required in this area.

The next issue is the discussion in the literature about the type of economic variables or “resources” that should be used to identify the poor. There is some consensus among economists that poverty is associated with the lack of “economic resources,” yet there are widely varying perspectives on what these resources should be and how they should be measured. Usually family income is assumed to represent the amount of resources that a family has the right to use, as done in the official measure of poverty in the U.S. However, income may not be a very good proxy for well-being, especially for low-income families. Incomes fluctuate over time but families usually find a way to maintain a more or less constant level of consumption. They use their assets or they receive non-cash benefits from government in hard times. In fact, some researchers, such as Slesnick (1993) and Jorgenson and Slesnick (1987) have argued that consumption is a much better measure of well-being. However, these measures also have shortcomings, such as the sensitivity of the estimated poverty rates to the equivalence scale used<sup>5</sup>.

An alternative definition of poverty (‘Self-Reliant poverty’), inspired by the work of Amartya Sen, is developed by Haveman<sup>6</sup>. Here, the emphasis is on potential earnings, called ‘earnings capacity’, and not on realized earnings. The idea is that being incapable of earning sufficient income is a more vulnerable situation than being short of cash in a given year; therefore, poverty analysis and policy should shift its focus from low incomes to lack of basic capabilities and should emphasize the merits of individual independence. An individual is Self-

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<sup>5</sup> Triest (1998) reports that the level of consumption poverty estimated by Jorgenson and Slesnick depends crucially on the equivalence scales used and that the scales they use take unreasonable values.

<sup>6</sup> Haveman and Bershadker (2001). Two prior studies that have used measures of earnings capacity are Garfinkel and Haveman (1977) and Haveman and Bershadker (1998).

Reliant poor if his earnings capacity is lower than that would enable him to secure a socially-accepted minimum level of living, even if he or she worked full-time full-year, accounting for the time lost because of poor health or disability and the cost of dependent care. Haveman and Bershadker (2001) estimate earnings capacity using individual and family characteristics such as age, education, marital status, region of residence and non-labor income, controlling for selection bias. Their results are revealing. They show that both the official and the Self-Reliant poverty rates have an upward trend in the 1975-97 period; however the official rates have a much slower trend. This indicates that “the potential earnings of families at the bottom of the distribution are declining at a more rapid rate than is the realization of that potential, suggesting an increase in the utilization of earnings capacity by these working-age families.” This can be interpreted as evidence that deterioration in the labor market opportunities for the less skilled workers plays an important role in the upward trend in the poverty rate.

Of particular interest to this paper is the group of researchers that has called attention to the importance of wealth in the measurement of poverty. These researchers argue that wealth is an important dimension of well-being, therefore it should be included in the family resources when defining poverty. Wealth gives its owner an advantage in life, “independent of the direct financial income it provides” (Wolff 2001a) and apart from the political power it brings. It is a source of consumption, since it can be converted into cash in times of economic stress caused by unemployment, disability, sickness or family breakup (Wolff 2001a). Comparing income to wealth, Oliver and Shapiro (1990) state that “income is a transitory measure and can be consumed as quickly as it is earned, yet wealth is a more stable indicator of status or position in society and represents stored-up purchasing power. It reflects savings and investments that can be drawn on in times of need.” In addition, families normally enjoy consumption services from assets such as owner-occupied housing and consumer durables. It is now very well-known that wealth is distributed far more unevenly than income in the U.S.<sup>7</sup>. Oliver and Shapiro (1990) show that one-third of households in the U.S. have zero or negative net financial assets; therefore “redistributive and welfare policies based on income analyzes and levels seriously underestimate the severity of the problems they are meant to address.”

Evidently, a poverty measure that includes wealth in the definition of family resources is preferable to a measure based on income only. However, there are some issues that need to be resolved. First, one has to find a way to add wealth, which is a stock variable, to income, which

is a flow variable. Researchers have suggested mainly two ways of doing this: converting wealth into an income flow before adding it to family income, which is used more commonly, and setting a joint threshold of income and wealth. The income flow generated by wealth can be computed as a lifetime annuity that brings wealth down to zero at the end of one's lifetime. Alternatively, it can be assumed that the annuity flow is paid out like a bond coupon and the principal value of wealth can be kept constant. The method used in the computation of the annuity flow may have an effect on the results. In either case, one would expect the elderly to benefit more from the addition of wealth to income than the non-elderly, since the elderly have higher ratios of wealth to current income. But the lifetime annuity approach accentuates further the advantage of the elderly, because they have shorter life expectancies.

Weisbrod and Hansen (1968) first attempted to explicitly account for wealth as well as income in measuring poverty. Using 1962 data, a fixed \$3000 poverty line and the lifetime annuity technique, they found both a lower incidence of poverty (20 percent versus 18 percent with 4 percent interest rate) and a younger age distribution of poor households under the income-net worth approach than under the simple income measure. Lerman and Mikesell (1988) added several new wrinkles to the Weisbrod-Hansen study. They used more recent data (1983 Survey of Consumer Finances (SCF)), adjusted poverty thresholds for family size and composition, examined the overlap between the two measures and extended the analysis to several demographic characteristics. They found an overall poverty rate of 11 percent with the income-net worth poverty measure, compared to 13 percent with income only. They also considered adjusting the poverty thresholds for the inclusion of wealth. Their argument for this adjustment was that differences in the official poverty lines between elderly and non-elderly households were partially intended to reflect differences in wealth; thus if wealth is included in family resources the poverty lines should also be adjusted upward. They chose to calibrate their thresholds to replicate the poverty headcount based on the official thresholds. They showed that 87 percent of the income-poor were also income-net worth-poor. However, the extended threshold changed the composition of the poor; they found more non-elderly, renters, large families, children and unemployed among the poor.

Wolff (1990) included a wealth dimension in the poverty measure by assuming that households receive annuity flows of their wealth which are paid out like bond coupons. By using data from the 1983 wave of the SCF, he found that the impact of adding wealth was to

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<sup>7</sup> Oliver and Shapiro (1990) and Wolff (2001a).

reduce poverty rate by about 10 percent for the full population and by more than 20 percent for the elderly. He also analyzed the consequences of using a poverty line that is based on a joint threshold of income and net worth. First, he defined poverty as the state of having below-poverty income *and* below-median wealth. This caused a 15 percent reduction in the income only poverty rate. Then, he considered defining poverty as having below-poverty income *or* below-median wealth, which resulted in a 20 percent higher poverty rate compared to the official rate.

Moon (1977), Crystal and Shea (1990) and Rendall and Speare (1993) focused on the economic circumstances of the elderly and demonstrated how using raw income to estimate the well-being of the elderly could distort the picture of poverty. Moon (1977) and Crystal and Shea (1990) found that restricting the analysis to family incomes caused the poverty rate among whites to be overestimated. A more comprehensive measure of poverty detected more poor minorities than an income-only measure did. Crystal and Shea (1990) showed that the apparent disadvantage of the elderly disappeared, once incomes were adjusted for household size, underreporting of property income and for the annuity value of net worth. However, as both Crystal and Shea (1990) and Rendall and Speare (1993) reported, the adjustment process did not eliminate the inequality among the elderly. While Social Security exercised some leveling effect, these equalizing effects were outweighed by those of pension and property income concentrated in the hands of high-income individuals.

Ruggles and Williams (1989) and Ruggles (1990) analyzed the effects of asset holdings on the poverty entries and spell durations, assuming that assets could be used to bring the consumption levels of those with below-poverty incomes to the poverty line for as long as possible. They found that over 60 percent of poverty entries remained even after asset holdings were accounted for. By contrast, half of the observed poverty spell entries for the elderly were eliminated. Those who did remain in poverty even when their assets were counted were the ones who were more likely to experience very long spells; so the average spell duration increased after the addition of assets in resources.

This takes us to another point of interest of this paper, which is the persistence of poverty. Identifying the groups of people and families that are poor chronically versus temporarily is important both for theoretical reasons and for making informed policy decisions. Assuming that the causes of the two types of poverty are different, so will be their remedies.



Bane and Ellwood (1986) is the first study that carefully distinguishes between the “ever-poor” and the “poor at a particular time.” Using the PSID data, the authors examined transitions into and out of poverty to derive estimates of completed spells of poverty for the non-elderly population. Their work showed that most of the people who are ever poor stay in poverty for a short time, while the majority of the poor at a given time experience long spells of poverty before they exit. To illustrate, among those who ever experienced poverty on an annual basis, about 45 percent of poverty spells ended within one year and 70 percent within three years. Only 12 percent of spells lasted longer than eight years. Restricting the sample to those who are poor in a given year, only 11 percent of spells lasted for less than a year, about 25 percent lasted for less than three years and a little more than 50 percent lasted more than eight years<sup>8</sup>. This finding is very important, since it means that the persistence of poverty is much lower when the analysis is based on the people that are just beginning a poverty spell than it is when one looks at the stock of people poor at any point in time.

Bane and Ellwood (1986) helped us understand not only the extent of temporary versus chronic poverty, but also some of the reasons why people move into and out of poverty. Among the non-elderly population, a drop in the earnings of the family head accounts for 38 percent of all poverty beginnings. Divorce, birth of a child or setting up an independent household accounts for another 43 percent. Interestingly, similar events, in the reverse direction, cause people to escape poverty, although a change in earnings or transfers play a relatively more important role in the exit from poverty.

Although the Bane and Ellwood study reformed the understanding of poverty dynamics in an important way, it had a major shortcoming. It focused on single spells. Stevens (1999) extended it to analyze multiple poverty spells. She found that individuals were likely to fall back into poverty, especially during the years just after an exit from poverty. Specifically, she calculated that half of all individuals ending a poverty spell in a given year became poor again within the next four years. The fact that people returned to poverty caused the average time spent in poverty to be higher than it would be when the analysis was restricted to single spells. This led to the conclusion that the Bane and Ellwood study understates the persistence of poverty within the sample of those who ever entered poverty compared to poverty in the sample of those poor at a particular time. Strikingly, Stevens’ results showed that the average time spent

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<sup>8</sup> Given the Census Bureau statistics of annual poverty of 12-14 percent, this result can be used to conclude that about 6 or 7 percent of the population is chronically poor, if chronic poverty is defined as being poor for at least

in poverty in a ten-year period is four years with more than half of blacks and about a third of whites who ever become poor spending five or more of the ten years in poverty.

Another important finding of Stevens (1999) is that the persistence of poverty depends on individual and family characteristics. Those living in two-parent households have the most transient poverty. Education and race of the head play important roles, too. On average, people living in families headed by black and less-educated males spend four out of ten years in poverty, while those in families with white and at least high school graduate heads spend less than two and a half out of ten years in poverty. Persistence of poverty is extremely high for people in single-female headed households, especially for children. Poverty continues for at least six out of ten years for between 26 and 64 percent of adults (depending on race and education level) and for between 47 and 90 percent of children living in such households.

Ruggles and Williams (1989) critiqued the Bane and Ellwood (1986) study for its reliance on an annual poverty measure. They cautioned that incomes usually fluctuate widely during the year, particularly for the low-income population. For example, the 1984 poverty rate based on annual income as measured in the Survey of Income and Program Participation (SIPP) was 11 percent, but only 5 percent were poor in every month. In contrast, over 26 percent were poor in at least one month. Even relatively short spells can mean substantial hardship, to the extent that such sub-annual poverty spells are experienced by those with near-poverty incomes and thus with limited savings. The authors observed that while there were a few cases of high-income individuals with short spells of poverty, the typical case was a low-income individual who lacked the resources to call upon to withstand a poverty spell.

Duration studies of poverty dynamics implicitly assumed that chronic poverty is a state in which income is less than needs during a long and continuous period of time. This assumption may be misleading if the time period analyzed is not representative of the lifetime income profile of an individual. In fact, individuals can make intertemporal income transfers by borrowing and saving. Rodgers and Rodgers (1993) attempted to correct for this by supposing that individuals can make inter-year income transfers at realistic savings and borrowing rates. They developed a notion of chronic poverty on the basis of a measure of permanent income compared with permanent needs. Using the PSID data for the period since the late 1970s, they concluded that about one-third of measured poverty in the U.S. as of 1987 could be regarded as chronic, and that over the period they studied, “poverty not only increased, it became more

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eight years.

chronic and less transitory in nature.” They also found that “the poorest group identified consists of people living in families headed by African-American females without high-school diplomas, for whom chronic poverty is about twelve times as intense as in the entire population.”

### **B. The Official Measure of Poverty in the U.S. and Suggestions for its Improvement**

The underlying concept in the definition of the official poverty measure in the U.S. is comparing pre-tax money income of a family to some minimum standard. The measure is based on work done almost four decades ago by Orshansky (1965). Using 1955 nutrition data from the U.S. Department of Agriculture, she calculated the minimum amount of money needed to feed a family of four. At that time, except for the area of food, no definitive and accepted standards of minimum need for major consumption items (such as housing, medical care, clothing, and transportation) existed—nor do they exist today. Since the data at that time showed that food made up about one-third of low income families’ expenditures, she computed the poverty threshold by multiplying the minimum food cost by a factor of three to include spending for shelter, clothing and other necessities. Also, the threshold was adjusted for such factors as family size, farm versus non-farm residence, age of the family head and the number of children. To account for price changes over time, poverty lines are updated each year according to the overall Consumer Price Index (CPI).

The establishment of an official poverty line is considered by many as the most important contribution of the ‘War on Poverty’ to social policy. It caused a shift in the emphasis of the federal budget from military spending toward social welfare spending. During the decade following the declaration of the war on poverty in 1964, new programs were initiated and the old ones were expanded. However, at the time of its establishment, the official poverty measure was intended to be only a starting point for the development of new and more refined methodologies, and not to be the ultimate measure. Revisions were supposed to be made in many directions over time. Due mainly to political reasons, these expectations were not fulfilled. Concerns about a possible increase in the poverty count and program eligibility after a revision are cited by some observers as an explanation of why very little modification was made in the poverty measure (Rodgers 2000). As a result, the poverty lines designed in the 1960s remain to be the official method of estimating poverty rates today.

In the beginning of the 1990s, recognizing the importance of accurately measuring poverty and as a response to the ongoing criticism towards the official measure, the Congress

asked the National Academy of Science (NAS) to convene a committee to investigate new approaches. The report of this panel, released in Citro and Michael (1995) highlights the flaws in the official measure and makes suggestions for its improvement. The panel puts forward a set of “experimental poverty thresholds” and an updated “family resources” definition to be used in the new poverty measure.

The experimental poverty thresholds proposed by the NAS panel are based on the cost of food, clothing and shelter with a small allowance for other expenses, as opposed to only food with a large multiplier for all other expenses as in the official measure. The panel recommends that the poverty lines be based on actual consumer expenditure data (the Consumer Expenditure Survey), and not on expert judgement, to account for the changes in living standards and consumption patterns over time. The thresholds should be updated each year for the changes in spending on food, clothing and shelter over previous three years for two-adult two-child families, as opposed to adjusting only for changes in the price level.

As mentioned earlier, the official poverty lines were set only on the basis of food requirements of the standard family and the lines for other family types were adjusted by wrongly assuming that other consumption needs vary more or less in the same proportion as food requirements. For this reason the equivalence scale implicit in the official thresholds is not internally consistent and exhibits an irregular pattern. The NAS panel recommends that the equivalence scale be defined explicitly and separate parameters be assigned to represent adult equivalence and economies of scale. Another problem is that, the current measure reflects ad hoc adjustments for single people living alone and for two-person families. It also sets lower thresholds for the elderly than for younger people, which does not make much sense. Although the elderly may need less food or clothing, they have higher health costs, which more than offset the reduction in spending on food or clothing. The NAS panel agrees that the scale should account for differences between the needs of adults and children but urges that no further distinction be made among family members by age or other characteristics.

The panel emphasizes strongly that the consistency principle be respected, i.e. that the definitions of poverty thresholds and family resources be made in the same terms. The official measure has been violating this principle from the beginning, since the thresholds were defined in terms of after-tax income data while resources were defined in before-tax terms. To solve this problem, family resources should include not only the before-tax money income, but also the value of in-kind benefits such as food stamps and housing subsidies. Income and payroll taxes

and other nondiscretionary expenses should be deducted. These include items such as child care and other work-related expenses, child support paid to other households and out-of-pocket medical expenses.

Finally, the panel makes some points on how to define family resources in a more comprehensive way. The report maintains that, as expected, the practice of adding assets directly to family income to quantify family resources can not be justified in general. It is appropriate only when the accounting period of poverty is very short (a few months), since spending down assets can alleviate poverty only for a short period of time. In fact, some government programs, such as food stamps, work on this principle and allow families to qualify for assistance if their income is low temporarily and if their asset holdings are lower than a threshold. The panel report mentions that for longer periods (a year or longer), it is more appropriate, instead, to define resources as disposable income from all sources, including any income from assets, such as interest or rent, although very few income-poor people have financial assets. Surprisingly, though, the panel does not specify clearly how the income flow from assets should be computed.

The panelists reach a consensus on the importance of accounting for the flow of services from owner-occupied housing, which constitutes a large part of household wealth, in order to make consistent estimates of families' economic resources. The motivation for this argument is that owners with low housing costs have more of their income available for consumption of other items. Hence, not to include imputed rent is to underestimate their income relative to their poverty threshold. The panel reasons, however, that this task is currently not feasible due to the lack of data to develop adequate rental imputations. Valuation of home ownership services is marked as a priority area for further research and consideration for implementation in the poverty measure at a later date.

### **III. THE DEFINITION OF ASSET POVERTY**

In this paper, we adopt the definition of asset poverty in Haveman and Wolff (2001): "A household or a person is considered to be 'asset-poor' if the access that they have to wealth-type resources is insufficient to enable them to meet their 'basic needs' for some limited 'period of time'." We specify 'basic needs', the 'period of time' and the content of 'wealth-type resources', in the spirit of the study cited above, as follows:

1. We use four alternative wealth measures: Net worth (NW) includes the current value of all marketable assets less the current value of all debts. Net worth minus home equity (NW-HE) includes all items in NW except for home equity. Liquid wealth (LIQ) measures the value of cash and other kinds of easily monetizable assets. The final measure sets an absolute standard of \$5,000 and labels all households with asset holdings below this level as asset poor. (See the Appendix for the description of the wealth data in the Panel Study of Income Dynamics (PSID).)
2. We set the ‘period of time’ somewhat arbitrarily, but reasonably, as three months. This is the time period that we require the households to survive on their own by spending down their wealth in case their income flow stopped for some reason.
3. We use the family-size conditioned poverty thresholds recently proposed by a National Academy of Sciences panel. The panel first set the threshold for a reference family made up of two adults and two children using Consumer Expenditure Survey data. The threshold for the reference family was \$15,998 in 1997 dollars. Then, the panel adjusted the threshold for different family sizes and structures by using a three-parameter equivalence scale<sup>9</sup>. We adjust poverty thresholds for inflation using CPI-U.

As an illustration of the level of these thresholds, we present an example. For the reference family, the asset poverty threshold is \$2,589 in 1984, \$3,089 in 1989, \$3,693 in 1994 and \$4,151 in 1999.

We estimate asset poverty using the headcount index and the poverty gap ratio, which belong to the  $P\alpha$  class of poverty measures introduced by Foster, Greer and Thorbecke (1984). These measures are defined as:

$$P\alpha \equiv \frac{1}{n} \sum_{i=1}^n \left\{ \frac{\max(PL - W_i, 0)}{PL} \right\}^{\alpha},$$

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<sup>9</sup> Specifically, this scale fixes the ratio of the scale for two adults and one adult to 1.41. For single parents the scale is  $(A+0.8+0.5*(C-1))^{0.7}$ , where A is the number of adults and C is the number of children. All other families use the formula  $(A+0.5*C)^{0.7}$ . See Short (2001) or Citro and Michael (1995) for more information.

where PL is the asset poverty line,  $n$  is the sample size,  $W_i$  is the wealth of household  $i$  and  $\alpha$  is the measure of inequality aversion. When  $\alpha=0$ , the index gives a headcount, i.e., the percentage of households in asset poverty. When  $\alpha=1$ , the index becomes the poverty gap ratio, i.e., the mean shortfall of wealth below the poverty line as a proportion of the poverty line.

In words, the headcount index gives us an estimate of the share of households that would be unable to survive for three months if forced to liquidate all wealth and consume the proceeds. The poverty gap ratio measures the amount of wealth that we would need to transfer to the average asset-poor household to bring it to the asset poverty line.

#### **IV. ESTIMATES OF ASSET POVERTY IN THE U.S. FROM 1984 TO 1999**

##### **A. The Evolution of Wealth in Years 1984-1999**

To start with, we present some evidence on how the mean and some percentiles of household wealth in the U.S. fared during the 15-year period that we are analyzing. Tables 1A and 1B describe mean and some percentiles of NW, NW-HE and LIQ in the four years for which wealth information was collected. As shown in these tables, mean household wealth, represented by mean NW, NW-HE and LIQ, increased steadily between 1984 and 1999, although at different growth rates. We will document later in this paper that the percentage of the population that remained below the asset poverty threshold stayed more or less the same during this period, despite the considerable increase in mean household wealth (see Table 1A and Table 1B).

Median net worth increased from \$42,970 to \$56,500 (all in 1999 dollars), or 31.48 percent between 1984 and 1999. The 25<sup>th</sup> percentile increased only slightly, from \$1,600 to \$2,000. However, the top 5 percent of the distribution went up 61.24 percent from \$483,120 to \$799,000 during the same period. Therefore, the lower tail of the net worth distribution stagnated or moved to the left as the upper tail moved to the right. NW-HE showed a similar trend. The faster progress in the upper percentiles of both NW and NW-HE relative to their median increased the skewness of these distributions. The 10<sup>th</sup> percentile of NW and NW-HE became more negative—that is, the indebtedness of the poorest 10 percent of the Americans increased between 1984 and 1999.

The rise in liquid asset holdings was also highly concentrated at the upper tail of the distribution. The median value of liquid assets went up from \$5,610 to \$9,010 in the 1984-94

period, only to decline to \$6,000 in 1999. By contrast, the 95<sup>th</sup> percentile of the liquid asset distribution went up by 77 percent.

### **B. Changes in Asset Poverty, 1984-99**

The following table shows estimates of the headcount index of asset poverty for the entire population of households in the United States. As expected, NW yields the lowest estimates (25 percent–27 percent), as it is the most inclusive measure of wealth. Excluding home equity increases poverty rates by almost 15 percentage points. This is consistent with the fact that home equity is the most widely held asset category and also an important part of household wealth in the US. It is interesting that the NW-HE and liquid asset estimates are pretty close. This happens because only a small percentage of households own illiquid assets other than primary residence, such as real estate (other than home) or business assets. The highest estimates are obtained when the \$5,000 threshold for liquid assets is used. Close to one half of the population lack even a \$5,000 worth of liquid asset cushion to protect them against adverse shocks.

We also notice that there seems to be almost no trend in overall asset poverty rates in this 15-year period. Net worth poverty increased only a bit from 1984 to 1989 and then declined slightly from 1989 to 1999. Liquid asset poverty remained pretty much the same as well, although it declined to its lowest level in 1994. According to the fourth measure of asset poverty, the share of households whose liquid assets are worth at least \$5,000 went up from 46.5 percent (100 percent–53.5 percent) to 53.6 percent (100 percent–46.4 percent). Since the \$5,000 threshold is in current dollar terms, increases in the overall price level pushed the nominal value of assets up in time, leaving fewer households below the threshold. Despite this good news, there is no sign of a downward trend in liquid asset poverty between 1984 and 1999.

Table 2B presents the poverty gap ratios estimated for years 1984 to 1999 for the entire population. As mentioned before, this index measures the mean shortfall of wealth below the poverty line as a proportion of the poverty line. For instance, in 1984 the asset poverty line for a reference family of two adults with two children was \$2,589 ( $\$10,356 / 4$ ). Our estimates show that the average net worth poor family with this family structure would need an additional \$1,592 (61.51 percent of \$2,589) to move to the poverty threshold.



It is interesting how the stability of the headcount index gives one the false impression that the recession in the beginning of the 1990s did not have any adverse effects on the asset-poor. Although the share of the asset-poor stayed constant over time, the large increase in the P1 index between 1989 and 1994 suggests that the economic downturn in the beginning of the 1990s was harsh on almost one fourth of the population. It seems that the average asset-poor household lost assets during the recession. In 1989, the asset-poor households were on average 75 percent below the poverty line, while in 1994 they were 89 percent below the poverty line, as shown in Table 2B. To illustrate, the average (4-person) asset-poor household had \$752 and \$393 net worth in 1989 and in 1994, respectively, in current dollars<sup>10</sup>.

Moreover, contrary to popular belief, asset poverty rates did not go down during the expansion in the late 1990s. Both NW and NW-HE poverty stayed the same; liquid asset poverty increased from 37.8 percent to 41.6 percent. The share of households with less than \$5,000 worth of liquid assets went up from 43.1 percent to 46.4 percent. During this expansionary period, both the NW and NW-HE poverty gaps fell, although the NW-HE gap stayed above 100 percent in 1999. As Table 3 shows, in 1999 the NW-HE-poor had negative wealth on average, with an average non-mortgage debt of \$6,999, compared to the average value of businesses at \$177, real estate at \$82, and checking and saving accounts at \$1,099. Looking at the NW poverty gap we can see that it fell from 89 percent to 82 percent between 1994 and 1999; however it was still higher in 1999 in comparison to the 1980s.

Another observation worth noting is that the ordering among the P1 indices for the three wealth measures remains the same in every year, except in 1994: the liquid asset poverty gap is the lowest among the three, NW gap comes the second, and the NW-HE gap is the highest. The finding that the liquid asset poverty gap is the lowest is interesting, given the previous finding that liquid asset poverty is more widespread than NW poverty (see Tables 1A-1B). A deeper look into the asset holdings of poor households tells us why.

In Table 3, we show the asset ownership rates as well as the mean value of each asset in the portfolio of the asset-poor households. Comparing the last section of the table to the previous two sections, we notice that the average liquid-asset-poor household is actually rich by the other two measures. Such a household has \$27,466 NW and \$8,783 NW-HE in 1984, which are both well above the poverty line. These households usually hold considerable amounts of

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<sup>10</sup> These figures are for the reference (2 adults, 2 children) household.

non-liquid assets and especially home equity, yet they have too little liquid assets to be considered liquid asset non-poor.

Comparing the second section of Table 3 to its first section, we observe that NW-poor households, as expected, have a very low home ownership rate at 5.35 percent. Although the ownership rates of other assets are comparable to the rates in the other two groups, asset holdings are very low. Items with the highest value in the portfolio of the average NW-poor household are vehicles and debt, the remaining items are worth little. Consequently, the average NW-poor household is NW-HE-poor and liquid asset poor as well.

In short, liquid asset poverty is very common, but the poverty gap for the liquid asset poor is relatively small. NW-HE and liquid asset poverty rates ( $P_0$ ) are close. However the NW-HE poverty gap ( $P_1$ ) is higher than the NW poverty gap since the NW-HE wealth measure excludes home equity. The absence of debt in the liquid asset wealth measure creates a natural upper limit on the poverty gap. When debt is included, wealth may take a negative value and the poverty gap may exceed 100 percent. This actually happened in 1994 and 1999, when the debt side of the portfolio became heavier than the asset side for the NW-HE-poor households.

Finally, we make a remark about the volatility over time of the NW and NW-HE  $P_1$  indices. Over the 1984-1999 period, the liquid asset  $P_1$  index varied very little, between 30 percent to 33 percent, as shown in Table 2B. By contrast, the NW and NW-HE  $P_1$  indices were volatile and the latter sometimes exceeded 100 percent over the time of analysis. The estimates in Table 3 imply that there has been a noticeable increase in the indebtedness of the asset-poor households from the 1980s to 1990s. In the 1980s the debt holdings of the average asset-poor household were low and comparable to its asset holdings. However, over the 1990s, both the mortgage and non-mortgage debt of the NW and NW-HE poor jumped substantially and exceeded their asset holdings.

### **C. Structure of Asset Poverty in 1999**

Table 4 presents descriptive statistics on asset poverty in 1999 for various demographic and labor market groups. Households are classified according to the age, race/ethnicity and the education level of the head of the household, their housing tenure and family type (marital status and presence of children).

Several points are worth noting:

- First, there are striking differences in asset poverty rates among the racial/ethnic groups, regardless of the wealth measure used. Blacks are more than twice as likely to be asset-poor than whites<sup>11</sup>. Latin Americans and the “others” are also more asset-poor than whites. Latin Americans are closer in poverty rates to blacks whereas the residual racial group is closer to whites. This ranking is independent of the poverty measure used. Poverty gap ratios for racial groups display almost the same ordering as poverty rates: The severity of poverty is the highest among blacks and the lowest among whites. Latin Americans and “others” are in between. However, these two groups seem to be closer to blacks than to whites.
- Second, the following life-cycle pattern is evident: Both asset poverty indices decrease as the age of the household head increases. It is also striking that NW and NW-HE poverty gaps for the youngest (head younger than 35) are much greater than the 100 percent level, i.e., the young poor households have negative wealth on average.
- Third, asset poverty rates (P0 indices) decrease with the education level of the household head and this is true for every wealth measure used. There is a striking difference in asset poverty rates of households headed by a high school dropout and a high school graduate. Also, holding a college degree seems to matter: Households whose heads dropped out of college are twice as likely to be asset-poor as those with college graduate heads. Asset poverty gaps (P1 indices) decline with the education of the household head as do the P0 indices, with the exception of NW and NW-HE poverty gaps for those with some college experience.
- Fourth, homeowners (or families who are in the process of buying their homes) are much wealthier than renters. In 1999, the NW poverty rate among homeowners is about 6 percent, whereas it is 67 percent among renters. Even after excluding home equity, we observe more than twice as much asset poverty among renters as among homeowners (27 percent versus 67 percent). Furthermore, the severity of asset poverty among the poor renters is much worse than it is among poor homeowners. The average NW or NW-HE-poor renter has

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<sup>11</sup> There is a large number of studies that have attempted to explain the black-white wealth gap. See, for instance, Gittleman and Wolff (2001).

negative wealth in 1999. The disparity between the homeowners and renters is sharp even when we compare the holdings of assets unrelated to home equity, such as liquid assets.

- Fifth, looking at the decomposition according to family structure, we see that the group with the highest rate of asset poverty is female-headed families with children. The second highest asset poverty rate is among families with children. However, the poverty rates of these two groups are quite far apart; families with children are half as likely to be asset-poor when both parents are present as when the father is absent. This is exactly as we would expect to see, considering the high unemployment rate and dependency on government assistance among single mothers and the high living expenses families with children have to bear. The lowest asset poverty rate among family types occurs among elderly married couples. Even among the elderly, being married seems to be an important factor that determines wealth holdings. Looking at the P1 indices, we see that female-headed families with children have the highest asset poverty with poverty gaps over 100 percent, whereas the married elderly are again the group with the lowest poverty gap.

#### **D. Changes in Asset Poverty in Years 1984 to 1999, by Groups**

##### ***1. Asset Poverty by Race, 1984 to 1999***

Table 5B presents evidence on how the four racial and ethnic groups have fared in terms of asset poverty between 1984 and 1999. By the net worth measure, whites experienced a small decline in their asset poverty rate, from 21 percent to 19 percent. The poverty rate for blacks declined from 56 percent in 1984 to 51 percent in 1994 and then bounced back to 55 percent in 1999. As a result, the black-white disparity in the poverty rate went up between 1984 and 1999.<sup>12</sup>

Although this result is not robust to the measure of wealth used, we do not see any evidence for a narrowing black-white wealth gap. P1 indices in Table 6 add the information that asset poverty is more severe among blacks than among whites (with the exception of the NW poverty gap in 1994). The P1 index for black NW-HE poverty is especially noteworthy: It exceeds 100 percent in all years.

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<sup>12</sup> This finding is in contrast with Haveman and Wolff (2001), who report on the basis of SCF data a large increase in asset poverty for whites relative to non-whites between 1983 and 1998.

The degree of variation in the asset poverty rates for Latin Americans is remarkable: We observe 15 percentage point declines and 30 percentage point increases!<sup>13</sup> We observe that the Hispanic poverty rates declined during the 1984-94 period and increased during the 1994-99 period. The increases in the 1994-99 period were large enough to offset the reductions in the previous 10-year period. Their net worth poverty rate, for instance, dropped from 46 percent to 31 percent, but climbed to 51 percent by 1999. Despite the increase in the poverty rate between 1994 and 1999, the severity of poverty declined in the same period. In fact, the P1 indices estimated for NW and NW-HE declined throughout the 15-year period. We estimate NW poverty gap as 203 percent, 114 percent, 94 percent and 83 percent for 1984, 1989, 1994 and 1999, respectively. The liquid asset poverty gap went down as well (from 57 percent to 33 percent), but only until 1994, after which it went up (to 64 percent).

The residual racial group, which mainly includes Asians, saw a sizeable increase in the asset poverty rate (about 25 points) between 1984 and 1999. Poverty rates and poverty gap ratios for this group moved upward until 1994 and downward between 1994 and 1999. The worst time for this group was 1994, when the NW poverty rate climbed to 41 percent and the NW poverty gap went as high as 255 percent. Some part of this trend seems to match the ups and downs of the business cycle: This group benefited from the expansionary period of 1994-99, and lost during the recession in the beginning of the 1990s.

## ***2. Asset Poverty Rates by Age of the Household Head, 1984 to 1999***

The decomposition of asset poverty rates by the age of the head of the household reveals an interesting picture. Although there is no apparent common trend for all the age groups during 1984-89 and 1989-94, the 1994-99 period was characterized by an increase in asset poverty rates for all age groups (except for the oldest) regardless of the wealth measure used. By and large, the younger groups experienced bigger percentage point increases, and, in fact, the youngest age group (under 25) had by far the largest increase over the 1984-1999 period. There was an almost continuous rise in NW and NW-HE poverty gap (P1 index) for all age groups (except for the oldest) during these 15 years. The estimates of this index remained above 100

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<sup>13</sup> We should stress that the sample shares of Latin Americans in the PSID varied considerably from one cross-section to the other as they were dropped from the sample for various reasons and included again at a later date. The characteristics of the households that were dropped and added could be very different. In short, the data do not provide us with a stable and clear representation of Latin Americans during these 15 years.

percent for those younger than 35 in all four years of the analysis. Moreover, the increase in the poverty gap was the steepest for the youngest group.

### ***3. Asset Poverty Rates by Education of the Household Head, 1984 to 1999***

Table 5D presents the changes in asset poverty rates for the four educational groups. The 1984-89 period was the time during which all groups saw declines in asset poverty rates. For the other two five-year periods, the results are mixed. The least educated group was different from the others in the sense that asset poverty rates followed a U-shape, declining first and then rising later over the 10 years from 1989 to 1999, whereas the rates for the other three groups usually declined. From the last column in the table it is evident that all but those with less than a high school degree enjoyed a reduction in asset poverty over the entire 1984-99 period. Among college graduates, asset poverty rates were reduced by almost half over the period.

Table 6 presents more evidence on the disparity among the education groups. NW and NW-HE poverty gap almost doubled for the least educated group. Although there was an increase in the poverty gap for the other three groups, the rate of increase was not as high. College graduates saw a decline in poverty between 1984 and 1999. However the degree of asset poverty within this group in 1994 is quite high. The NW poverty gap in this group reached a peak of 112 percent in 1994 and then went down to 74 percent in 1999. The NW-HE poverty gap declined a bit for college graduates between 1984 and 1999, but it stayed above 100 percent in all years. Looking at liquid asset poverty gaps, we notice the clear ranking by education; among those that are liquid asset poor, the least educated ones held the lowest amount of funds on average.

### ***4. Asset Poverty Rates by Homeownership, 1984 to 1999***

The first and possibly the most striking observation is that the gap between the homeowners and renters is huge and persistent. As Table 5E shows, renters are more than twice as likely to be asset poor as homeowners in all years of the analysis. However, the descriptive statistics show no clear difference between the two groups in terms of changes in asset poverty rates.

Another observation is that there has been almost no change in liquid wealth poverty rates as well as poverty gap ratios among homeowners in the 15 years from 1984 to 1999.

Although a higher percentage of them are above the \$5,000 threshold, about the same percentage of them still seem to be liquid asset poor in 1999.

The big difference in poverty rates between homeowners and renters mirror the difference in poverty gap ratios. NW and NW-HE poverty gaps among homeowners are about 25 percent and 60 percent respectively (with the exception of year 1994), while those for renters are greater than 100 percent at all times and close to 200 percent in 1999.

### ***5. Asset Poverty Rates by Family Structure, 1984 to 1999***

Changes in asset poverty rates for some selected family types from 1984 to 1999 are shown in Table 5F. The most surprising result is for non-elderly female-headed families with children. Although they have the highest rate of asset poverty by all measures of wealth, they seem to have experienced a continuous decline in poverty over the 15-year period that we are analyzing. However, Table 6 shows another side of the story. While the number of asset poor in this group declined, the poverty of the asset poor increased. In 1984, the NW poor in this group held almost zero wealth, but from 1989 onward the wealth holding of the poor became negative. The NW-HE poverty gap was always greater than 100 percent for this group. What is worse, it increased from 120 percent in 1984 to 176 percent in 1999.

Changes in asset poverty among the elderly show that this group is not homogenous. Marriage is apparently an important factor that determines not only the level of but also the trend in asset poverty. Between 1984 and 1999, asset poverty rates decreased among the married elderly while they increased among the unmarried elderly. We see a similar picture when we look at poverty gap ratios. The P1 index went down among the married elderly, but it went up among the unmarried elderly. The rise in both P0 and P1 indices was the highest during the 1989-94 period, which includes a recession.

Surprisingly, childless non-elderly couples witnessed an increase in asset poverty, while non-elderly couples with children saw a decrease. NW poverty rate among the childless couples increased from 10 percent to 14 percent between 1984 and 1999, and thus moved closer to the NW poverty rate of the couples with children. Comparing the trends in P1 indices for these two groups, we see that in 1984 both the NW and NW-HE P1 indices among couples with children were higher than the ones among childless couples. However, this difference was eliminated as the P1 indices for childless couples increased to catch up with the P1 indices among couples

with children. The worst year for the asset poor in these groups was 1994 when the P1 index generally reached its peak value (with the exception of married couples with children).

## V. EFFECTS OF THE CHANGES IN POPULATION COMPOSITION ON OVERALL ASSET POVERTY RATES

The population in the United States experienced some compositional changes set off by events such as immigration and aging during the 15 years that we analyze. Table 7 shows the changes in the shares of the demographic and labor market groups from 1984 to 1999. Even if we held constant the asset poverty rates within all these groups, changes in the shares by themselves could create changes in the overall asset poverty rates. Since we do not observe any substantial changes in total asset poverty rates in our dataset, it is interesting to see how these two sets of factors have been interacting to keep these rates more or less the same.

In the literature, the typical way of estimating the contribution of changes in the sample composition to the change in a statistic of interest (such as a poverty index or an index of income distribution) is to decompose the change in the statistic using a shift-share analysis. This technique simply breaks down the total change in the statistic into changes in the values that the statistic takes for various groups and changes in the population shares of these groups. Formally, a decomposable index  $Y$  can be written as,

$Y_t = \sum_{i=1}^n Y_{it} s_{it}$ , where  $Y_{it}$  is the value of  $Y$  for group  $i$  at time  $t$ ,  $s_{it}$  is the share of group  $i$  in the population at time  $t$  and  $n$  is the number of groups. Then, the change in  $Y$  between  $t$  and  $t-1$  can be approximated as  $\Delta Y_t \approx \sum_{i=1}^n \Delta Y_{it} \Delta s_{it}$ , where  $\Delta x_t \equiv x_t - x_{t-1}$  for a variable  $x_t$ .

Researchers who use this technique to analyze changes in poverty or income distribution usually find that compositional factors have only a modest impact. For instance, Gottschalk and Danziger (1995) show that the decline in poverty from 1949 to 1969 was due entirely to economic changes, with demographic factors working in the opposite direction. They attribute the rise in poverty from 1973 to 1991 to the weakened effect of economic changes on poverty rather than to any massive change in the demographic composition of the population. Freeman (2001) carries the time frame of the same analysis forward to investigate whether the economic boom of the 1990's-early 2000s improved the well being of people in the bottom of the income



distribution. He reports that the timing of demographic changes does not coincide with the timing of changes in unemployment, poverty and growth, and argues that the demographic story does not explain the data.

To investigate whether the compositional changes would have had any considerable influence on overall asset poverty rates, we apply the same technique to our case. We should note that we are not trying to “explain” the changes in asset poverty rates, since there are only minor changes in the overall asset poverty rates during the period of analysis. But we are trying to determine “what would asset poverty rates have been if only the composition of the population had changed and poverty rates within the groups had stayed the same.”

We perform the decomposition of net worth poverty for each grouping category separately; that is, we have a total of five decompositions. This enables us to analyze the impact of changes in the shares of racial/ethnic, age, education, homeownership and family type groups separately. To estimate the counterfactual asset poverty rates for the later years, we keep the poverty rates within groups constant at their 1984 levels and adjust for the changes in the composition only. We report our estimates of counterfactual NW poverty rates in table 8, together with the actual NW poverty rates for comparison.

The figures in Table 8 suggest that changes in the shares of groups in race/ethnicity and family type categories had a negligible effect on the total NW poverty rate. Changes in age, education and homeownership composition, however, had some effect. The aging of the population would have pulled the overall NW poverty rate down to 20.34 percent in 1999, but the increases in the poverty rates within the younger groups and the decreases within the older groups kept the actual rate at 25.88 percent. Similarly, the increase in the homeownership rate would have brought about a decline in the poverty rate to 21.96 percent. However this did not actually happen, since the net worth poverty rate within both renters and homeowners increased. The effect of increases in the education of the heads is smaller, though. Taking the educational improvements into account and keeping the group poverty rates constant would have lowered the overall poverty rate to 24.94 percent, which is quite close to the actual NW poverty rate.

## **VI. COMPARISON OF ASSET POVERTY RATES IN THE PSID TO THE RATES IN THE SCF**

Haveman and Wolff (2001) computed asset poverty rates defined in the same way for the same time frame using another major source of wealth data, the Survey of Consumer Finances (SCF) conducted by the Federal Reserve Board. Each wave of this survey consists of a core representative sample combined with a high-income supplement. The design of this survey makes it different from the PSID in two main aspects: First, it provides a much “richer” sample of high income and therefore potentially very wealthy households. Secondly, it provides more detail than the PSID on both assets and debts. It contains information on the current value of pension plans, and therefore it has a more inclusive measure of wealth than the PSID.

Given that SCF oversamples high-income households and collects information on pension wealth, one would expect the SCF estimates of asset poverty rates to be lower than the PSID estimates. This is in fact generally true, as documented in Table 9, which presents estimates of asset poverty rates computed by Haveman and Wolff (2001). The one overlapping year is 1989, and the overall estimates of NW, NW-HE, and LIQ poverty rates computed using the SCF data are lower than the corresponding rates computed from the PSID data.<sup>14</sup> The SCF-based poverty rates by demographic group are also generally lower than the corresponding PSID-based poverty rates in 1989.

Though the years differ slightly (1983-1998 for the SCF data versus 1984-1999 for the PSID data), comparisons of trends over time are still quite interesting. According to the SCF data, the overall NW poverty rate rose by 2.3 percentage points between 1983 and 1989 and then grew by another 0.8 percentage points over the remaining 9 years, for a total increase of 3.1 percentage points. In contrast, the comparable PSID poverty rate increased by 0.7 percentage points from 1984 to 1989 and then dropped by 1.2 percentage points from 1989 to 1999, for a net decline of 0.5 percentage points. The SCF-based NW-HE poverty rate showed virtually no change from 1983 to 1998, whereas the PSID-based rate fell by 1.5 percentage points between

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<sup>14</sup> The one apparent exception is the poverty rate based on liquid assets less than \$5,000. However, this is due to differences in methodology. In Haveman and Wolff, the criterion is based on constant 1998 dollars, whereas here we use current dollars. Another difference worth noting is that liquid wealth in the PSID incorporates “Other Savings” (item (6) in the definition of wealth in Appendix), which includes the value of collections households acquire for investment purposes and equity in a trust or estate. These items are not included in liquid wealth in the Haveman and Wolff study and would not be classified as part of liquid wealth here if a detailed breakdown of “Other Savings” were available. However, only the total value of “Other Savings” is reported. The SCF has a finer decomposition of the assets in household portfolios.

1984 and 1999. The SCF-based LIQ poverty rate climbed by a huge **6.5** percentage points over the 15-year period, whereas the PSID-based rate showed virtually no change.

Results also differ by demographic characteristics. Among whites, the SCF data indicate a significant increase in the NW poverty rate between 1983 and 1998 of 3.4 percentage points, whereas the PSID data shows a drop of 2.4 percentage points from 1984 to 1999. In contrast, the PSID data show virtually no change in the NW poverty rate among blacks, whereas the SCF data indicate a drop of 2.1 percentage points among blacks and Hispanics. Moreover, according to the SCF data, there was a sharp increase in NW poverty among blacks and Hispanics from 1983 to 1989, followed by an even greater decline from 1989 to 1998, whereas the PSID data indicate a fall from 1984 to 1989 and then an equivalent increase from 1989 to 1999 among blacks.

The SCF data show increases in NW poverty rates for all age groups and particularly among the two younger (under 25 and 25-34). In contrast, the PSID calculations show increases among the three younger age groups but no change or decreases among the older three groups. Both surveys indicate a hefty rise in NW poverty among both home-owners and renters over their respective 15-year intervals. On the other hand, results by family type are at variance between the two samples.

It is hard to say whether the two sets of estimates are inconsistent or which set of estimates is more accurate. The dates differ between the two samples. However, both 1983 to 1984 and 1998 to 1999 were years of economic growth, so that poverty rates should have fallen between the two sets of years (and thus the changes should cancel each other out). In some cases, the demographic categories are different—for example, in the SCF data blacks and Hispanics are combined in a single category whereas they are separated in the PSID computations.) Generally speaking the SCF data give better estimates of household wealth since the survey asks many more detailed questions on asset and debt holdings. However, the SCF sample is weighted toward high income households, whereas the PSID tends to over-sample the poor. As a result, the PSID sample may give a more accurate assessment of the wealth holdings of low income households.

## VII. COMPARISON OF ASSET POVERTY RATES TO OFFICIAL POVERTY RATES

At this point, it is worth taking a look at how the asset poverty rates we have calculated using PSID data compare to the official poverty rates published by the U.S. Bureau of the Census. As we mentioned before, the unit of analysis for our asset poverty measure is the household—that is, our measure tells us what percentage of households are below the asset poverty threshold. The official poverty rates are published both for families and for people (individuals). However, a Census Bureau family is not an equivalent to a PSID household.<sup>15</sup> Therefore, we choose to base the comparison of asset poverty rates on individuals.

Table 10 presents both income-based and asset-based poverty rates. We follow the convention of the Census Bureau when grouping people by race/ethnicity, age and gender. The asset poverty rate for individuals is defined as the ratio of the number of individuals in asset-poor households to the total number of individuals in the population. The race of a household member is determined by the race of the household head. As before, we calculate poverty rates for four different measures of wealth.

The figures in Table 10 show us that the official poverty rates for almost all of these groups are much less than asset-based poverty rates. On average, asset poverty is two to four times as high as income poverty. Looking at racial groups, we observe the same ranking among groups with income poverty as we do with asset poverty, with whites having the lowest rate and blacks having the highest among racial groups.<sup>16</sup> Among age groups, however, income poverty is slightly higher among the elderly than among the 18-64 year old group, while the elderly are the least asset poor group. Classifying individuals according to gender, we observe that both asset and income poverty rates for females are greater than the corresponding rates for males. However, the disparity in income poverty rates seems to be greater than the disparity of asset poverty rates.

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<sup>15</sup> The U.S. Census Bureau defines a family as a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together. The PSID definition of a family unit (FU) is a group of people living together. They are usually related by blood, marriage or adoption, but unrelated persons can be part of a FU if they are permanently living together and share both income and expenses. Obviously, the two definitions are not equivalent. The Census Bureau definition excludes one-person units and the PSID definition includes all persons living together if they share income and expenses, although they may not be related.

<sup>16</sup> This raises the issue of whether income poverty goes hand in hand with asset poverty, which we do not explore here.

As expected, the official poverty rate follows the business cycle in the U.S., decreasing in booms as incomes go up and increasing in recessions. However, there is no such trend for asset poverty. In fact, net worth poverty seems to be moving in the opposite direction, going up in the expansionary periods of 1984-89 and 1994-99, and going down during the recession in the beginning of 1990's. This might suggest that saving rates go down during booms and that the decline in saving rates is big enough to offset the effects of an increase in the prices of the assets already owned.

We should note that, despite the differences in their levels, both income and asset poverty rates moved in the same direction between 1984 and 1999, that is, both poverty rates went down. The exception is the trend in NW poverty rates. As the number of individuals in NW-HE or LIQ-poverty declined, the number of NW-poor individuals seems to have increased. Next, we explore why NW-poverty rates for people went up as the other rates went down.

## **VIII. COMPARISON OF HOUSEHOLD ASSET POVERTY TO INDIVIDUAL ASSET POVERTY**

As shown in Table 10, the number of people in income poverty declined between 1984 and 1999, while the number in net worth poverty inclined. This trend exists for almost all of the groups. For instance, the income poverty rate among blacks went down from 33 percent to 23 percent but their net worth poverty rate went up from 52 percent to 57 percent. Similarly, the income poverty rate for Hispanics went down from 28 percent to 22 percent while their net worth poverty rate went up from 37 percent to 52 percent.

We suspect that the growth of the number of individuals in NW-poverty despite the stagnation in the number of households in NW-poverty has something to do with the changes over time in NW poverty within households of different sizes. To explore this issue further, we tabulate NW poverty rates for households of different sizes for all years of analysis. As shown in Table 11A, the level of and the trend in NW poverty change by household size.

In 1984, one-person households had the highest NW poverty rate, at 36 percent, while two-person households had the lowest rate, at 18 percent. The rates among the other household groups lie in between the two. Checking the trends, it is noticeable that NW poverty rate among one-person households went down from 36 percent to 33 percent between 1994 and 1999. The rates for households that are made up of two to four persons remained almost the same. By

contrast, NW poverty rate among the households with five or more members went up from 26 percent in 1984 to 31 percent in 1999. The average household size in our sample stayed almost the same (varying between 2.76 and 2.9) during the years 1984 to 1999. Therefore, these findings suggest that the increase in NW poverty among large households and the decrease among one-person households can explain why NW poverty rate for households stayed the same while the rates for individuals went up.

We next check whether a similar trend exists for NW-HE poverty rates. Table 11B displays these rates for households of different sizes. Looking at the changes over time, we observe that during these 15 years NW-HE poverty rates remained more or less the same for one- to three-person households and decreased for households with four or more members. So the trend mentioned before is for NW poverty only. Since the only difference between NW and NW-HE is, by definition, home equity, we proceed to investigate the changes in the value of this portfolio item over time<sup>17</sup>. We would like to know if it was changes in house value or changes in mortgage principal that caused the increase in NW poverty rates. For this purpose, we add house value to NW-HE wealth measure. Poverty rates estimated with this measure are shown in Table 11C.

The figures in the first section of Table 11C tell us what the asset poverty rates would be if only the house value (primary residence) were added to the NW-HE wealth measure and if the remaining mortgage principal were assumed to be zero. All of these poverty rates are less than both NW-HE and NW poverty rates, as they should be. Adding the house value reduces asset poverty rates, but including the value of remaining mortgage principal takes away some of the reduction. The second section of Table 11C shows us what percentage of this reduction is taken away by the inclusion of mortgage principal. To illustrate, in 1984, the NW-HE poverty rate for one-person households was 43.73 percent (Table 11B). Adding house value reduces it to 36.43 percent, while subtracting the remaining mortgage principal increases it to 36.80 percent (Table 11A). Therefore, the percentage of the reduction in the asset poverty rate that is eliminated by subtracting the mortgage principal was 5.1 percent. By 1999, this percentage went up to 13.8 percent. The effect has been far more pronounced for large households. For households with five or more members, the corresponding figures are 7.3 percent in 1984 versus 27.4 percent in 1999. Evidently, the impact of mortgages on asset poverty rates has intensified

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<sup>17</sup> Home equity is defined as the value of the house minus the value of the remaining outstanding mortgage principal on the primary residence.

from year 1984 to 1999. Moreover, this increase is more visible for large households than for small households. As a result, NW poverty rates for individuals went up between 1984 and 1999 while the same rates for households remained almost constant over the same period.

## **IX. THE PORTFOLIO COMPOSITION OF THE POOR**

In this section we first look into the asset holdings of the entire sample of households. Following that, we examine the portfolios of some selected income- or asset-poor groups. For each sample, we decompose net worth into its components and we compute the share of the sample that holds each component, as well as the mean value of the component and its share in the total net worth of the sample. Table 12A shows the breakdown for the entire sample. In the first column we report the percentage of households that own each wealth item in each year. The second column shows the mean value of each item and the third column shows the share of each item in the total wealth (net worth) of that group. Although vehicles are considered as durable consumption goods and are not a wealth component in this paper, we include them in net worth in this section. This is done with the purpose of displaying the degree of (or lack of) access to this resource, which is a necessity in many parts of the country.

The figures in the table show that the home ownership rate increased from 60 percent to 67 percent during the 15-year period. Mortgage holdings followed the trend in home ownership rate, yet the share of homeowners who also have a mortgage has remained more or less the same (60-63 percent, not shown in the table). Although both rates went up, their wealth shares moved in different directions. House value as a share of total net worth stayed more or less the same (48-51 percent) until 1994, but dropped to 43 percent in 1999. On the other hand, the wealth share of remaining mortgage principal seems to have an upward trend, with a peak in 1994. More importantly, for the average household, mortgage debt as a share of house value climbed from 27 percent to 37 percent between 1984 and 1999, after achieving a peak of 40 percent in 1994. This result is consistent with the observation made by Wolff (2001b), who documents that the rising indebtedness of the middle class is due to rising mortgage debt. Such a trend may also be a response to changing incentives, as conjectured in Hurst, Luoh and Stafford (1998). After the tax law changes of the 1990s, mortgage interest continued to be tax-deductible, while the ability to deduct interest payments on consumer loans was phased out. It is possible that as

borrowing against home equity became more attractive, new financial products emerged, which encouraged many homeowners to refinance their mortgages and take out home equity loans.

Another point worth noting is the sharp increase of the share of stocks in the total household net worth, from 9 percent to 20 percent during this period. In fact, the wealth share in 1999 is probably higher than the 20 percent shown in the table, since IRAs, which are asked separately in 1999, consist of both stocks and money market funds (classified under checking/saving), but the division is unknown. Despite this rise in equity ownership, the popular view that corporate equity holdings have become the primary asset in the 1990's for a broad spectrum of American households is not true. As emphasized by Tracy, Schneider and Chan (1999) and as obvious in Table 11A, home equity is still the major item in most households' portfolios. The share of stocks in total wealth in the country has gone up in the 1990s. However, this is largely due to the increased holdings of the richest households, as stock ownership is highly skewed by wealth and income class (Wolff 2001b).

We can also see that the average value of vehicles has gone up since 1984, from \$8,850 to \$13,312 (in 1999 dollars). The vehicle ownership rate and the relative value of vehicles to total net worth have stayed almost the same.

How do the asset and debt holdings of the more vulnerable groups compare to those of the better-off groups? Are the asset-poor groups poor because of heavy debt, or is it because they have not accumulated any assets? What types of assets do the poor own, if any? To answer these questions, we now present some descriptive statistics of portfolio composition of some selected asset- or income-poor groups. We contrast the asset and debt holdings of these groups to the holdings of all remaining groups, which we call "others." In Table 12B, the first column for each survey year reports asset ownership rates and the second column shows the share of each wealth item in the total wealth (net worth) of that group. These descriptive statistics reveal a number of interesting results:

- While 60-70 percent of "others" own their homes, only about 40 percent of blacks do so. The homeownership rate among blacks is not high, but on average this group seems to own nothing else. House value (gross) makes 76-100 percent of net worth of an average black household. Another observation on black families is that their vehicle ownership rate is low compared to "others"; it is even lower than the rate among single mothers. Yet, vehicles constitute a non-negligible share of their total wealth (14-19 percent), and it constitutes the



second highest wealth share, after home equity. In addition, the vehicle ownership rate went up from 56 percent to 63 percent. Strikingly, only 45 percent of blacks have a bank account, which makes them the group with the lowest bank account ownership rate, whereas 90 percent of “others” have an account. Similarly, stock, real estate and business ownership rates are very low among blacks (6-11 percent, 5-8 percent and 2 percent, respectively) compared to “others” (32-45 percent, 18-23 percent and 18-19 percent, respectively). In addition to these, IRA ownership rate in this group is incredibly low at 8.6 percent, whereas 43 percent of “others” hold such accounts.

- It is interesting that the group of households whose heads do not have a high school degree hold a non-negligible share of their wealth in farm or business assets; moreover, the share has increased in time. This is true despite the fact that the business ownership rate in this group is not very high. Home equity is an important asset for this group too, and mortgage debt has increased relative to the gross value of homes. The IRA ownership rate of this group is much lower than average.
- Among the elderly the sum of mortgage and non-mortgage debt makes up only 3-4 percent of the net worth of this group. The business ownership rate is also lower among the elderly than among the “others” group. The elderly have the highest home ownership rate (70-79 percent) and more of the elderly were homeowners in 1999 than in 1984. It is also noteworthy how the portfolio composition of this group has changed from 1984 to 1999. In the 1980s, the portfolios of the elderly included three main items: home, real estate and bank accounts. Although the stock ownership rate was not low, stocks constituted a small share of their wealth. In the 1990s, the elderly were holding a bigger percentage of their wealth in business assets and stocks and a smaller percentage in home equity, real estate and bank accounts.
- The portfolio composition of single-female headed families is strikingly similar to that of black families in many ways: a very high concentration in home equity, and low business, stock and real estate ownership rates. This similarity is expected, since single female heads are mostly black. However, there are also differences: The percentage with and the wealth share of non-mortgage debt is higher among single mothers than among blacks. A higher

percentage of single mothers own stocks, and they keep a larger share of their net worth in stocks. The wealth share of stocks in year 1999 is especially noteworthy.

## **X. DETERMINING THE CHARACTERISTICS OF THE ASSET-POOR**

We now turn our attention to the composition of the asset-poor part of the population with the purpose of determining the characteristics that these households might have in common. Before performing a regression analysis, we present some descriptive statistics.

Table 13 decomposes the asset poor part of the population into the demographic and labor market groups that we have been looking at. For all wealth measures, we observe that the share in asset poverty of the following households went down during the 1984-1999 period: (1) households with white or black heads; (2) households whose heads are younger than 35; (3) households whose heads have a high school degree or less; (4) non-elderly female-headed households with children; and (5) renters. On the other hand, the shares in asset poverty of the following households went up during the same period: (1) households with non-white and non-black heads (i.e. Latin American, Asian etc.); (2) households whose heads are 35-61 years old; (3) households whose heads are college graduates; (4) non-elderly households with no children; and (5) homeowners (or those who are in the process of buying their homes).

To trace the independent effect of each factor on asset, we next estimate a probit model for each survey year. In these models, all independent variables are dummy variables that represent household characteristics. To prevent multicollinearity, the dummy variables for whites, the 50-61 age group, the lowest education group and the unmarried non-elderly are excluded. The dependent variable is a binary variable that takes the value of one if the household is asset poor and zero otherwise. The model is estimated for all four measures of asset poverty separately.

Formally, we assume that the household  $i$  is asset-poor if  $x_i' \beta + \varepsilon_i \geq 0$ , where  $x_i$  is a vector of a constant and dummy variables representing the characteristics of the household and its head and  $\beta$  is the vector of coefficients on these characteristics. If we assume that  $\varepsilon_i$  is normally distributed, then the probability that household  $i$  is asset-poor is  $\Phi(x_i' \beta)$ , where  $\Phi$  is the cumulative normal density function.

Table 14 presents the marginal effects in this model estimated for the 1999 cross-section, along with the Wald statistics of model significance and the maximized values of the log-likelihood function. We approximate the marginal effects vector,  $m$ , by using the standard formula, which is  $m \equiv \phi(\bar{X}\beta)\beta$ , where  $\phi$  is the standard normal density,  $\bar{X}$  is the vector of sample means and  $\beta$  is the vector of regression coefficients.

The estimates in Table 14 indicate that, relative to the excluded 50-61 age group, households with heads that are older than 61 are less likely to belong to the asset poor group, whereas those with heads that are younger than 50 are more likely. For instance, the 25-34 age group is 16.2 percent more likely and the oldest group is 20.5 percent less likely to be NW-poor than the 50-61 year old group.

The estimates also confirm that having a higher degree of education increases the chances of having higher wealth. To illustrate, households with high school graduate heads are 21.4 percent less likely than those without a high school degree to be NW-HE-poor. Having some college experience reduces the probability of being NW-HE-poor by another 3.1 percent and a college degree reduces it further by 19.4 percent<sup>18</sup>. Interestingly, the effect of a college degree is stronger when the liquid assets of the household are used as a measure of wealth. A household with a college graduate head is 28.8 percent less likely than one with a college dropout head to be LIQ-poor.

Race/ethnicity is another important factor that determines asset poverty. The results indicate that, controlling for all the other factors, having a black or Latin American head increases the chances for the household of being below the poverty threshold. The “other race” group has a small but negative marginal effect—that is, they are a bit less likely than whites to be asset poor.

Comparing the estimates for different family types, we observe that non-elderly couples with children, female-headed families with children and single or widowed elderly are more likely to be asset-poor relative to the excluded group, which is the group of non-elderly singles. Childless couples and the married elderly have negative marginal effects, i.e. they are less likely

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<sup>18</sup> The education dummies take the value of one if the household head has at least the specified degree and zero if not. For example, the “high school” dummy is equal to one if the head has 12 or more years of formal education and zero otherwise. For a college graduate, all three of the education dummies are equal to one. Thus, the estimate of the coefficient on an education dummy is an estimate of the additional value of obtaining the degree, relative to the lower degree.

to be asset poor. Homeownership seems to be a very important factor. Homeowners are 41.6 percent less likely to be NW-poor and about 20 percent less likely to be NW-HE or LIQ-poor than renters.

Tables 15A through 15D report the estimated  $\beta$ -coefficients as well as the sample sizes, the adjustment factors, Wald statistics of model significance, and the maximized value of the loglikelihood function. The marginal effects in these models can be calculated by multiplying  $\beta$ -coefficients by the adjustment factors.

## XI. IDENTIFYING TRENDS IN ASSET POVERTY

In this section we try to find out whether any of the demographic and labor market groups have become more or less likely to be asset-poor in time. To test for the existence of such a trend, we test the hypothesis that the  $\beta$ -coefficients remain the same from one survey year to the next<sup>19</sup>.

To do this, we take advantage of the fact that the  $\beta$  vector is asymptotically normally distributed. Therefore, the hypothesis that we test is  $H_0 : \beta_{t2} - \beta_{t1} = 0$ . The test statistic is in a standard form: Test statistic  $\equiv (\beta_{t2} - \beta_{t1})(\sigma_{s2-s1})^{-1}$ , where  $\sigma_{s2-s1} = (\sigma_{s2}^2 + \sigma_{s1}^2)^{1/2}$ , assuming that  $\text{cov}(\sigma_{s1}, \sigma_{s2}) = 0$ <sup>20</sup>.

Tables 15A to 15D present the  $\beta$ -coefficients for each year and for each wealth definition. In these tables, we indicate whether the test statistic is positive or negative, i.e., whether there is an upward (U) or a downward (d) trend, and also the significance of the trend. The test procedure reveals the following trends over the 15 years of analysis:

- Households whose heads have a high school degree displayed an upward trend relative to those without a high school degree. Similarly, those with some college experience displayed

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<sup>19</sup> Marginal effect vectors are functions of sample means ( $\bar{X}$ ), which normally change over time. In order to keep our results free of the influence of changing  $\bar{X}$ , we choose to identify trends by looking at differences in  $\beta$ -coefficients and not in the marginal effects. The changes in  $\beta$ -coefficients indicate the changes in the contribution of each independent variable to the index  $X\beta$ . We must mention that, due to the non-linearity of the probit model, it is impossible to interpret these changes as changes in the contribution to the probability of being asset-poor.

<sup>20</sup> This test is in fact a quite conservative one due to the assumption of zero covariance between the coefficient estimates. It is possible that the coefficients are positively correlated, which would make  $\sigma_{s2-s1}$  smaller and the test statistic larger (in absolute value), which would lead to a rejection of  $H_0$  more often.

an upward trend relative to high school graduates. Therefore, the incremental effect on reducing asset poverty from having a high school degree or some college experience declined over time. On the contrary, the incremental effect of a college degree increased, since college graduates displayed a downward trend in their contribution to asset poverty relative to college dropouts.

- Although the level of asset poverty among blacks remained quite high, the contribution to asset poverty of being black relative to being white surprisingly went down. The other racial/ethnic groups showed mixed results.
- Looking at the age effects, we observe that the 35-49 year-old group experienced an upward trend in its contribution to asset poverty, relative to the excluded 50-61 year-old group<sup>21</sup>. All other age groups experienced a downward trend relative to this pre-retirement group.
- We observe some unexpected trends for some family groups. Being married with children became less important for determining asset poverty. On the other hand, childless couples became more likely to be asset poor. Surprisingly, the contribution of being a (non-elderly) female head with children to asset poverty went down. For households with an elderly head, we observe a downward trend in NW-poverty. However, this is true for married elderly only. In fact, having a single or widowed elderly head (of either sex) became a more important factor in making a household asset poor<sup>22</sup>.
- Being “not working” contributed less to asset poverty in 1999 than in 1984.
- The propensity to be asset poor went up among homeowners, but only when asset poverty is defined as on the basis of net worth.

To summarize, in years 1984 to 1999, heads with one or more of the following characteristics became worse off in terms of asset poverty: Working, 35-49 years old, married without children, white, low education, single or widowed elderly. The contribution of having a college degree to reducing asset poverty increased. To our surprise, the importance of being black, being married with children or being a female head with children diminished as a determinant of asset poverty.

What implications do these trends in  $\beta$ -coefficients have for the changes in the *probability* of being asset-poor? To illustrate a few cases, we pick five fictitious household

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<sup>21</sup> This middle-age pre-retirement group was selected as the reference group due to its relatively stable asset poverty rate and population share.

heads and compute their probabilities of being NW-poor predicted by the probit models in years 1984 and 1999. The estimates, presented in Table 16 are interesting. Lines (1) and (2) demonstrate the difference between an elderly married head and an elderly female head with no husband. The household in line (1) became less likely to be NW-poor whereas the one in line (2) became more likely. Comparing lines (2) and (3), we observe that the probability of being poor is much smaller for homeowners than for renters, as expected. However, homeowners faced a higher percentage increase in their likelihood of being poor; their chances increased five times according to the probit model estimates. Lines (4) and (5) compare a black household to a white one. Although both households experienced an increase, the percentage increase for the black household was smaller.

## **XII. AN ALTERNATIVE POVERTY RATE CALCULATION**

As mentioned in the beginning of this paper, the current practice of measuring poverty relies only on the comparison of annual household income to a minimum needs threshold. Conceptually, poverty is a state of lacking the resources to have a decent living and wealth is an important resource both for the income it produces and for the sense of power and security it provides. For this reason, it makes sense to make wealth a part of the poverty measure.

In this section, we suggest a combined income and net worth poverty measure. We investigate whether the addition of a wealth dimension changes the income poverty rates and identify the groups for which the addition has a pronounced effect.

We use the technique of adding the annuity value of wealth to income<sup>23</sup>, following Wolff(1990). We assume that the annuity of net worth is paid out like a bond coupon, so the capital value of net worth remains the same. The amount of annual consumption-out-of-wealth that keeps wealth the same is  $rW/(1+r)$ , where  $r$  is the real interest rate and  $W$  is wealth. We try three alternative interest rates: 3 percent, 5 percent and 7 percent.

Household income is defined as in the Current Population Survey (CPS). For a list of the items included in household income, see the Appendix.

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<sup>22</sup> For instance, for a male head who is 71 or older,  $\beta$ -coefficients in the NW-poverty regression for the age effect and the family type effect sum to  $-0.696$  in 1984 and the sum declines to  $-0.332$  in 1999.

<sup>23</sup> We should note that the way we treat wealth is not to be interpreted as a suggestion for households to annuitize their assets nor as an indication of the actual practice. It is just a simple and acceptable way of combining wealth and income.

Line (1) in Table 17A shows what the poverty rate would be if an annuity computed to net worth were added to household income. In fact, the assets that a household owns already produce income in the form of rent, interest and dividends; that is, this process overstates the effect on the poverty rate of adding an annuity flow. In line (2), property income is subtracted from the gross annuity value used above. Line (3) takes into account adding the value of imputed rent to owner occupied housing. Gross imputed rent is estimated as the annuity flow from the gross value of the house. Mortgage interest payments, homeowner insurance and property taxes are subtracted from gross imputed rent to get net imputed rent. Line (4) shows the effect of adding net imputed rent. Finally, in lines (5) and (6), gross and net values, respectively, of the annuity to both net worth and owner occupied housing are included in the poverty measure. Since the annuity value of the house is added twice (the first time directly and the second time through net worth) in lines (5) and (6), these two measures of poverty are unrealistically low.

The section on the right in Table 17A shows the combined poverty rate as a percentage of the income poverty rate. As is apparent, the poverty rate is reduced by 20-25 percent when the annuity value of wealth is added to household income. As expected, the degree of reduction in poverty rate depends on the components of wealth used to compute the annuity flow as well as the interest rate. The higher the interest rate, the lower the combined poverty rate. Strikingly, though, even after adding the gross values of both the annuity and the imputed rent, and assuming a 7 percent interest rate, the poverty rate is reduced to 77 percent of the income-only level, from 11.81 percent to 9.09 percent, an only 2.72 percentage point decline. Therefore, we do not see a substantial reduction in the overall poverty rate, which signals a low level of wealth holdings among the low-income groups.

Table 17B reports our estimates of income plus net worth poverty rates as a percentage of income poverty rates for various demographic groups. The last two columns of the table show income-only poverty rates for comparison. Both of these rates are from the PSID; the first one is based on the experimental poverty threshold and the second one is based on the official threshold. As expected, the impact of adding the annuity flow from wealth in the poverty measure is the strongest for groups that have the lowest asset poverty rates, such as whites, the elderly, homeowners and college graduates. For homeowners, in particular, estimated poverty rates are cut from 30 to almost 50 percent. For others, the impact is much smaller and even zero for some.

### **XIII. PERSISTENCE OF POVERTY**

#### **A. The Conditional Probability of Being Poor: Descriptive Statistics**

How likely is it for a household to be observed in asset poverty in two consecutive survey years? And, has the probability of remaining poor increased or decreased between 1984 and 1999? How does asset poverty persistence compare to income poverty persistence?

Ideally, we would like to analyze the duration of poverty spells and compare the characteristics of households that experience longer spells to the characteristics of those with shorter spells. However, since wealth data are available only at five-year intervals, however, a duration analysis of asset poverty is not feasible. We use the information on wealth at the end points of each 5-year period to identify the groups that are repeatedly seen in asset poverty. It is true that this analysis has some weaknesses, such the inability to differentiate between a household that is poor in only the two survey years and one that is poor throughout the period. However, the analysis is still meaningful, since the fact that the household is in poverty a second time points out that asset poverty is not just a one-time event for that household.

Table 18 presents for both the overall population and for individual groups the probability of a household being asset-poor in a survey year, given that the same household was asset-poor in the previous survey year<sup>24</sup>. This probability is estimated as the number of households who are asset poor in both years divided by the number of poor in the first year. The estimates are based on the longitudinal sample that is restricted to households for which the head remains the same over the five-year period. Three different longitudinal samples are used.

The figures in the table are revealing. Our previous estimates showed that in a given year about 26 percent of the households are NW-poor. Table 18 shows that about 60 percent of those who are asset poor in one year will still be NW-poor in five years. Combining the two pieces of information, we can say that about 15 percent of all households are unable to escape NW-poverty within five years. The situation gets worse when a more restrictive wealth measure is used. About 28 percent of all households remain in NE-HE or in LIQ-poverty.

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<sup>24</sup> For example, the conditional probability of being LIQ-poor in the second survey year (t2) can be expressed as:  
$$P(LIQpoor_{t2} | LIQpoor_{t1}) \equiv P(LIQpoor_{t2} \cap LIQpoor_{t1}) / P(LIQpoor_{t1})$$



Evidently, both liquid asset (LIQ) and NW-HE poverty are more likely to carry on to the second survey year than NW-poverty for all periods analyzed. This reminds us once again of the importance of home equity. Many households escape NW-poverty by buying a residence but they either do not accumulate other types of assets or can not get out of debt and therefore stay NW-HE and LIQ-poor.

Another point worth noting is the changing persistence of asset poverty in time. We observe that NW-poverty was hardest to move out of during the 1989-94 period. However, for NW-HE and LIQ poverty, the 1994-99 period seems to be the worst.

For the racial/ethnic groups, we see a picture that is similar to the one-year asset poverty rates. Whites have the lowest and blacks have the highest conditional poverty rates. For the residual racial group the conditional NW poverty rate in 1989 is 100 percent, since there were only a small number of observations in this group in 1984 and all of them were still in poverty in 1989.

For age groups, the picture is different from before. We reported before that the asset poverty rates are the lowest for the elderly and the highest for the youngest and that the poverty rate is a decreasing function of the age of the household head. The conditional poverty rates, on the other hand, are the lowest for the groups whose heads are between 35 and 60. The rates for the youngest and oldest groups are higher, showing a smaller degree of wealth mobility for these groups.

Education of the head seems to be an important determinant of the probability of staying in poverty. College graduates have the smallest conditional probabilities. Homeowners are half as likely to stay in NW-poverty as renters. However these two groups are not very different in terms of NW-HE or LIQ-poverty.

Examining the persistence of asset poverty for different types of families, we notice that families headed by the elderly and female-headed families with children have the highest chance of staying in asset poverty. The latter group stays in poverty with about 85 percent probability.

Next, we take a look at the conditional probabilities of being income poor. As Table 19 demonstrates, these probabilities are much smaller than the conditional asset poverty rates. Overall, an income poor household in 1984 has a 41 percent probability of being income poor again in 1989. The lowest conditional probability estimate is for college graduates. The younger households have more income mobility than the older ones. As expected, blacks, single mothers and the elderly are more likely to stay in income poverty.

## B. Determining the Role of Changes in Assets and Changes in Debt on the Transitions Into and Out of Asset Poverty

If some households have stayed in asset poverty while others have moved out of poverty, was it because they did not accumulate assets or because they piled up debt? For the families who have fallen into asset poverty, was the precipitating event a loss of assets or a sudden increase in debt?

Before we perform a formal analysis, we present some descriptive statistics. Tables 20A-20C show the mean values of NW in the beginning and at the end of each five-year period. The tables also show the mean values of changes in assets and debts classified by the families' movements into and out of poverty. For example, households who were NW-poor both in 1984 and in 1989 increased their assets by \$3,000 on average (1999 dollars) and increased their debt by \$3,800.

For the whole sample, we observe the following: First, households that stayed in NW-poverty increased both their assets and their debts, and the magnitudes of these two changes were close. Second, those who moved out of and those who stayed out of NW-poverty increased both assets and debts too. However, the increase in their assets was much stronger than the increase in their debts. Third, those who went into poverty saw a large decline in their assets.

To measure the effect of changes in assets and changes in debts on the transition probabilities of moving into and out of poverty, we proceed as follows:

We divide the sample into two, based on the state of asset poverty in the beginning of the 5-year period; poor and non-poor. For each sub-sample, we run the following probit regression:

$$y_i^* = \beta_0 + \beta_1 \Delta Asset_i + \beta_2 \Delta Debt_i + \sum_{j=1}^k \beta_{j+2} d_{ji} + \varepsilon_i, \quad y_i = \begin{cases} 1, & y_i^* > 0 \\ 0, & otherwise. \end{cases}$$

The dependent variable takes the value of one if the household changes its asset poverty status during the period. The independent variable  $\Delta Asset_i$  is the value of the change in assets for household  $i$  and  $\Delta Debt_i$  is the change in debt. We control for the effects of household characteristics by introducing group dummies to the regression<sup>25</sup>. The dummy variable  $d_{ji}$  takes the value of one if household  $i$  is a member of group  $j$  and zero otherwise. There are  $k$  groups.

The  $\beta$ -coefficients of this model are estimated by running a probit regression for the two subsamples separately. The estimates are reported in Tables 21A and 21B.

The estimates of  $\beta$ -coefficients on  $\Delta Asset_i$  and  $\Delta Debt_i$  have the expected signs but are pretty close in absolute value. For example, for the sample of households that are asset-poor in 1984, the estimates of  $\beta$ -coefficients on  $\Delta Asset_i$  and  $\Delta Debt_i$  are 0.0761 and - 0.0522, respectively. In order to find out which one of these two variables has more effect on the transition probabilities, we test the hypotheses that the  $\beta$ -coefficients on these variables sum to zero, that is we test  $H_0 : \beta_1 - \beta_2 = 0$ . The p-values for these tests are reported in the tables. Unfortunately, the null hypotheses are rejected in only some cases, but not in all. Therefore, we can not say for sure which variable is the more influential one in every period that we analyze.

### **C. Events Associated with Movements Into and Out of Asset Poverty**

Another innovation of this paper is that it investigates the correlation of movements into and out of asset poverty with some major lifetime events. One can imagine that a change in the family composition caused by a divorce of the head may have an impact on the wealth of that family, since the spouse will probably move out with some assets. Similarly, a change in the health status of the head, such as a disability that affects his ability to work, may oblige the family to spend down its wealth<sup>25</sup>. Or, starting a new business can make the family asset-rich if the business becomes successful. As far as we know, no research has been done on the impact of lifetime events on asset poverty transitions.

Our analysis is based on estimating probit models that explain the movements into and out of NW poverty. For the three five-yearly longitudinal samples (1984-89, 1989-94 and 1994-99), we run two separate probit regressions on the probability of changing NW poverty status—the first for the NW-poor and the second for the non-poor sub-samples. For each longitudinal sample, the first regression explains the movement out of NW poverty while the second one explains the movement into poverty. We control for the characteristics of the household head,

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<sup>25</sup> The same change in assets or debts can have different effects on the transition probabilities of distinct groups, since the P1 indices are not the same. For example, asset-poor blacks may require a larger increase in assets than whites do to move out of poverty.

<sup>26</sup> The analysis of family composition changes is somewhat limited in this paper, since the longitudinal samples are restricted to households for which the head remains the same. The only change allowed is the movement of family members other than the head, such as the marriage of the head or the arrival of a new child.

using dummies that stand for the demographic and labor market groups. The  $\beta$ -coefficient estimates and their standard errors are reported in Table 22.

All independent variables shown in this table are dummy variables. The “ended marriage” dummy takes the value of one if the household head is married in the beginning of the period and the marriage ends (via divorce or death) during the period, and vice versa for “got married.” The “lost job” dummy is one if the head is working in the beginning and becomes unemployed sometime during the period. The dummies “got retired” and “became disabled” are one if the head is working in the beginning and retired and disabled in the end, respectively. The dummy variables “bought home,” “lost home,” “started business,” and “closed business” are defined with respect to the ownership status of the head in the beginning and the end of the period. “Inheritance” is one if the head receives an inheritance during the period<sup>27</sup>. The household has a “new child” if the number of children in the beginning is smaller than the number of children at the end of the period and vice versa for the “child left home” dummy. The  $\beta$ -coefficient estimates shown in the table reveal some interesting findings. We must stress that while some of these estimates have the signs that one would intuitively expect to see, others have the opposite sign. This poses some puzzles on which we speculate below.

Controlling for all other factors, we find that getting married has been a way out of NW poverty for some and the upward trend in the  $\beta$ -coefficient estimates suggests that the contribution of getting married to escaping asset poverty has increased in time. The ending of the head’s marriage, on the other hand, increases his chances of becoming poor. Surprisingly, in the 1994-99 sample, getting married increased the chances of a NW non-poor household falling into poverty, although the effect is not significant. Could this be because the new spouses brought in more debt than assets to these households? Or is it because the newly married couples made bad investments and lost money, or refinanced the mortgage on their homes—perhaps, to pay for the wedding?

The job market experiences of the head appear to have some effect on the wealth of the household. However the signs of the estimates are not always what we would expect to see. Specifically, coefficient estimates for the “found job” dummy are puzzling. For the poor, the

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<sup>27</sup> For the samples 1984-89 and 1989-94, the PSID tracks only the inheritances that exceed \$10,000 in amount, resulting in a censored distribution. For the 1994-99 sample, however, the actual amounts are reported and the inheritance dummy takes the value of one whenever the amount is positive. Redefining the dummy variable so that it is one when the amount exceeds \$10,000 does not change the results very much.

direction of the effect is ambiguous as the estimates take different signs in the samples. For the non-poor, finding a job makes it more likely for the household head to fall below the NW-poverty threshold. We could speculate that those who have found a job during the period were unemployed but non-poor in the beginning, and were relying on their non-labor income or their assets to survive. The fact that the household head has found a job might mean that he has run down the assets and is desperate enough to take any job offered to him.

Getting retired and becoming disabled have mixed effects on the probabilities of moving both into and out of NW-poverty. Therefore, the results do not suggest a specific direction of correlation. As expected, buying a home has a highly significant effect on the transition out of poverty in all samples, just as losing a home does on the transition into poverty. Interestingly, the effectiveness of buying a home diminished in time, although it remained a significant determinant of getting out of poverty in all NW-poor samples. For the NW non-poor, losing a home increased in importance.

Inheritances have highly significant effects on the transition probabilities. This is very intuitive since inheritances usually come in considerable amounts. They increase the likelihood of escaping poverty for the poor and decrease the likelihood of falling into poverty for the non-poor, with the exception of the “1994-99 poor” sample. The coefficient estimates for starting and closing businesses are as expected too, with the exception of the “1989-94 non-poor” sample. The direction and the degree of correlation between a change in the number of children in the household and the transition probabilities are, however, uncertain.

Overall, many of these lifetime events such as changes in marital, homeownership and business ownership status are correlated with the transition probabilities and the correlations run in the directions that we would expect. However, some coefficient estimates create puzzles and more research is needed to solve them.

#### **XIV. SUMMARY AND CONCLUSION**

In this paper, we argue that household wealth is important for its own sake and not only for the income that it generates. Assets provide people with an economic protection for the hard times and enable them to invest in their future. Distribution of political power is also closely related to distribution of wealth. During the last two decades, the mean net worth of households in 1999 dollars climbed from \$127,000 to \$217,000. However, the bulk of the gains went to the upper

tail of the wealth distribution. Median net worth rose at a much slower rate, from \$42,000 to \$56,000 in this period.

We estimate the level and the severity of asset poverty in the United States in the years 1984 to 1999. Our findings suggest that a very large percentage of the population is in asset poverty, despite the low thresholds that we assume. About 25 percent of all households are in NW-poverty. For comparison, the income poverty rate is around 13 percent. Excluding home equity from the wealth measure increases the asset poverty rate to 40 percent. About 50 percent of all households in the United States do not have even \$5,000 worth of liquid assets. Moreover, the persistence of asset poverty is very high. There is a 60 percent probability that a NW-poor household will be NW-poor again in five years. Furthermore, despite the stability of household-based NW poverty rate, the individual-based NW poverty rate went up, which means that there are more people if not more households in NW-poverty in 1999 than in 1984. These findings are alarming, since they point to a sizeable part of the population that is persistently vulnerable to adversities, such as a job loss.

We estimate asset poverty rates for various demographic and labor market groups. We observe that white households have lower asset poverty rates than non-whites, and that blacks have the highest poverty rates. The NW-poverty rates for whites and blacks are 20 percent and 53 percent respectively. Poverty rates decline with the age and the education of the household head. NW-poverty rates are approximately 75 percent for households with heads younger than 25, and 13 percent for those older than 70. Households whose heads do not have a high school degree have about 30 percent NW-poverty while the same rate for those with college graduate heads is around 10 percent. Homeowners have an enormous wealth advantage. Even when we exclude home equity from the wealth measure, they are half as likely to be asset-poor as renters. About 60 percent of female-headed households with children are NW-poor and close to 80 percent of them have less than \$5,000 liquid assets. About one fifth of intact non-elderly families with children are NW-poor.

The decomposition of household wealth shows us that about 65 percent of all households own home equity. House value as a share of total net worth stayed more or less the same (48-51 percent) until 1994 and dropped to 43 percent in 1999, whereas the wealth share of remaining mortgage principal has an upward trend. More importantly, for the average household, mortgage debt as a share of house value climbed from 27 percent to 37 percent between 1984 and 1999, achieving a peak of 40 percent in 1994. About 80 percent of all households have a bank account,

but only 39 percent of black households and 30 percent of female-headed households with children do. The NW-poor households are poor because they have both low assets and high debt, with mortgage debt exceeding non-mortgage debt on average.

It is worth mentioning that the increase in stock market wealth of the average household is deceiving, since it is highly influenced by a small number of households that own stocks in very large amounts. The average NW-poor household held \$104 and \$364 in stocks in 1984 and in 1999, respectively. The average liquid asset-poor household held \$22 and \$23 in stocks in 1984 and 1999. Given that 40 percent of the households are liquid asset-poor, it is clear how misleading the population mean can be.

The estimates of probit regressions explaining asset poverty suggest a downward trend in the contribution to asset poverty of being a college graduate and of being a married elderly head. To our surprise, the contribution to asset poverty of being black, being a single mother or being married with children went down as well. The probit regression estimates indicate an upward trend in the contribution of not having a college degree, being a 35-49 year-old household head or being a childless non-elderly couple. The contributions of being a homeowner to NW-poverty went up as well. Being elderly seems to have lost its advantage in reducing the likelihood of being asset poor if the household head is not married. The finding that the elderly who are married are less likely to be asset poor now than before, while unmarried elderly are more likely may suggest that wealth inequality among the elderly has increased.

Given the importance of household wealth and its high concentration, we argue that it should be included in the poverty measure in order to get a better understanding of the living standards in the United States. Our income plus net worth poverty estimates are somewhat lower than the rates estimated using an income-only measure. However, adding wealth to the poverty measure makes a difference for some groups, such as the elderly, college graduates and homeowners.

Descriptive statistics of the changes in assets and debts for households that move into and out of asset poverty suggest that the changes in assets have a more important role than the changes in debts on the transitions. We notice especially the large decline in assets for those who became poor. For those who moved out of asset poverty, the role of assets was again more pronounced than the role of debts.

We look finally at some lifetime events that might be associated with the transitions into and out of asset poverty. Regression estimates show that many of these events such as changes

in marital, homeownership and business ownership status are correlated with the transition probabilities. Moreover, the correlations run in the directions that one would expect. However, coefficient estimates for some events are not as expected. These create puzzles and more research is needed to solve them.

Given all this evidence, it is clear that economic and financial developments benefited only a relatively small part of the population in the United States in the years 1984-1999. Asset poverty rates did not go down even in the long expansionary period in the late 1990s. Given the high persistence of asset poverty, there is a good reason to suspect that more or less the same households stayed in asset poverty in these fifteen years. Poverty reduction policy in the United States has so far focused exclusively on income maintenance. While government programs created under this policy benefited many families, they did not do a very good job of making the poor self-sufficient. The short-term focus and especially the asset limits of these programs even made some families dependent on government assistance. These programs should be supplemented by new ones, which provide incentives for the poor to accumulate assets. The Individual Development Accounts introduced in 1998 is a sign of the progress made in this endeavor.



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**Table 1A: Mean Values of NW, NW-HE and LIQ, in 1999 Thousand Dollars, and Percentage Changes.**

	M e a n				% change		
	1984	1989	1994	1999	1984-89	1989-94	1994-99
<b>NW</b>	127.94	162.59	168.70	217.06	27.1	3.8	28.7
<b>NW-HW</b>	81.89	107.50	116.04	158.75	31.3	7.9	36.8
<b>LIQ</b>	36.34	49.30	68.76	72.53	35.7	39.5	5.5

Source: Authors' calculations from the 1999 survey of the PSID.

Notes: The data are based on four weighted, cross-sectional snapshots of the households surveyed in each of these years. See the Appendix for the description of these cross-sectional samples.

**Table 1B: Percentiles of NW, NW-HE and Liquid Assets, in 1999 Thousand Dollars and Percentage Changes Over the Years 1984 to 1999.**

	Percentile	1984	1989	1994	1999	% change
<b>NW</b>	10	-0.44	-1.07	-1.69	-1.80	-
	25	1.60	1.34	2.03	2.00	25.00
	50	42.97	41.65	50.66	56.50	31.49
	75	132.29	152.46	167.73	195.00	47.40
	95	483.12	584.98	664.15	779.00	61.24
<b>NW-HE</b>	10	-1.60	-3.22	-5.07	-5.00	-
	25	0.00	0.00	0.00	0.00	0.00
	50	7.22	8.46	11.26	12.00	66.20
	75	57.72	67.18	84.43	100.00	73.25
	95	352.76	399.03	495.30	621.00	76.04
<b>LIQ</b>	10	0.00	0.00	0.00	0.00	0.00
	25	0.48	0.54	0.56	0.50	4.17
	50	5.61	6.72	9.01	6.00	6.95
	75	28.86	38.96	56.28	40.50	40.33
	95	163.55	201.53	298.30	289.00	76.70

Source: Authors' calculations from the 1999 survey of the PSID.

Notes: The data are based on four weighted, cross-sectional snapshots of the households surveyed in each of these years. See the Appendix for the description of these cross-sectional samples.

**Table 2A: Overall Asset Poverty Rates (Headcount Index):**

	<b>NW</b>	<b>NW-HE</b>	<b>Liquid</b>	<b>\$5,000</b>
<b>1984</b>	26.35	41.65	41.83	53.50
<b>1989</b>	27.08	41.32	38.85	48.15
<b>1994</b>	26.08	40.49	37.83	43.12
<b>1999</b>	25.88	40.13	41.65	46.40

Source: Authors' calculations based on the 1984, 1989,1994 and 1999 PSID data.

**Table 2B: Poverty Gap Ratios (P1 Indices) for the Sample of all Households**

	<b>NW</b>	<b>NW-HE</b>	<b>Liquid</b>
<b>1984</b>	61.51	84.99	33.28
<b>1989</b>	75.66	93.72	30.72
<b>1994</b>	89.35	112.82	30.75
<b>1999</b>	82.30	108.74	32.30

Source: Authors' calculations based on the 1984, 1989,1994 and 1999 PSID data.

**Table 3: Asset Ownership Rates and Mean Asset Holdings of Households that are Asset-Poor by Net Worth, Net Worth Minus Home Equity and by Liquid Assets: 1984-1999**

<b>NW-poor</b>	<b>1 9 8 4</b>		<b>1 9 8 9</b>		<b>1 9 9 4</b>		<b>1 9 9 9</b>	
	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>
(Gross) House value	5.35	2,380	8.86	4,290	14.08	7,710	15.38	9,700
Mortgage principal	4.66	2,174	8.01	5,046	11.84	8,390	14.01	10,142
Business	0.91	38	2.34	114	3.13	661	3.17	478
Checking/Saving	54.44	686	54.18	797	51.78	949	62.46	947
Debt	53.83	5,091	56.02	5,785	55.48	8,922	56.85	7,879
Real Estate	1.54	167	2.34	408	1.7	259	1.24	76
Stock	5.06	104	4.29	83	8.01	522	5.13	364
Vehicles	64.63	3,253	65.02	3,614	68.97	5,167	70.88	5,116
Other Savings	6.58	112	7.43	172	8.69	169	5.11	155
IRAs (1999 only)							5.81	248

  

<b>NW-HE-poor</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>
	(Gross) House value	40.11	29,249	40.26	31,403	44.67	34,099	45.42
Mortgage principal	28.23	11,429	28.8	13,797	29.59	16,004	32.87	20,912
Business	1.35	30	3.04	136	2.79	233	3.93	177
Checking/Saving	59.84	908	60.02	1,102	56.13	1,129	66.58	1,099
Debt	54.14	4,363	58.59	5,467	56.4	7,485	57.23	6,999
Real Estate	1.46	120	2.45	261	1.88	256	1.39	82
Stock	6.14	127	5.78	153	8.94	407	5.43	323
Vehicles	73.25	4,554	72.63	5,279	75.28	6,492	77.26	6,727
Other Savings	8.03	144	8.98	250	9.6	212	5.83	188
IRAs (1999 only)							6.65	329

  

<b>Liquid Asset poor</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>	<b>% with asset</b>	<b>Mean (\$1999)</b>
	(Gross) House value	42.15	29,757	39.99	28,063	44.87	31,747	48.67
Mortgage principal	28.15	11,074	26.8	12,558	26.79	12,725	34.15	20,743
Business	6.46	7,844	5.91	4,568	6.35	4,181	6.9	8,141
Checking/Saving	57.31	528	55.53	532	50.69	511	65.42	684
Debt	49.17	2,822	52.16	3,755	49.39	5,568	51.93	5,043
Real Estate	7.63	3,144	8.05	6,375	6.77	4,109	6.56	4,066
Stock	3.56	22	2.98	26	4.37	37	2.42	23
Vehicles	72.91	4,632	70.84	4,911	73.67	6,381	77.77	7,763
Other Savings	6.02	67	6.25	58	5.62	53	3.3	31
IRAs (1999 only)							12.77	4,651

Source: Authors' calculations from 1984, 1989, 1994 and 1999 surveys of the PSID.

Notes: Mean values are computed for the entire sample, not just for those who own the asset.

**Table 4: Asset Poverty Rates in 1999 (In Percentages)**

	P0 Indices				P1 Indices		
	NW	NW-HE	Liquid	\$5,000	NW	NW-HE	Liquid
<b>Total</b>	25.88	40.13	41.65	46.40	82.30	108.74	32.30
<b>Race / Ethnicity</b>							
White	18.99	31.80	33.78	39.02	80.19	104.29	24.71
Black	55.28	75.23	73.95	77.90	93.61	130.90	65.38
Latin American	51.27	73.53	74.89	76.38	83.24	116.31	64.05
Others	34.56	47.47	47.98	51.24	90.01	120.23	34.00
<b>Age group</b>							
< 25	76.81	82.30	78.82	85.11	375.84	387.08	59.30
25 - 34	48.45	63.58	56.20	64.98	175.26	207.51	43.89
35 - 49	28.34	44.51	46.97	50.08	78.85	107.25	36.90
50 - 61	14.87	28.98	34.82	39.07	51.90	86.21	25.61
62 - 69	10.77	23.56	26.54	30.41	28.93	51.30	20.48
70 +	11.19	22.72	25.84	31.08	14.64	26.14	20.72
<b>Education</b>							
<High	40.03	62.09	66.43	69.47	87.47	114.46	56.06
High School	25.29	41.01	45.16	49.68	68.19	89.59	34.70
Some college	26.61	37.97	38.21	44.11	107.96	132.31	27.33
College Grad.	13.49	21.32	18.32	23.98	74.26	107.53	12.30
<b>Housing Tenure</b>							
Homeowner	5.91	27.07	30.10	34.40	26.49	65.74	21.32
Renter	67.08	67.08	65.47	71.16	197.40	197.40	54.94
<b>Family Type</b>							
<65 yrs, Mar, Chil	19.88	40.65	43.76	44.64	58.76	90.97	31.18
<65 yrs, Mar, No Chil	14.68	27.39	27.70	32.76	63.15	90.01	20.07
<65 yrs, Fem.Head, Chil	58.52	73.73	74.15	77.39	145.40	176.54	63.48
65+ yrs, Married	3.13	13.16	16.94	20.01	6.66	19.88	12.66
65+ yrs, Female Head	18.33	32.90	36.19	43.37	27.65	42.67	28.71
65+ yrs, Male Head	21.58	28.91	28.03	34.12	52.36	64.95	25.89

Source: Authors' calculations from the 1999 survey of the PSID.

Note: Since sampling weights for 1999 are not available currently, 1997 weights are used.

**Table 5A: Overall Asset Poverty Rates, 1984 to 1999**

	Years				Percentage point change			
	1984	1989	1994	1999	1984-89	1989-94	1994-99	1984-99
<b>Total</b>								
NW<.25 Poverty line	26.35	27.08	26.08	25.88	0.73	-1.00	-0.20	-0.47
(NW-HE)<.25 Poverty line	41.65	41.32	40.49	40.13	-0.33	-0.83	-0.36	-1.52
Liquid<.25 Poverty line	41.83	38.85	37.83	41.65	-2.98	-1.02	3.82	-0.18
Liquid<\$5,000	53.51	48.15	43.12	46.40	-5.36	-5.03	3.28	-7.11

Source: Authors' calculations from 1984, 1989, 1994 and 1999 surveys of the PSID.

**Table 5B: Asset Poverty Rates by Race and Ethnicity, 1984 to 1999**

Race	Year				Percentage point change			
	1984	1989	1994	1999	84-89	89-94	94-99	84-99
<b>White</b>								
NW<.25 Poverty line	21.36	22.11	21.87	18.99	0.75	-0.24	-2.88	-2.37
(NW-HE)<.25 Poverty line	35.49	35.29	35.39	31.80	-0.20	0.10	-3.59	-3.69
Liquid<.25 Poverty line	35.52	32.55	32.58	33.78	-2.97	0.03	1.20	-1.74
Liquid<\$5,000	47.81	42.12	37.83	39.02	-5.69	-4.29	1.19	-8.79
<b>Black</b>								
NW<.25 Poverty line	55.52	52.11	51.07	55.28	-3.41	-1.04	4.21	-0.24
(NW-HE)<.25 Poverty line	77.54	73.25	72.29	75.23	-4.29	-0.96	2.94	-2.31
Liquid<.25 Poverty line	78.98	72.21	71.10	73.95	-6.77	-1.11	2.85	-5.03
Liquid<\$5,000	85.53	80.11	75.00	77.90	-5.42	-5.11	2.90	-7.63
<b>Latin American</b>								
NW<.25 Poverty line	46.58	41.61	31.45	51.27	-4.97	-10.16	19.82	4.69
(NW-HE)<.25 Poverty line	67.12	55.95	44.25	73.53	-11.17	-11.70	29.28	6.41
Liquid<.25 Poverty line	65.27	54.36	40.95	74.89	-10.91	-13.41	33.94	9.62
Liquid<\$5,000	79.08	62.56	50.25	76.38	-16.52	-12.31	26.13	-2.70
<b>Others</b>								
NW<.25 Poverty line	9.56	32.28	41.03	34.56	22.72	8.75	-6.47	25.00
(NW-HE)<.25 Poverty line	20.11	37.00	48.21	47.47	16.89	11.21	-0.74	27.36
Liquid<.25 Poverty line	24.05	33.38	40.71	47.98	9.33	7.33	7.27	23.93
Liquid<\$5,000	49.51	43.83	55.67	51.24	-5.68	11.84	-4.43	1.73

Source: Authors' calculations from 1984, 1989, 1994 and 1999 surveys of the PSID.



**Table 5C: Asset Poverty Rates by Age, 1984 to 1999**

Age Groups	Year				Percentage point change			
	1984	1989	1994	1999	84-89	89-94	94-99	84-99
<b>Ages &lt;25</b>								
NW<.25 Poverty line	72.23	77.15	70.87	79.55	4.92	-6.28	8.68	7.32
(NW-HE)<.25 Poverty line	79.00	84.90	86.72	87.65	5.90	1.82	0.93	8.65
Liquid<.25 Poverty line	73.58	82.24	80.99	84.58	8.66	-1.25	3.59	11.00
Liquid<\$5,000	86.60	90.74	85.86	87.49	4.14	-4.88	1.63	0.89
<b>Ages 25-34</b>								
NW<.25 Poverty line	43.14	42.52	38.67	44.01	-0.62	-3.85	5.34	0.87
(NW-HE)<.25 Poverty line	59.44	59.68	54.31	65.05	0.24	-5.37	10.74	5.61
Liquid<.25 Poverty line	56.02	53.82	48.23	57.60	-2.20	-5.59	9.37	1.58
Liquid<\$5,000	71.61	62.08	54.67	63.94	-9.53	-7.41	9.27	-7.67
<b>Ages 35-49</b>								
NW<.25 Poverty line	16.93	16.62	17.05	22.64	-0.31	0.43	5.59	5.71
(NW-HE)<.25 Poverty line	36.66	37.74	35.21	40.17	1.08	-2.53	4.96	3.51
Liquid<.25 Poverty line	39.44	35.70	31.56	43.64	-3.74	-4.14	12.08	4.20
Liquid<\$5,000	50.65	41.73	34.20	45.27	-8.92	-7.53	11.07	-5.38
<b>Ages 50-61</b>								
NW<.25 Poverty line	11.74	8.66	10.20	9.49	-3.08	1.54	-0.71	-2.25
(NW-HE)<.25 Poverty line	27.39	23.84	23.81	24.91	-3.55	-0.03	1.10	-2.48
Liquid<.25 Poverty line	28.88	21.29	24.63	29.91	-7.59	3.34	5.28	1.03
Liquid<\$5,000	37.98	27.30	27.31	32.07	-10.68	0.01	4.76	-5.91
<b>Ages 62-69</b>								
NW<.25 Poverty line	11.39	9.32	9.13	11.14	-2.07	-0.19	2.01	-0.25
(NW-HE)<.25 Poverty line	21.86	22.28	22.52	23.20	0.42	0.24	0.68	1.34
Liquid<.25 Poverty line	24.12	22.86	23.95	26.08	-1.26	1.09	2.13	1.96
Liquid<\$5,000	34.29	30.28	26.18	29.96	-4.01	-4.10	3.78	-4.33
<b>Ages 70+</b>								
NW<.25 Poverty line	11.87	12.47	16.61	11.19	0.60	4.14	-5.42	-0.68
(NW-HE)<.25 Poverty line	25.40	24.95	31.82	22.72	-0.45	6.87	-9.10	-2.68
Liquid<.25 Poverty line	28.04	26.24	35.00	25.84	-1.80	8.76	-9.16	-2.20
Liquid<\$5,000	36.67	34.01	39.58	31.08	-2.66	5.57	-8.50	-5.59

Source: Authors' calculations from 1984, 1989, 1994 and 1999 surveys of the PSID.

**Table 5D: Asset Poverty Rates by Education, 1984 to 1999**

Education Groups	Year				Percentage point change			
	1984	1989	1994	1999	84-89	89-94	94-9	84-99
<b>&lt;High</b>								
NW<.25 Poverty line	33.58	29.97	30.78	34.31	-3.61	0.81	3.53	0.73
(NW-HE)<.25 Poverty line	54.66	50.48	54.97	58.1	-4.18	4.49	3.13	3.44
Liquid<.25 Poverty line	58.82	52.56	57.37	62.73	-6.26	4.81	5.36	3.91
Liquid<\$5,000	67.18	59.86	60.61	65.59	-7.32	0.75	4.98	-1.59
<b>High School</b>								
NW<.25 Poverty line	27.05	22.37	23.85	18.22	-4.68	1.48	-5.63	-8.83
(NW-HE)<.25 Poverty line	42.76	39.1	42.52	35.37	-3.66	3.42	-7.15	-7.39
Liquid<.25 Poverty line	43.26	37.73	41.5	39.95	-5.53	3.77	-1.55	-3.31
Liquid<\$5,000	55.65	44.83	44.95	43.73	-10.82	0.12	-1.22	-11.92
<b>Some college</b>								
NW<.25 Poverty line	24.56	16.62	18.55	18.8	-7.94	1.93	0.25	-5.76
(NW-HE)<.25 Poverty line	37.71	32.02	31	31.28	-5.69	-1.02	0.28	-6.43
Liquid<.25 Poverty line	36.13	28.26	27.33	31.87	-7.87	-0.93	4.54	-4.26
Liquid<\$5,000	51.44	36.71	32.7	35.49	-14.73	-4.01	2.79	-15.95
<b>College Grad.</b>								
NW<.25 Poverty line	15.18	8.86	9.22	8.76	-6.32	0.36	-0.46	-6.42
(NW-HE)<.25 Poverty line	22.48	19.22	17.46	16.64	-3.26	-1.76	-0.82	-5.84
Liquid<.25 Poverty line	17.37	12.28	12.15	14.76	-5.09	-0.13	2.61	-2.61
Liquid<\$5,000	29.54	17.68	15.19	17.98	-11.86	-2.49	2.79	-11.56

Source: Authors' calculations from 1984, 1989, 1994 and 1999 surveys of the PSID.

**Table 5E: Asset Poverty Rates by Housing Tenure, 1984 to 1999**

Tenure	Year				Percentage point change			
	1984	1989	1994	1999	84-89	89-94	94-99	84-99
<b>Homeowner</b>								
NW<.25 Poverty line	2.35	3.5	5.58	5.85	1.15	2.08	0.27	3.50
(NW-HE)<.25 Poverty line	27.84	26.35	26.88	26.07	-1.49	0.53	-0.81	-1.77
Liquid<.25 Poverty line	29.38	24.46	25.43	29.16	-4.92	0.97	3.73	-0.22
Liquid<\$5,000	39.56	31.28	28.7	32.37	-8.28	-2.58	3.67	-7.19
<b>Renter</b>								
NW<.25 Poverty line	62.39	64.03	66.02	66.29	1.64	1.99	0.27	3.90
(NW-HE)<.25 Poverty line	62.39	64.03	66.02	66.29	1.64	1.99	0.27	3.90
Liquid<.25 Poverty line	60.54	62.02	62.83	65.34	1.48	0.81	2.51	4.80
Liquid<\$5,000	74.45	69.7	67.75	69.25	-4.75	-1.95	1.50	-5.20

Source: Authors' calculations from 1984, 1989, 1994 and 1999 surveys of PSID.

**Table 5F: Asset Poverty Rates by Family Structure, 1984 to 1999**

Family Type	Year				Percentage point change			
	1984	1989	1994	1999	84-89	89-94	94-9	84-99
<b>&lt;65 yrs, Mar, Chil</b>								
NW<.25 Poverty line	19.56	20.18	21.32	19.88	0.62	1.14	-1.44	0.32
(NW-HE)<.25 Poverty line	44.68	42.11	40	40.65	-2.57	-2.11	0.65	-4.03
Liquid<.25 Poverty line	46.83	39.34	36.89	43.76	-7.49	-2.45	6.87	-3.07
Liquid<\$5,000	55.87	45.37	38.94	44.64	-10.50	-6.43	5.70	-11.23
<b>&lt;65 yrs, Mar, No Chil</b>								
NW<.25 Poverty line	10.72	10.47	13.07	14.68	-0.25	2.60	1.61	3.96
(NW-HE)<.25 Poverty line	23.14	23.36	26.77	27.39	0.22	3.41	0.62	4.25
Liquid<.25 Poverty line	22.53	19.15	22.86	27.7	-3.38	3.71	4.84	5.17
Liquid<\$5,000	32.72	26.86	28.45	32.76	-5.86	1.59	4.31	0.04
<b>&lt;65 yrs, Fem.Head, Chil</b>								
NW<.25 Poverty line	67.39	62.69	60.86	58.52	-4.70	-1.83	-2.34	-8.87
(NW-HE)<.25 Poverty line	82.75	79.07	77.03	73.73	-3.68	-2.04	-3.30	-9.02
Liquid<.25 Poverty line	84.14	76.28	74.14	74.15	-7.86	-2.14	0.01	-9.99
Liquid<\$5,000	90.84	82.07	77.66	77.39	-8.77	-4.41	-0.27	-13.45
<b>65+ yrs, Married</b>								
NW<.25 Poverty line	6.43	4.64	4.71	3.13	-1.79	0.07	-1.58	-3.30
(NW-HE)<.25 Poverty line	18.63	17.08	17.56	13.16	-1.55	0.48	-4.40	-5.47
Liquid<.25 Poverty line	20.41	19.35	21.63	16.94	-1.06	2.28	-4.69	-3.47
Liquid<\$5,000	25.77	22.89	23.14	20.01	-2.88	0.25	-3.13	-5.76
<b>65+ yrs, Female Head</b>								
NW<.25 Poverty line	15.94	17.69	23.85	18.33	1.75	6.16	-5.52	2.39
(NW-HE)<.25 Poverty line	29.30	31.97	40.79	32.9	2.67	8.82	-7.89	3.60
Liquid<.25 Poverty line	32.14	32.49	42.8	36.19	0.35	10.31	-6.61	4.05
Liquid<\$5,000	43.49	44.56	48.86	43.37	1.07	4.30	-5.49	-0.12
<b>65+ yrs, Male Head</b>								
NW<.25 Poverty line	15.76	16.74	20.64	21.58	0.98	3.90	0.94	5.82
(NW-HE)<.25 Poverty line	23.41	22.54	33.76	28.91	-0.87	11.22	-4.85	5.50
Liquid<.25 Poverty line	24.78	25.78	34.12	28.03	1.00	8.34	-6.09	3.25
Liquid<\$5,000	38.45	35.79	40.87	34.12	-2.66	5.08	-6.75	-4.33

Source: Authors' calculations from 1984, 1989, 1994 and 1999 surveys of PSID.

**Table 6: P1 Index (Poverty Gap) in Percentages, by Group and Year**

	N W				N W - H E				L I Q			
	1984	1989	1994	1999	1984	1989	1994	1999	1984	1989	1994	1999
<b>Total</b>	61.51	75.66	89.35	82.30	84.99	93.72	112.82	108.74	33.28	30.72	30.75	32.30
<b>Race / Ethnicity</b>												
White	54.78	72.78	85.80	80.19	76.52	87.44	108.77	104.29	26.93	24.51	25.49	24.71
Black	76.28	81.44	95.48	93.61	104.53	118.84	119.00	130.90	70.52	63.64	64.40	65.38
Latin American	203.94	114.38	94.43	83.24	260.28	137.17	131.15	116.31	57.35	45.64	33.46	64.05
Other	25.61	66.35	255.55	90.01	36.85	78.42	289.78	120.23	16.42	26.45	31.23	34.00
<b>Age</b>												
<25	136.02	174.99	139.35	375.84	142.85	185.11	161.99	387.08	58.78	61.62	58.41	59.30
25-34	106.04	137.80	150.08	175.26	129.80	148.73	181.19	207.51	44.03	40.95	39.26	43.89
35-49	64.24	74.51	89.20	78.85	102.97	102.36	120.22	107.25	30.73	29.36	27.75	36.90
50-61	17.97	24.31	49.00	51.90	43.70	56.45	81.02	86.21	24.01	20.41	23.74	25.61
62-69	16.59	16.48	20.66	28.93	28.19	31.47	41.61	51.30	19.92	21.74	22.33	20.48
70 +	11.92	25.40	63.26	14.64	23.03	26.06	40.93	26.14	22.55	19.82	29.72	20.72
<b>Education</b>												
<High	42.89	62.04	68.39	87.47	68.75	88.38	100.81	114.46	50.60	49.86	54.30	56.06
High School	52.77	55.90	75.85	68.19	72.21	74.94	101.87	89.59	34.05	32.15	36.09	34.70
Some College	72.68	106.89	104.40	107.96	101.83	121.73	135.89	132.31	25.54	24.56	23.64	27.33
College Graduate	97.46	93.26	111.67	74.26	119.59	102.38	117.59	107.53	11.47	10.08	10.13	12.30
<b>Tenure</b>												
Homeowner	17.75	25.85	37.03	26.49	56.87	55.53	72.83	65.74	21.83	18.66	19.98	21.32
Renter	127.19	153.08	188.97	197.40	127.19	153.08	188.97	197.40	50.48	49.46	51.26	54.94
<b>Family Type</b>												
<65 yrs, Mar, Children	59.99	78.49	74.03	58.76	100.63	103.93	103.92	90.97	35.41	28.99	27.93	31.18
<65 yrs, Mar, No Chil.	40.15	38.19	76.69	63.15	63.98	66.21	114.77	90.01	15.88	13.78	16.96	20.07
<65 yrs, Fem.Head, Chil.	98.14	104.59	109.74	145.40	120.19	129.02	133.56	176.54	75.78	66.29	68.44	63.48
65+ yrs, Married	8.76	27.39	67.80	6.66	21.99	19.48	29.24	19.88	17.08	12.60	18.61	12.66
65+ yrs, Female Head	14.08	19.21	27.79	27.65	27.54	34.59	48.38	42.67	25.46	26.54	36.49	28.71
65+ yrs, Male Head	21.96	15.35	35.17	52.36	22.07	20.15	52.32	64.95	21.31	19.16	30.69	25.89

Source: Authors' calculations from 1984, 1989, 1994 and 1999 surveys of PSID.

**Table 7: The Composition of the Population by Demographic Characteristics, 1984-1999.**

	1984	1989	1994	1999
<b>Race</b>	(%)	(%)	(%)	(%)
White	83.85	81.38	83.71	78.11
Black	12.76	13.55	12.9	11.22
Latin	2.81	4.23	2.14	6.48
Other	0.58	0.84	1.25	4.19
<b>Age</b>				
<25	8.67	6.47	4.3	2.64
25-34	25.7	24.1	21.94	16.77
35-49	25.09	29.6	37.81	35.48
50-61	17.21	15.42	14.52	19.95
62-69	9.15	9.86	9.41	9.13
70+	14.19	14.55	12.02	16.03
<b>Education</b>				
<High	29.19 <i>100.00</i>	26.79 <i>99.99</i>	21.07 <i>100.00</i>	30.93 <i>100.00</i>
High School	35.14 <i>70.81</i>	32.05 <i>73.20</i>	32.44 <i>78.93</i>	27.04 <i>69.07</i>
Some college	17.26 <i>35.67</i>	20.09 <i>41.15</i>	21.27 <i>46.49</i>	18.22 <i>42.03</i>
College Grad.	18.41	21.06	25.22	23.81
<b>Housing Tenure</b>				
Homeowner	60.08	60.85	65.65	66.98
Renter	39.92	39.15	34.35	33.02
<b>Family Structure</b>				
<65 yrs, Mar, Chil	27.73	24.35	27.82	24.62
<65 yrs, Mar, No Chil	18.20	18.38	21.83	18.13
<65 yrs, Fem.Head, Chil	8.31	9.15	6.39	8.25
65+ yrs, Married	8.28	8.56	8.68	9.12
65+ yrs, Female Head	9.16	9.86	7.91	8.98
65+ yrs, Male Head	1.90	2.02	1.76	2.06
Others	26.41	27.69	25.62	28.83

Note: The numbers in italics in “Education” rows represent the cumulative percentages of educational groups. For example, in 1984, 71 percent of the heads had a high school degree or more, 36 percent had some college experience or more, 18.41 percent had college degree or more.

**Table 8: Effects of Changes in Population Composition on Asset Poverty Rates: Counterfactual and Actual NW Poverty Rates**

<b>Counterfactual NW poverty rates</b>				
<b>Categories</b>	<b>1984</b>	<b>1989</b>	<b>1994</b>	<b>1999</b>
<i>Race/Ethnicity of the Head</i>	26.35	26.95	26.16	26.34
<i>Age of the Head</i>	26.35	24.74	23.20	20.34
<i>Education of the Head</i>	26.35	25.80	24.91	24.94
<i>Housing Tenure</i>	26.35	25.86	23.02	21.96
<i>Family Type</i>	26.35	26.94	24.95	25.50
<b>Actual NW poverty rates</b>	26.35	27.08	26.08	25.88

Source: Authors' calculations based on the 1984, 1989, 1994 and 1999 PSID data.

**Table 9: Asset Poverty Rates Estimated Using the Survey of Consumer Finances (SCF).**

	NW			NW-HE			LIQ			LIQ < \$5,000		
	1983	1989	1998	1983	1989	1998	1983	1989	1998	1983	1989	1998
<b>Total</b>	22.4	24.7	25.5	36.7	37.3	36.8	33.2	36.4	39.7	40.1	38.7	45.3
<b>Race / Ethnicity</b>												
White	17.1	16.6	20.5	30.0	26.7	30.8	26.9	25.9	33.5	33.5	28.5	39.6
Black/Hispanic	47.4	53.6	45.3	69.9	74.7	60.5	63.8	72.9	64.7	71.8	76.2	69.0
<b>Age</b>												
<25	55.6	70.1	70.7	63.0	73.9	75.3	56.1	76.1	70.0	70.7	76.7	81.2
25-34	36.3	42.7	46.8	51.4	54.1	59.8	44.8	50.4	59.2	53.6	53.6	64.9
35-49	17.7	22.1	23.5	36.2	35.0	33.8	30.9	32.1	39.7	35.4	33.2	44.2
50-61	13.8	11.2	15.0	27.8	27.6	27.4	26.2	27.9	29.8	29.5	31.1	36.3
62+	9.9	13.1	11.0	21.9	25.6	22.9	22.5	28.1	26.2	30.5	32.4	31.5
<b>Education</b>												
<High	29.8	32.3	40.2	50.0	48.2	58.7	50.0	49.7	64.8	56.9	53.5	68.7
High School	20.9	25.4	26.5	36.1	36.6	39.6	33.6	34.9	45.6	40.6	38.0	51.9
Some College	25.5	19.2	24.5	37.8	32.7	34.8	31.1	26.4	36.5	38.8	29.6	43.8
College Graduate	11.3	9.6	15.3	19.3	15.3	20.8	11.8	13.5	19.1	17.6	13.2	23.8
<b>Tenure</b>												
Homeowner	3.6	3.3	6.4	26.5	23.5	23.5	22.6	22.2	26.6	27.6	23.9	31.4
Renter	54.8	60.8	63.0	54.8	60.7	63.0	51.7	60.5	65.4	61.7	64.9	72.7
<b>Family Type</b>												
<65 yrs, Mar, Children	21.6	21.3	25.3	42.2	36.8	39.3	37.6	36.9	44.4	40.6	36.5	45.9
<65 yrs, Mar, No Chil.	12.9	13.5	19.0	25.0	25.4	28.9	19.9	20.9	27.9	25.1	22.7	34.9
<65 yrs, Fem.Head, Chil.	48.1	63.0	53.7	67.0	77.2	64.4	63.4	75.0	69.8	68.4	77.3	74.2
65+ yrs, Married	5.5	5.7	4.0	16.3	16.4	12.8	17.4	17.2	19.1	22.6	19.5	20.7
65+ yrs, Female Head	15.3	16.8	17.3	28.0	33.2	30.3	29.0	38.4	31.9	41.7	43.3	39.9
65+ yrs, Male Head	21.1	24.3	13.1	40.2	26.6	30.8	40.2	24.6	32.7	49.6	36.6	38.9

Source: Haveman and Wolff (2001).

**Table 10: Comparison of Asset Poverty Rates with the Official Poverty Rates, by Age, Race and Gender .**

(Percentage of individuals in poverty)						
	Years	OFFICIAL	ASSET-BASED			
			NW	NW-HE	LIQ	LIQ 5
All Races	1984	14.4	24.45	43.81	44.80	54.37
	1989	12.8	25.42	42.90	40.57	47.92
	1994	14.5	24.83	41.34	38.70	42.33
	1999	11.8	27.93	42.48	39.95	42.42
White (Non-Hispanic)	1984	10	19.27	37.25	37.95	48.2
	1989	8.3	20.16	36.46	33.85	41.67
	1994	9.4	20.18	35.92	33.26	36.91
	1999	7.7	19.74	32.43	29.8	32.6
Black	1984	33.8	52.22	78.36	80.33	85.61
	1989	30.7	51.12	75.24	73.77	79.06
	1994	30.6	51.36	73.97	71.7	74.36
	1999	23.6	57.61	75.63	72.29	74.91
Hispanic	1984	28.4	37.68	62.39	66.22	76.97
	1989	26.2	35.38	53.74	54.17	60.08
	1994	30.7	30.51	44.26	41.58	47.08
	1999	22.8	52.26	77.16	77.24	77.41
UNDER 18	1984	21.5	31.42	56.21	58.54	66.33
	1989	19.6	33.55	54.58	52.71	57.99
	1994	21.8	30.78	49.53	46.47	48.43
	1999	16.9	36.09	52.89	50.63	52.13
18 TO 64	1984	11.7	23.8	41.8	41.93	52.54
	1989	10.2	24.81	41.68	38.38	46.69
	1994	11.9	24.27	40.2	36.82	41.28
	1999	10	28.08	42.24	39.1	41.72
65 AND OLDER	1984	12.4	10.18	23.23	25.6	33.93
	1989	11.4	10.01	22.54	24.1	31.28
	1994	11.7	12.16	26.17	29.21	32.31
	1999	9.7	9.74	21.44	21.48	25.17
MALE	1984	12.8	23.61	42.87	44.07	53.85
	1989	11.2	24.57	42.07	39.94	47.33
	1994	12.8	24.46	41.12	38.41	42.22
	1999	10.3	27.75	42.34	39.5	41.63
FEMALE	1984	15.9	25.22	44.67	45.46	54.85
	1989	14.4	26.19	43.66	41.14	48.46
	1994	16.3	25.19	41.55	38.97	42.45
	1999	13.2	28.09	42.6	40.37	43.15

Sources: 1) Official poverty rates: U.S. Bureau of the Census, Current Population Survey; Historical Poverty Tables by People. 2) Asset poverty rates: Authors' calculations using the PSID data and the experimental poverty thresholds.



**Table 11A: NW Poverty Rates for Households by Household Size and Year**

Size	1984	1989	1994	1999
1	36.80	36.09	36.29	33.36
2	18.28	20.06	18.92	19.59
3	26.50	27.41	26.68	25.65
4	21.39	21.44	22.79	21.68
5+	26.10	28.91	27.45	31.45
All	26.36	27.08	26.08	25.89

Source: Authors' calculations based on the 1984, 1989,1994 and 1999 PSID data.

**Table 11B: NW-HE poverty rates for households by household size and year:**

Size	1984	1989	1994	1999
1	43.73	44.69	46.58	43.60
2	30.72	31.69	30.95	31.40
3	44.95	44.57	44.19	44.59
4	44.66	42.90	41.94	39.04
5+	56.65	54.85	48.94	52.43
All	41.65	41.32	40.50	40.13

Source: Authors' calculations based on the 1984, 1989,1994 and 1999 PSID data.

**Table 11C: Section 1: (NW-HE+house) Poverty Rates for Households, by Household Size and Year. Section 2: The Percentage of the Reduction in Asset Poverty Taken Away by Including Remaining Mortgage Principal, by Household Size and Year**

Size	NW-HE+house poverty rates				% Explained by Mortgage Principal			
	1984	1989	1994	1999	1984	1989	1994	1999
1	36.43	35.36	35.60	31.72	5.1	7.8	6.3	13.8
2	17.55	18.01	16.51	17.10	5.5	15.0	16.7	17.4
3	25.42	24.41	22.50	22.78	5.5	14.9	19.3	13.2
4	19.14	18.66	18.59	15.99	8.8	11.5	18.0	24.7
5+	23.69	25.80	21.64	23.55	7.3	10.7	21.3	27.4
All	25.28	25.09	23.26	22.58	6.6	12.3	16.4	18.9

Source: Authors' calculations based on the 1984, 1989,1994 and 1999 PSID data.

Note:  $\% \text{ Explained} \equiv \frac{NW \text{ poverty rate} - (NW - HE + \text{house}) \text{ poverty rate}}{(NW - HE) \text{ poverty rate} - (NW - HE + \text{house}) \text{ poverty rate}} * 100$

**Table 12A : Portfolio Composition of Households, 1984-1999**

	1984			1989			1994			1999		
	% with asset	Mean (1999 \$)	% of wealth	% with asset	Mean (1999 \$)	% of wealth	% with asset	Mean (1999 \$)	% of wealth	% with asset	Mean (1999 \$)	% of wealth
House value	60.02	63,589	49.70	60.85	79,310	48.78	65.58	84,775	50.25	67.34	93,590	43.12
Mortgage principal	36.33	17,542	13.71	37.31	24,226	14.90	41.55	31,954	18.94	42.89	35,278	16.25
Business	12.20	26,608	20.80	13.40	30,919	19.02	13.78	25,953	15.38	12.80	43,185	19.90
Checking/Saving	80.77	19,505	15.25	81.28	23,910	14.71	79.08	22,814	13.52	84.24	19,071	8.79
Debt	46.30	2,941	2.30	50.15	3,894	2.39	50.26	7,064	4.19	46.28	5,436	2.50
Real Estate	19.98	21,887	17.11	19.61	31,177	19.18	18.30	28,330	16.79	17.21	22,443	10.34
Stock	24.81	11,386	8.90	27.96	17,455	10.74	36.17	34,860	20.66	28.52	44,599	20.55
Vehicles	83.22	8,850	6.92	83.11	10,485	6.45	85.85	12,317	7.30	86.26	13,312	6.13
Other Savings	23.33	5,445	4.26	26.37	7,938	4.88	25.31	10,991	6.51	20.07	8,863	4.08
IRAs (1999 only)										33.66	26,024	11.99
Total		136,787			173,075			181,022			204,349	
Total (excluding vehicles)		127,937			162,590			168,704			191,037	

Source: Authors' calculations using the PSID data; 1984, 1989, 1994 and 1999 cross-sectional samples, weighted.

Notes: “percent with asset” is the percentage of households that own each wealth item. “Mean” is the mean value of the wealth item in the entire sample. “percent of wealth” is the ratio of the overall mean of each listed wealth item to mean net worth (NW), times 100.

**Table 12B: Portfolio Composition of Various Asset and Income-Poor Groups vs. Other Households (i.e., those whose heads are not black, not elderly, not a single mother and have at least a high school degree.)**

Blacks	1984		1989		1994		1999	
	% with asset	% of wealth	% with asset	% of wealth	% with asset	% of wealth	% with asset	% of wealth
Asset type								
House value	38.10	86.34	38.14	76.19	40.06	84.02	40.42	100.66
Mortgage principal	21.90	22.53	23.04	23.36	22.92	30.77	28.34	44.76
Business	1.35	5.31	2.13	21.19	2.55	3.79	2.62	2.81
Checking/Saving	44.65	11.38	48.46	14.71	43.38	15.98	55.62	12.00
Debt	44.07	6.03	46.52	6.68	41.41	9.08	43.52	8.31
Real Estate	6.76	10.84	8.25	8.82	5.25	9.22	5.75	9.13
Stock	6.91	4.53	6.73	3.10	11.02	9.92	5.73	14.53
Vehicles	56.61	15.46	57.96	14.71	62.34	18.16	63.09	19.38
Other Savings	13.77	10.16	14.42	6.03	13.94	16.93	8.64	9.30
IRAs (1999 only)							8.68	4.63
<b>Less than high school degree</b>								
House value	56.60	51.07	55.09	44.81	57.34	49.78	56.83	51.99
Mortgage principal	22.57	8.86	23.40	8.08	22.49	10.56	30.00	16.93
Business	7.37	15.89	8.75	19.37	9.11	12.62	6.23	28.71
Checking/Saving	64.65	19.15	62.70	19.85	58.84	17.96	68.14	11.81
Debt	30.73	1.41	36.16	1.80	34.28	4.46	35.24	2.89
Real Estate	13.93	14.59	13.00	18.19	13.63	18.61	11.68	11.87
Stock	10.64	5.91	11.17	4.74	14.99	10.64	9.02	5.97
Vehicles	70.46	7.21	71.07	7.41	73.04	9.83	75.68	8.43
Other Savings	14.50	3.66	16.98	2.93	14.63	5.40	12.67	3.58
IRAs (1999 only)							13.78	5.89
<b>Elderly</b>								
House value	70.75	36.20	72.05	35.59	75.94	32.58	79.89	30.85
Mortgage principal	12.12	2.09	13.65	2.21	14.72	2.79	17.61	2.46
Business	6.54	7.45	8.11	8.61	10.16	9.23	9.12	13.32
Checking/Saving	86.40	25.39	84.79	22.47	77.72	16.71	88.29	11.66
Debt	18.66	0.40	19.29	0.33	19.82	1.87	20.99	1.27
Real Estate	22.86	17.41	21.87	18.15	21.77	14.56	22.73	9.59
Stock	22.37	11.67	26.43	13.71	33.16	28.13	33.90	24.73
Vehicles	71.46	3.85	72.73	4.39	78.34	4.18	80.50	3.91
Other Savings	22.54	4.38	26.13	4.01	21.69	3.45	20.43	2.25
IRAs (1999 only)							33.83	11.33

Source: Authors' calculations using PSID, 1984, 1989, 1994 and 1999 surveys.

**Table 12B (continued): Portfolio Composition of Various Asset and Income-Poor Groups vs. Others**

	1984		1989		1994		1999	
	% with asset	% of wealth	% with asset	% of wealth	% with asset	% of wealth	% with asset	% of wealth
<b>Single female-headed families with children</b>								
House value	24.53	101.58	31.93	93.56	33.01	103.24	36.78	95.57
Mortgage principal	18.96	43.54	24.55	39.07	21.18	40.13	27.16	47.80
Business	2.98	13.99	3.37	8.64	2.33	2.30	3.66	1.65
Checking/Saving	46.99	10.53	54.46	20.83	48.02	22.32	66.53	11.15
Debt	46.11	12.03	52.97	8.72	46.21	12.25	52.16	14.13
Real Estate	6.67	12.42	7.02	12.62	5.10	7.83	6.34	10.26
Stock	8.78	7.07	8.00	4.16	10.95	7.97	8.67	25.82
Vehicles	60.07	16.86	63.27	13.18	64.80	21.21	73.09	14.16
Other Savings	10.83	9.99	13.16	7.98	13.22	8.72	9.10	4.12
IRAs (1999 only)							14.69	13.36
<b>All other groups</b>								
House value	63.95	51.89	64.40	51.46	70.16	56.77	71.48	45.31
Mortgage principal	50.09	17.37	50.65	19.08	55.72	27.80	57.59	21.25
Business	17.70	26.81	19.11	22.38	17.92	18.87	17.79	24.96
Checking/Saving	90.57	11.62	91.72	11.64	89.09	12.24	91.70	7.05
Debt	57.85	2.83	61.53	2.84	61.07	4.67	56.49	2.64
Real Estate	23.54	17.47	23.75	20.32	20.83	18.22	18.67	10.25
Stock	32.87	8.33	37.66	10.89	45.98	18.91	36.08	18.88
Vehicles	92.73	7.29	92.05	6.46	92.76	7.72	92.83	6.31
Other Savings	28.28	4.08	31.93	5.22	30.43	7.46	24.42	4.87
IRAs (1999 only)							43.38	12.58

Source: Authors' calculations using PSID, 1984, 1989, 1994 and 1999 surveys.

**Table 13: Composition of the Asset-Poor; 1984 to 1999, by Various Wealth Measures.**

	N W				N W - H E			
	1984	1989	1994	1999	1984	1989	1994	1999
<b>Race / Ethnicity</b>								
White	67.96	66.44	70.21	57.05	71.45	69.50	73.15	61.60
Black	26.91	26.06	25.26	23.50	23.78	24.01	23.03	20.63
Latin American	4.92	6.50	2.58	13.64	4.49	5.73	2.34	12.62
Other	0.21	1.00	1.96	5.81	0.28	0.75	1.48	5.15
<b>Age</b>								
<25	23.79	17.71	11.22	8.03	16.46	12.30	8.19	5.55
25-34	42.10	41.55	36.58	30.42	36.70	34.57	30.17	25.75
35-49	16.14	22.75	32.86	39.50	22.11	27.97	36.67	40.02
50-61	7.63	6.76	7.59	11.19	11.27	10.20	9.84	14.07
62-69	3.96	4.53	4.10	3.92	4.81	6.17	5.70	5.53
70 +	6.39	6.70	7.64	6.93	8.65	8.79	9.43	9.08
<b>Education</b>								
<High	37.25	36.16	30.06	36.19	38.37	36.20	30.59	36.21
High School	36.11	33.57	36.35	29.39	36.12	33.59	36.94	30.74
Some College	16.08	19.28	19.98	20.66	15.62	18.74	19.20	19.02
College Graduate	10.55	10.99	13.60	13.77	9.89	11.47	13.27	14.04
<b>Tenure</b>								
Homeowner	5.35	8.86	14.15	15.38	40.11	40.26	44.70	45.42
Renter	94.65	91.14	85.85	84.62	59.89	59.74	55.30	54.58
<b>Family Type</b>								
<65 yrs, Mar, Children	20.56	18.14	22.81	20.38	29.72	24.81	27.56	26.87
<65 yrs, Mar, No Chil.	7.39	7.10	10.99	10.23	10.09	10.39	14.51	12.32
<65 yrs, Fem.Head, Chil.	21.27	21.17	15.03	16.74	16.52	17.51	12.25	13.60
65+ yrs, Married	2.02	1.47	1.57	1.32	3.70	3.54	3.77	3.57
65+ yrs, Female Head	5.55	6.44	6.98	6.29	6.45	7.63	7.69	7.28
65+ yrs, Male Head	1.14	1.25	1.37	1.82	1.07	1.10	1.45	1.57

Source: Authors' calculations using PSID, 1984, 1989, 1994 and 1999 surveys.

**Table 13 (continued): Composition of the Asset-Poor; 1984 to 1999, by Various Wealth Measures.**

	LIQ				LIQ 5			
	1984	1989	1994	1999	1984	1989	1994	1999
<b>Race / Ethnicity</b>								
White	71.21	68.18	72.10	63.06	74.93	71.20	73.46	65.38
Black	24.12	25.18	24.25	19.54	20.42	22.54	22.44	18.48
Latin American	4.34	5.92	2.32	12.38	4.12	5.50	2.49	11.34
Other	0.33	0.72	1.34	5.02	0.54	0.77	1.60	4.81
<b>Age</b>								
<25	15.27	12.33	8.44	5.12	14.05	11.87	8.27	4.96
25-34	34.44	32.75	28.60	21.94	34.42	32.48	29.47	22.77
35-49	23.68	28.37	34.62	40.69	23.78	28.34	34.34	38.94
50-61	11.83	9.94	10.83	16.29	12.16	9.96	10.68	16.41
62-69	5.28	6.78	6.42	6.00	5.87	7.07	6.22	6.18
70 +	9.50	9.83	11.10	9.96	9.72	10.28	11.01	10.75
<b>Education</b>								
<High	41.10	39.74	33.63	37.32	36.70	36.10	31.56	35.04
High School	36.39	34.50	38.53	32.62	36.60	34.10	37.63	32.20
Some College	14.90	17.69	17.76	18.44	16.59	19.20	19.06	19.11
College Graduate	7.61	8.07	10.08	11.62	10.11	10.60	11.76	13.65
<b>Tenure</b>								
Homeowner	42.15	39.99	44.87	48.67	44.37	42.33	45.36	49.92
Renter	57.85	60.01	55.13	51.33	55.63	57.67	54.64	50.08
<b>Family Type</b>								
<65 yrs, Mar, Children	31.02	24.66	27.21	27.88	28.93	22.94	25.20	25.53
<65 yrs, Mar, No Chil.	9.79	9.06	13.26	12.00	11.11	10.25	14.48	12.74
<65 yrs, Fem.Head, Chil.	16.73	17.96	12.63	13.18	14.12	15.59	11.60	12.35
65+ yrs, Married	4.03	4.26	4.97	4.43	3.98	4.07	4.67	4.69
65+ yrs, Female Head	7.05	8.25	8.64	7.72	7.46	9.13	8.65	8.30
65+ yrs, Male Head	1.13	1.34	1.57	1.47	1.37	1.50	1.65	1.60

Source: Authors' calculations using PSID, 1984, 1989, 1994 and 1999 surveys.

**Table 14: Probit Estimates of the Marginal Effects on Asset Poverty Status, 1999.**

	NW	NW-HE	LIQ	LIQ 5
Intercept	-	-	-	-
Age < 25	0.239 (0.037)	0.413 (0.058)	0.288 (0.057)	0.338 (0.063)
Age 25- 34	0.162 (0.021)	0.292 (0.028)	0.142 (0.028)	0.189 (0.029)
Age 35 - 49	0.068 (0.019)	0.105 (0.024)	0.052 (0.024)	0.046 (0.024)
Age 62 - 70	-0.084 (0.046)	-0.114 (0.052)	-0.161 (0.052)	-0.163 (0.052)
Age 71 +	-0.205 (0.061)	-0.224 (0.069)	-0.264 (0.069)	-0.252 (0.068)
High School	-0.095 (0.017)	-0.214 (0.023)	-0.209 (0.023)	-0.207 (0.023)
Some college	0.008 (0.016)	-0.031 (0.021)	-0.090 (0.021)	-0.077 (0.021)
College degree	-0.091 (0.016)	-0.194 (0.021)	-0.288 (0.021)	-0.263 (0.021)
Black	0.127 (0.019)	0.288 (0.028)	0.240 (0.028)	0.242 (0.030)
Latin American	0.064 (0.024)	0.165 (0.036)	0.158 (0.037)	0.135 (0.038)
Other race	-0.018 (0.028)	-0.006 (0.039)	-0.012 (0.040)	-0.037 (0.041)
Unemployed	0.075 (0.020)	0.101 (0.028)	0.085 (0.027)	0.042 (0.028)
Married w/ children (non-elderly)	0.031 (0.018)	0.023 (0.024)	0.028 (0.024)	-0.066 (0.024)
Married no children (non-elderly)	-0.020 (0.020)	-0.109 (0.027)	-0.141 (0.027)	-0.182 (0.027)
Fem. head, children (non-elderly)	0.067 (0.024)	0.130 (0.036)	0.128 (0.036)	0.088 (0.038)
Elderly married	-0.036 (0.061)	-0.124 (0.065)	-0.110 (0.064)	-0.139 (0.063)
Elderly fem. head	0.062 (0.058)	0.051 (0.066)	0.037 (0.066)	0.053 (0.066)
Elderly male head	0.128 (0.065)	0.011 (0.080)	-0.061 (0.082)	-0.038 (0.080)
Homeowner	-0.416 (0.016)	-0.238 (0.020)	-0.213 (0.020)	-0.206 (0.020)
N	4413	4413	4413	4413
Log likelihood	-1372.0	-2216.2	-2291.9	-2370.2
Chi Square	1506.3	1168.3	1107.0	1078.7

Source: Authors' calculations using PSID, 1984, 1989, 1994 and 1999 surveys. The dependent variable is one if the household is classified as asset poor and zero otherwise.

**Table 15A : Probit  $\beta$ -Estimates and Standard Errors (in parentheses),  
Dependent Variable: Net Worth (NW) Poverty Status**

	Probit estimates				Trends			
	1984	1989	1994	1999	84-89	89-94	94-99	84-99
Intercept	-0.065 (0.091)	0.166 (0.087)	0.235 (0.089)	0.273 (0.101)				
Age < 25	1.184 (0.100)	1.014 (0.101)	0.887 (0.115)	1.031 (0.159)	d	d	U	d
Age 25- 34	0.739 (0.088)	0.675 (0.082)	0.534 (0.081)	0.701 (0.090)	d	d	U	d
Age 35 - 49	0.232 (0.093)	0.348 (0.082)	0.259 (0.079)	0.294 (0.082)	U	d	U	U
Age 62 - 70	-0.15 (0.161)	-0.03 (0.142)	-0.02 (0.158)	-0.36 (0.198)	U	U	d	d
Age 71 +	-0.516 (0.217)	-0.148 (0.195)	0.057 (0.212)	-0.883 (0.266)	U	U	d ***	d
High School	-0.491 (0.063)	-0.420 (0.058)	-0.267 (0.060)	-0.410 (0.073)	U	U *	d	U
Some college	-0.122 (0.067)	-0.221 (0.060)	-0.295 (0.059)	0.033 (0.067)	d	d	U ***	U
College degree	-0.135 (0.081)	-0.250 (0.070)	-0.417 (0.061)	-0.393 (0.071)	d	d *	U	d **
Black	0.616 (0.066)	0.343 (0.059)	0.294 (0.062)	0.549 (0.080)	d ***	d	U **	d
Latin American	0.503 (0.126)	0.123 (0.098)	-0.018 (0.140)	0.277 (0.103)	d **	d	U *	d
Other race	-1.057 (0.345)	0.119 (0.224)	0.292 (0.169)	-0.076 (0.123)	U ***	U	d *	U ***
Not working	0.465 (0.069)	0.258 (0.066)	0.271 (0.066)	0.323 (0.087)	d **	U	U	d
Married w/ children (non-elderly)	0.314 (0.067)	0.111 (0.061)	0.215 (0.060)	0.134 (0.076)	d **	U	d	d *
Married no children (non-elderly)	-0.156 (0.081)	-0.179 (0.074)	-0.108 (0.068)	-0.087 (0.087)	d	U	U	U
Fem. head, children (non-elderly)	0.485 (0.085)	0.476 (0.077)	0.401 (0.088)	0.288 (0.102)	d	d	d	d
Elderly married	-0.115 (0.206)	-0.567 (0.191)	-0.626 (0.207)	-0.156 (0.263)	d	d	U	d
Elderly fem. head	-0.103 (0.201)	-0.408 (0.178)	-0.349 (0.200)	0.266 (0.250)	d	U	U *	U
Elderly male head	-0.180 (0.257)	-0.388 (0.227)	-0.391 (0.247)	0.551 (0.281)	d	d	U **	U *
Homeowner	-2.182 (0.060)	-1.863 (0.051)	-1.810 (0.049)	-1.797 (0.060)	U ***	U	U	U ***
Adjustment factor	0.1918	0.2333	0.2468	0.2316				
N	6910	7112	6499	4413				
Log likelihood	-1881.6	-2209.4	-2159.2	-1372.0				
Chi Square	2063.3	2363.9	2215.2	1506.3				

Notes: 1) \*\*\*: significant at 1 percent level, \*\*: significant at 5 percent level, \*: significant at 10 percent level.

1) “d” denotes a downward movement of the slope from one survey year to the next. “U” denotes an upward movement.



**Table 15B: Probit  $\beta$ -Estimates and Standard Errors (in parentheses),  
Dependent Variable: Net Worth minus Home Equity (NW-HE) Poverty Status**

	Probit estimates				Trends			
	1984	1989	1994	1999	84-89	89-94	94-99	84-99
Intercept	0.0397 (0.067)	0.2076 (0.068)	0.3374 (0.072)	0.4069 (0.084)				
Age < 25	1.1972 (0.082)	1.0284 (0.088)	0.9736 (0.104)	1.0849 (0.153)	d	d	U	d
Age 25- 34	0.7786 (0.061)	0.6487 (0.062)	0.5927 (0.064)	0.7667 (0.075)	d	d	U *	d
Age 35 - 49	0.2542 (0.061)	0.3065 (0.059)	0.3196 (0.059)	0.2769 (0.063)	U	U	d	U
Age 62 - 70	-0.2818 (0.105)	-0.1756 (0.101)	-0.0648 (0.113)	-0.3006 (0.136)	U	U	d	d
Age 71 +	-0.2899 (0.144)	-0.2565 (0.135)	-0.0295 (0.148)	-0.5895 (0.183)	U	U	d **	d
High School	-0.566 (0.0465)	-0.5085 (0.0459)	-0.4235 (0.0493)	-0.5624 (0.0595)	U	U	d *	U
Some college	-0.1901 (0.0504)	-0.2214 (0.0473)	-0.35 (0.0476)	-0.0805 (0.0546)	d	d *	U ***	U
College degree	-0.2815 (0.0596)	-0.3163 (0.0536)	-0.6175 (0.0481)	-0.5089 (0.0549)	d	d ***	U	d ***
Black	0.7934 (0.0565)	0.6286 (0.0519)	0.574 (0.0549)	0.7566 (0.0731)	d **	d	U **	d
Latin American	0.4814 (0.1038)	0.2125 (0.0829)	-0.0262 (0.1194)	0.4333 (0.0944)	d **	d	U ***	d
Other race	-0.6095 (0.2531)	0.0601 (0.1865)	0.2309 (0.1520)	-0.0153 (0.1030)	U **	U	d	U **
Not working	0.4183 (0.0545)	0.249 (0.0549)	0.251 (0.0548)	0.2651 (0.0723)	d **	U	U	d *
Married w/ children (non-elderly)	0.2384 (0.0505)	0.1098 (0.0491)	0.0929 (0.0503)	0.0602 (0.0623)	d *	d	d	d **
Married no children (non-elderly)	-0.3151 (0.0580)	-0.2962 (0.0557)	-0.1964 (0.0541)	-0.2867 (0.0697)	U	U	d	U
Fem. head, children (non-elderly)	0.5458 (0.0785)	0.5815 (0.0705)	0.45 (0.0832)	0.3413 (0.0945)	U	d	d	d *
Elderly married	-0.4482 (0.1359)	-0.4558 (0.1265)	-0.5408 (0.1370)	-0.3247 (0.1700)	d	d	U	U
Elderly fem. head	-0.2477 (0.1373)	-0.1905 (0.1279)	-0.163 (0.1435)	0.133 (0.1740)	U	U	U	U *
Elderly male head	-0.5483 (0.1840)	-0.5075 (0.1708)	-0.2936 (0.1819)	0.0301 (0.2107)	U	U	U	U **
Homeowner	-0.4958 (0.0408)	-0.5298 (0.0398)	-0.6589 (0.0409)	-0.6265 (0.0514)	d	d **	U	d **
Adjustment factor	0.3871	0.3863	0.3835	0.3805				
N	6910	7112	6499	4413				
Log likelihood	-3479.1	-3710.3	-3472.5	-2216.2				
Chi Square	1772.47	1712.67	1465.1	1168.3				

Notes: 1) \*\*\*: significant at 1 percent level, \*\*: significant at 5 percent level, \*: significant at 10 percent level.

2) “d” denotes a downward movement of the slope from one survey year to the next. “U” denotes an upward movement.

**Table 15C : Probit  $\beta$ -Estimates and Standard Errors (in parentheses), Dependent Variable: Liquid Wealth (Liq) Poverty Status**

	Probit estimates				Trends			
	1984	1989	1994	1999	84-89	89-94	94-99	84-99
Intercept	0.126 (0.067)	0.2585 (0.069)	0.4166 (0.073)	0.6852 (0.084)				
Age < 25	1.0151 (0.081)	0.9625 (0.088)	0.8578 (0.103)	0.7457 (0.147)	d	d	d	d
Age 25- 34	0.6709 (0.062)	0.5702 (0.064)	0.383 (0.065)	0.3669 (0.074)	d	d **	d	d ***
Age 35 - 49	0.3004 (0.061)	0.3681 (0.061)	0.1327 (0.060)	0.1349 (0.062)	U	d ***	U	d *
Age 62 - 70	-0.1683 (0.103)	-0.1441 (0.105)	-0.0899 (0.113)	-0.4177 (0.135)	U	U	d *	d
Age 71 +	-0.148 (0.142)	-0.2538 (0.138)	-0.0134 (0.148)	-0.6848 (0.178)	d	U	d ***	d **
High School	-0.668 (0.047)	-0.598 (0.046)	-0.455 (0.049)	-0.541 (0.058)	U	U **	d	U *
Some college	-0.246 (0.050)	-0.308 (0.048)	-0.441 (0.048)	-0.234 (0.054)	d	d **	U ***	U
College degree	-0.442 (0.061)	-0.505 (0.057)	-0.819 (0.050)	-0.747 (0.055)	d	d ***	U	d ***
Black	0.819 (0.057)	0.663 (0.052)	0.619 (0.055)	0.623 (0.072)	d **	d	U	d **
Latin American	0.400 (0.102)	0.243 (0.084)	-0.044 (0.122)	0.410 (0.095)	d	d *	U ***	U
Other race	-0.421 (0.243)	0.065 (0.194)	0.156 (0.157)	-0.031 (0.102)	U	U	d	U
Not working	0.431 (0.055)	0.227 (0.056)	0.267 (0.055)	0.220 (0.071)	d ***	U	d	d **
Married w/ children (non-elderly)	0.351 (0.051)	0.119 (0.050)	0.170 (0.051)	0.073 (0.062)	d ***	U	d	d ***
Married no children (non-elderly)	-0.322 (0.059)	-0.400 (0.058)	-0.250 (0.056)	-0.365 (0.069)	d	U *	d	d
Fem. head, children (non-elderly)	0.655 (0.079)	0.545 (0.070)	0.483 (0.083)	0.333 (0.093)	d	d	d	d ***
Elderly married	-0.577 (0.134)	-0.356 (0.128)	-0.448 (0.136)	-0.286 (0.165)	U	d	U	U
Elderly fem. head	-0.362 (0.135)	-0.169 (0.130)	-0.189 (0.143)	0.096 (0.171)	U	d	U	U **
Elderly male head	-0.717 (0.182)	-0.387 (0.171)	-0.360 (0.182)	-0.158 (0.212)	U	U	U	U **
Homeowner	-0.468 (0.041)	-0.524 (0.040)	-0.630 (0.042)	-0.551 (0.051)	d	d *	U	d
Adjustment factor	0.3873	0.3751	0.3720	0.3859				
N	6910	7112	6499	4413				
Log likelihood	-3455.1	-3556.8	-3352.4	-2291.9				
Chi Square	1772.4	1778.4	1505.2	1107.0				

Notes: 1) \*\*\*: significant at 1 percent level, \*\*: significant at 5 percent level, \*: significant at 10 percent level.  
2) “d” denotes a downward movement of the slope from one survey year to the next. “U” denotes an upward movement.

**Table 15D: Probit  $\beta$ -Estimates and Standard Errors (in parentheses) Dependent Variable: Liquid Wealth <\$5,000 (Liq5) Poverty Status**

	Probit estimates				Trends			
	1984	1989	1994	1999	84-89	89-94	94-99	84-99
Intercept	0.6042 (0.067)	0.5486 (0.068)	0.6273 (0.073)	0.889 (0.084)				
Age < 25	1.0936 (0.086)	1.3087 (0.098)	1.035 (0.108)	0.8522 (0.159)	U *	d *	d	d
Age 25- 34	0.8092 (0.061)	0.7421 (0.062)	0.5371 (0.064)	0.4766 (0.073)	d	d **	d	d ***
Age 35 - 49	0.345 (0.059)	0.464 (0.059)	0.2066 (0.058)	0.1161 (0.061)	U	d ***	d	d ***
Age 62 - 70	-0.1508 (0.098)	-0.1616 (0.101)	-0.1203 (0.111)	-0.4099 (0.130)	d	U	d *	d
Age 71 +	-0.2491 (0.134)	-0.3848 (0.132)	-0.0261 (0.145)	-0.6349 (0.172)	d	U *	d ***	d *
High School	-0.586 (0.047)	-0.557 (0.046)	-0.456 (0.050)	-0.522 (0.059)	U	U	d	U
Some college	-0.194 (0.050)	-0.257 (0.047)	-0.389 (0.047)	-0.194 (0.053)	d	d **	U ***	d
College degree	-0.483 (0.057)	-0.496 (0.053)	-0.769 (0.049)	-0.663 (0.053)	d	d ***	U	d **
Black	0.735 (0.063)	0.651 (0.055)	0.574 (0.056)	0.610 (0.074)	d	d	U	d
Latin American	0.539 (0.114)	0.205 (0.085)	0.090 (0.119)	0.340 (0.096)	d **	d	U	d
Other race	0.080 (0.231)	0.054 (0.193)	0.435 (0.161)	-0.093 (0.102)	d	U	d ***	d
Not working	0.337 (0.056)	0.166 (0.056)	0.216 (0.055)	0.107 (0.069)	d **	U	d	d ***
Married w/ children (non-elderly)	0.012 (0.051)	-0.182 (0.050)	-0.077 (0.051)	-0.167 (0.061)	d ***	U	d	d **
Married no children (non-elderly)	-0.499 (0.056)	-0.510 (0.056)	-0.312 (0.054)	-0.460 (0.068)	d	U **	d *	U
Fem. head, children (non-elderly)	0.472 (0.090)	0.336 (0.074)	0.320 (0.085)	0.223 (0.096)	d	d	d	d *
Elderly married	-0.704 (0.126)	-0.408 (0.123)	-0.530 (0.134)	-0.349 (0.159)	U *	d	U	U *
Elderly fem. head	-0.346 (0.128)	0.037 (0.125)	-0.142 (0.141)	0.134 (0.165)	U **	d	U	U **
Elderly male head	-0.571 (0.169)	-0.205 (0.160)	-0.298 (0.178)	-0.095 (0.201)	U	d	U	U *
Homeowner	-0.480 (0.041)	-0.491 (0.040)	-0.649 (0.041)	-0.520 (0.051)	d	d ***	U **	d
Adjustment factor	0.3942	0.3987	0.3912	0.3971				
N	6910	7112	6499	4413				
Log likelihood	-3543.7	-3682.7	-3441.3	-2370.2				
Chi Square	1763.12	1838.28	1575.4	1078.7				

Notes: 1) \*\*\*: significant at 1 percent level, \*\*: significant at 5 percent level, \*: significant at 10 percent level.  
2) “d” denotes a downward movement of the slope from one survey year to the next. “U” denotes an upward movement.

**Table 16: Estimates of the Probabilities of Being NW-Poor in 1984 and 1999 for Selected Groups**

	1984	1999	% point change	% change
(1) <i>White, elderly married, age 71+ high school graduate, not working, renter</i>	23.49	19.68	-3.81	-16.2%
(2) <i>White, elderly female head, age 71+ high school graduate, not working, renter</i>	23.88	33.31	9.43	39.5%
(3) <i>White, elderly female head, age 71+ high school graduate, not working, homeowner</i>	0.19	1.29	1.10	578.9%
(4) <i>White, married with children, age 35-49 some college, working, homeowner</i>	3.54	14.32	10.78	304.5%
(5) <i>Black, married with children, age 35-49 some college, working, homeowner</i>	11.71	30.24	18.53	158.2%

Source: Authors' computations.

**Table 17A: The Effect of Adding an Annuity Flow from Net Worth to Household Income on the Overall Poverty Rate in 1984.**

Interest rate :	Income+NW Poverty			% of Income Poverty		
	3%	5%	7%	3%	5%	7%
(1) Income + gross annuity from net worth	10.51	9.92	9.52	0.89	0.84	0.81
(2) Income + net annuity from net worth	10.48	10.01	9.54	0.89	0.85	0.81
(3) Income + gross imputed rent	10.59	10.16	9.85	0.90	0.86	0.83
(4) Income + net imputed rent	10.62	10.28	9.97	0.90	0.87	0.84
(5) Income + gross annuity + gross rent	9.80	9.20	9.09	0.83	0.78	0.77
(6) Income + net annuity + net rent	9.81	9.32	9.17	0.83	0.79	0.78
<b>Income poverty rate</b>	<b>11.81</b>					

Source: Authors' calculations using the PSID data, 1984 and 1985 surveys. Sample size is 6,446, which includes the households whose heads remained the same in years 1984 and 1985.

Notes: The official poverty rate for 1984 is 14.4 percent. The "Income Poverty Rate" in the table is computed using the PSID data and the experimental poverty thresholds. The gap between the two is due to the use of different thresholds and different data. The poverty rate with the PSID data and the official thresholds is 13.7 percent. The PSID finds more income than the CPS, so the reported poverty rate is lower in PSID data, as reported also by Bane and Ellwood (1986, page 6), even after adjusting for the thresholds.

**Table 17B: Income Plus Net Worth Measure of Asset Poverty in 1984 (r = 3 percent).**

	(1)	(2)	(3)	(4)	(5)	(6)	Income poverty	Income poverty (official)
<b>Race/Ethnicity</b>								
White	0.83	0.83	0.86	0.86	0.76	0.76	8.20	9.55
Black	0.92	0.92	0.92	0.92	0.87	0.88	37.41	41.36
Latin American	1.00	1.00	0.94	0.94	0.83	0.83	14.51	16.81
Others	1.00	1.00	1.00	1.00	0.89	0.89	2.63	3.80
<b>Age group</b>								
<25	1.00	1.00	1.00	1.00	0.96	0.96	24.11	25.03
25-34	0.98	0.98	0.98	0.98	0.96	0.96	13.28	13.93
35-49	0.95	0.95	0.97	0.97	0.91	0.91	7.57	9.12
50-61	0.89	0.86	0.87	0.90	0.76	0.76	6.43	7.69
62-69	0.71	0.71	0.76	0.76	0.66	0.66	8.44	12.52
70+	0.72	0.72	0.77	0.77	0.63	0.64	20.05	22.33
<b>Education</b>								
<High	0.87	0.86	0.89	0.90	0.81	0.81	25.07	28.30
High School	0.90	0.90	0.90	0.90	0.84	0.84	8.87	10.31
Some college	0.84	0.84	0.86	0.86	0.73	0.73	3.87	4.86
College Grad.	0.48	0.48	0.47	0.47	0.38	0.38	1.14	1.14
<b>Housing Tenure</b>								
Homeowner	0.68	0.68	0.70	0.71	0.53	0.53	6.34	8.03
Renter	0.98	0.98	1.00	1.00	0.98	0.98	25.35	26.99
<b>Family Type</b>								
<65 yrs, Married, Chil	0.95	0.95	0.91	0.93	0.85	0.85	5.38	6.63
<65 yrs, Married, No Chil	0.78	0.73	0.90	0.90	0.69	0.69	2.88	4.57
<65 yrs, Female Head, Chil	0.99	0.99	0.99	0.99	0.98	0.97	43.44	45.18
65+ yrs, Married	0.71	0.71	0.79	0.79	0.58	0.58	8.25	8.30
65+ yrs, Female Head	0.70	0.70	0.74	0.74	0.62	0.63	27.00	30.64
65+ yrs, Male Head	0.97	0.97	1.00	1.00	0.97	0.97	12.20	18.19

Source: Authors' calculations using the PSID data, 1984 and 1985 surveys. Sample size is 6,445.

Notes:

1. Income + Net Worth poverty rates are shown as a fraction of income poverty rates.
2. "Income poverty" is the percentage of households in the PSID whose total income is below the experimental poverty thresholds. "Income poverty (official)" is also from the PSID, but is based on the official poverty thresholds.
3. (1): Income + gross annuity from Net Worth  
 (2): Income + net annuity from Net Worth  
 (3): Income + gross imputed rent  
 (4): Income + net imputed rent  
 (5): Income + gross annuity + gross imputed rent  
 (6): Income + net annuity + net imputed rent

**Table 18: Probability of being asset-poor in the second survey year, given that the household was asset-poor in the first survey year (in percentages).**

	1984 to 1989				1989 to 1994				1994 to 1999			
	NW	NW-HE	LIQ	LIQ 5	NW	NW-HE	LIQ	LIQ 5	NW	NW-HE	LIQ	LIQ 5
<b>Total</b>	61.95	68.68	67.65	68.77	62.57	68.58	69.73	71.78	59.75	72.09	71.42	74.13
<b>Race/Ethnicity</b>												
White	54.94	63.37	61.90	64.04	59.62	64.87	65.78	68.48	52.04	67.15	66.51	69.33
Black	77.48	84.46	83.70	86.87	74.55	80.66	82.14	83.47	76.68	87.59	85.44	88.50
Latin American	62.51	66.26	68.19	67.62	44.07	65.45	67.70	70.18	90.73	76.65	88.25	87.16
Others	100.00	87.80	85.49	68.90	69.99	74.71	45.03	78.50	72.27	72.96	63.75	81.58
<b>Age group</b>												
<25	61.84	70.81	70.99	77.83	64.53	78.89	72.85	83.20	70.64	79.41	74.85	77.33
25-34	60.94	66.64	66.05	65.64	57.39	65.64	64.38	66.25	56.55	73.00	74.69	74.98
35-49	56.95	67.13	63.73	65.03	62.13	63.85	66.80	67.11	61.72	73.35	72.78	75.38
50-61	65.96	69.65	69.39	64.57	62.33	68.21	72.17	70.86	48.63	64.59	63.94	70.35
62-69	75.44	68.79	68.93	77.44	87.62	82.72	87.39	89.34	62.08	62.13	60.70	70.77
70+	71.08	79.01	78.59	81.38	82.18	77.52	80.05	84.71	61.58	71.32	68.50	69.81
<b>Education</b>												
<High	73.38	79.37	79.22	82.87	74.91	82.83	83.90	86.10	74.98	84.85	83.13	86.20
High School	67.02	72.16	69.41	69.74	64.00	68.42	69.34	72.95	55.41	69.62	70.26	72.62
Some college	50.48	57.02	53.49	58.83	47.82	57.62	53.38	62.23	58.35	68.47	66.72	70.45
College Grad.	31.69	41.80	34.20	39.77	51.44	50.68	47.47	47.64	47.45	61.97	54.33	60.17
<b>Housing Tenure</b>												
Homeowner	26.26	60.76	60.57	59.92	30.67	58.53	64.51	63.63	24.04	63.38	62.73	64.18
Renter	63.70	73.62	72.44	75.56	65.42	74.92	72.84	77.63	65.87	78.70	77.93	81.59
<b>Family Type</b>												
<65 yrs, Mar, Chil	53.05	65.06	64.46	64.87	54.12	63.57	69.02	66.77	53.64	72.63	73.04	72.51
<65 yrs, Mar, No Chil	43.09	54.41	48.87	55.79	46.26	56.78	57.87	57.75	42.78	61.84	60.17	62.94
<65 yrs, Fem.Head, Chil	84.78	90.69	86.44	87.65	82.22	86.85	87.21	88.17	80.48	86.82	84.88	85.77
65+ yrs, Married	64.33	73.13	72.42	72.98	98.51	82.36	85.44	87.93	47.23	55.74	55.58	57.35
65+ yrs, Female Head	77.52	80.41	80.51	84.35	84.95	75.49	77.55	84.92	64.32	76.10	75.67	78.97
65+ yrs, Male Head	73.42	91.37	93.51	75.08	93.25	100.00	100.00	83.95	70.65	67.92	54.17	73.92

Source: Authors' calculations using the PSID; 1984, 1989, 1994 and 1999 surveys.

Note: Longitudinal samples are used, see the Appendix. Grouping is based on the characteristics of the household head as of the first survey year. Sample is weighted by weights in the first survey year.

**Table 19: Probability of Being Income-Poor in the Second Survey Year, Given That The Household is Income-Poor in the First Survey Year.**

	<b>1984-89</b>
<b>Total</b>	41.59
<b>Race/Ethnicity</b>	
White	32.62
Black	57.36
Latin American	34.63
Others	0.00
<b>Age group</b>	
<25	34.89
25-34	37.03
35-49	38.86
50-61	42.71
62-69	44.53
70+	53.56
<b>Education</b>	
<High	54.21
High School	27.67
Some college	16.33
College Grad.	7.92
<b>HousingTenure</b>	
Homeowner	35.94
Renter	44.27
<b>Family Type</b>	
<65 yrs, Mar, Chil	29.19
<65 yrs, Mar, No Chil	25.19
<65 yrs, Fem.Head, Chil	60.53
65+ yrs, Married	30.40
65+ yrs, Female Head	57.59
65+ yrs, Male Head	37.92

**Table 20A: Changes in Net Worth, Assets and Debt from 1984 to 1989 (Mean Values in Thousand of 1999 dollars).**

	1984 NW		Stay in		Out of		Stay out		Into		1989 NW	
	Non-poor	Poor	ΔAsset	ΔDebt	ΔAsset	ΔDebt	ΔAsset	ΔDebt	ΔAsset	ΔDebt	Non-poor	Poor
<b>Total</b>	146.5	-4.7	3.0	3.8	68.9	21.0	52.8	7.5	-33.2	-0.7	182.9	-4.6
<b>Race</b>												
White	155.1	-5.8	5.3	7.8	75.2	22.6	55.0	7.8	-34.5	-0.7	194.6	-6.3
Black	58.7	-0.9	1.1	1.5	43.8	14.7	20.7	3.3	-25.6	-1.3	69.4	-1.2
Latin American	85.0	-13.2	-10.7	-27.5	56.4	17.9	46.3	4.3	-43.2	-0.1	108.1	-2.8
Others	162.4	-3.8	-0.4	-1.3			126.2	23.0	-20.1	2.8	282.5	-1.6
<b>Age group</b>												
<25	24.5	-2.2	1.4	2.1	69.7	31.7	102.5	31.6	-22.0	-0.6	63.6	-2.9
25-34	57.0	-4.8	5.6	9.7	84.3	32.6	77.4	20.2	-31.6	-4.2	102.3	-7.6
35-49	138.5	-11.5	1.3	-5.3	57.4	-6.6	57.8	10.3	-36.2	1.0	182.0	-3.6
50-61	218.5	-1.6	1.4	1.3	34.7	8.0	61.8	1.0	-45.7	6.0	274.1	-2.7
62-69	203.1	-0.7	0.2	0.7	29.3	5.1	27.9	-2.9	-27.7	-0.4	235.0	-0.6
70+	158.0	0.2	0.1	0.1	41.6	2.4	6.8	-0.2	-32.9	-0.9	170.3	-0.1
<b>Education</b>												
<High	103.9	-0.6	2.4	3.1	50.1	10.6	18.2	1.0	-32.6	-2.6	119.6	-1.5
High School	125.9	-2.8	2.9	3.8	61.6	24.1	33.4	3.9	-33.9	-6.3	150.7	-3.1
Some college	167.2	-6.7	6.4	12.7	71.9	28.8	63.1	11.3	-40.7	1.2	201.5	-13.4
College Grad.	213.6	-19.0	-0.2	-12.8	96.8	19.9	113.1	17.5	-17.8	22.0	287.4	-9.2
<b>Housing Tenure</b>												
Homeowner	175.0	-37.5	-16.8	-53.8	41.3	-45.8	54.5	4.6	-18.8	25.9	225.1	-8.2
Renter	58.6	-3.1	3.4	5.0	71.7	27.7	45.8	19.0	-36.9	-7.6	75.5	-4.3
<b>Family Type</b>												
<65 yrs, Mar, Chil	129.1	-10.3	2.8	5.2	72.2	15.5	59.0	8.9	-44.1	-9.5	171.7	-8.9
<65 yrs, Mar, No Chil	206.4	-10.2	-2.0	-16.3	92.1	41.9	76.4	6.9	-35.9	15.0	268.8	-5.8
<65 yrs, Fem.Head, Chil	46.6	-1.1	2.6	3.0	52.5	22.1	2.7	0.9	-29.7	-2.9	47.7	-1.3
65+ yrs, Married	254.2	-0.2	1.1	0.7	23.1	-0.2	19.9	-1.1	-14.4	-2.7	276.4	-0.6
65+ yrs, Female Head	124.2	0.3	0.0	0.1	41.6	3.7	6.1	-1.2	-41.9	-0.2	134.4	0.1
65+ yrs, Male Head	132.9	0.1	0.0	0.0	34.4	-4.4	20.3	-0.1	-22.2	-0.5	163.6	0.2

Source: Authors' calculations using PSID, surveys from years 1984-89.

Note: Longitudinal trimmed sample is used. The sample is restricted to households for which the head remains the same.

<sup>(1)</sup> No household in the "Others" group moved out of poverty between 1984 and 1989.



**Table 20B: Changes in Net Worth, Assets and Debt from 1989 to 1994 (Mean Values in Thousands of 1999 dollars).**

	NW 1989		Stay in		Out of		Stay out		Into		NW 1994	
	Non-poor	Poor	ΔAsset	ΔDebt	ΔAsset	ΔDebt	ΔAsset	ΔDebt	ΔAsset	ΔDebt	Non-poor	Poor
<b>Total</b>	169.8	-4.0	3.4	5.4	73.8	15.4	31.3	3.0	-50.0	1.9	191.9	-6.0
<b>Race</b>												
White	179.9	-4.8	3.9	6.5	75.2	14.5	32.2	3.1	-54.3	0.5	204.0	-7.0
Black	61.0	-1.6	1.6	2.4	64.3	9.1	23.1	0.3	-25.0	6.5	83.1	-3.2
Latin American	159.6	-5.3	9.3	11.0	86.4	36.7	-0.9	3.3	-99.9	-26.2	129.7	-4.7
Others	203.2	-2.8	1.2	3.8	24.3	-1.3	143.7	16.9	40.7	186.3	292.0	-19.7
<b>Age group</b>												
<25	39.9	-2.9	5.7	8.7	67.0	16.4	76.0	29.6	-15.0	15.0	67.6	-6.0
25-34	63.4	-4.9	4.8	5.5	76.1	27.5	63.7	14.6	-26.8	9.5	98.1	-7.5
35-49	170.0	-5.1	3.6	8.5	73.5	-2.1	40.3	1.7	-56.0	-1.9	206.8	-8.4
50-61	228.0	-2.4	-0.6	0.4	63.9	-3.9	29.2	-1.1	-68.4	-10.2	254.5	-3.5
62-69	208.3	-0.8	-1.0	-0.8	16.6	-6.0	17.9	-2.4	-44.9	1.6	239.5	-2.0
70+	202.9	-0.6	-0.9	-2.0	146.9	27.4	-20.0	-0.4	-74.5	0.7	197.2	0.0
<b>Education</b>												
<High	122.0	-2.4	0.2	-0.1	62.5	4.1	8.1	1.1	-38.2	2.3	130.4	-2.2
High School	150.6	-1.7	2.5	4.3	69.4	14.3	14.8	0.6	-46.4	7.1	161.2	-4.7
Some college	154.2	-5.6	6.0	10.3	60.5	10.2	30.0	2.5	-57.3	-5.7	170.1	-7.7
College Grad.	247.0	-11.3	14.4	21.6	119.0	40.9	70.0	7.6	-75.8	0.8	298.3	-19.8
<b>Housing Tenure</b>												
Homeowner	201.1	-12.0	-0.1	2.9	47.3	-34.2	26.0	-2.0	-29.0	30.4	228.7	-17.2
Renter	76.9	-3.3	3.6	5.5	78.6	24.2	52.9	23.0	-54.9	-4.7	94.5	-5.0
<b>Family Type</b>												
<65 yrs, Mar, Chil	162.4	-4.4	12.8	17.0	54.9	10.1	36.5	3.2	-66.9	-4.3	187.6	-10.4
<65 yrs, Mar, No Chil	232.1	-7.1	0.6	6.1	118.3	37.3	47.5	-0.9	-41.2	12.9	274.8	-13.5
<65 yrs, Fem.Head, Chil	86.8	-1.9	0.7	1.5	42.7	-0.9	10.6	-4.7	-21.2	5.1	97.9	-2.3
65+ yrs, Married	256.5	-2.3	-5.2	-7.5	40.9	0.0	0.7	-3.5	-115.1	0.4	269.6	-2.1
65+ yrs, Female Head	140.0	-0.3	-0.1	-0.4	145.9	27.2	-18.8	0.5	-58.0	-0.9	132.6	0.1
65+ yrs, Male Head	195.4	-0.6	1.0	0.0	32.5	1.3	-45.0	5.7	-34.2	11.5	169.1	-2.6

Source: Authors' calculations using PSID, surveys from years 1989-94.

Note: Longitudinal trimmed sample is used. The sample is restricted to households for which the head remains the same.

**Table 20C: Changes in Net Worth, Assets and Debt from 1994 to 1999 (Mean Values in Thousands of 1999 dollars)**

	NW 1994		Stay in		Out of		Stay out		Into		NW 1999	
	Non-poor	Poor	ΔAsset	ΔDebt	ΔAsset	ΔDebt	ΔAsset	ΔDebt	ΔAsset	ΔDebt	Non-poor	Poor
<b>Total</b>	190.9	-7.6	4.8	4.4	76.0	22.0	22.9	4.7	-55.5	8.6	201.5	-7.2
<b>Race</b>												
White	200.2	-9.5	6.3	5.9	81.8	24.8	22.8	3.6	-67.6	6.0	210.0	-10.0
Black	73.2	-2.5	4.2	4.0	44.5	7.6	6.6	11.7	-33.5	12.9	67.7	-2.0
Latin American	189.7	-12.2	2.4	-0.7	82.0	32.7	24.1	9.3	-21.1	29.2	226.8	-6.5
Others	257.4	-7.3	-19.8	-20.2	75.3	4.0	147.5	60.4	-7.4	7.0	386.9	-4.0
<b>Age group</b>												
<25	73.4	-2.6	7.3	11.2	71.8	41.3	47.5	33.4	-50.1	0.8	67.2	-5.7
25-34	78.5	-7.1	6.9	7.4	87.0	40.3	71.4	25.9	-50.0	19.2	104.6	-8.3
35-49	173.2	-11.8	3.5	0.0	75.9	5.2	38.5	4.6	-56.2	7.7	204.3	-8.7
50-61	270.3	-6.6	2.3	2.5	42.4	3.7	-5.9	-5.3	-93.2	-9.3	263.3	-4.1
62-69	289.0	-2.3	-0.4	2.4	20.4	-2.8	-9.1	-6.2	-39.0	8.0	286.6	-3.5
70+	212.7	-0.6	0.0	-0.5	100.9	-7.5	-20.8	0.4	-37.9	3.7	195.4	-0.8
<b>Education</b>												
<High	135.4	-3.6	2.4	3.5	48.4	5.3	-3.1	3.4	-48.2	6.3	129.2	-4.4
High School	141.3	-5.2	7.9	8.9	68.1	18.3	19.3	3.7	-54.0	8.4	148.3	-5.3
Some college	185.9	-10.2	6.4	3.5	96.0	31.7	33.4	9.6	-46.4	11.8	203.0	-9.3
College Grad.	268.5	-16.1	0.4	-3.2	90.4	31.2	30.9	2.9	-84.7	8.0	285.9	-14.9
<b>Housing Tenure</b>												
Homeowner	215.3	-13.2	17.2	10.8	65.1	-0.8	20.7	1.0	-40.4	48.5	231.5	-16.8
Renter	93.6	-6.7	4.1	4.0	80.0	30.4	35.6	25.6	-60.2	-3.7	92.1	-6.0
<b>Family Type</b>												
<65 yrs, Mar, Chil	177.5	-11.6	5.0	3.2	93.4	22.6	43.0	6.3	-61.3	16.8	204.9	-11.0
<65 yrs, Mar, No Chil	234.1	-12.0	27.2	27.2	63.0	4.3	20.6	0.8	-63.2	4.1	247.8	-13.2
<65 yrs, Fem.Head, Chil	74.0	-2.6	2.4	5.9	39.3	19.5	50.0	6.1	-88.1	0.5	86.6	-5.8
65+ yrs, Married	316.8	-2.5	0.2	1.7	124.0	-21.8	-29.1	-5.8	-50.7	-5.1	295.3	-1.1
65+ yrs, Female Head	167.9	-0.8	0.0	-0.4	54.6	-1.4	-6.6	2.2	-35.3	3.5	160.1	-0.7
65+ yrs, Male Head	178.7	-0.7	0.0	-0.1	36.4	-1.8	-31.2	-2.6	-49.1	5.9	159.2	-2.0

Source: Authors' calculations using PSID, surveys from years 1994-99.

Note: Longitudinal trimmed sample is used. The sample is restricted to households for which the head remains the same.

**Table 21A:  $\beta$ -coefficient Estimates of the Probit Regression Explaining the Probability of Moving Out of Poverty for the NW-Poor in the First Survey Year**

<b>POOR</b>			
	<b>1984 - 89</b>	<b>1989 - 94</b>	<b>1994 - 99</b>
$\Delta$ Asset	0.0761	0.0738	0.0348
$\Delta$ Debt	-0.0522	-0.0735	-0.0245
N	1766	1672	1057
Wald chi square	554.86	506.02	271.16
Log likelihood	-574.47	-583.13	-478.44
p-value	<.0001	0.995	<.0001

**Table 21B:  $\beta$ -coefficient Estimates of the Probit Regression Explaining the Probability of Moving Into Poverty for the NW-Non Poor in the First Survey Year.**

<b>NON-POOR</b>			
	<b>1984 - 89</b>	<b>1989 - 94</b>	<b>1994 - 99</b>
$\Delta$ Asset	-0.00318	-0.0021	-0.0014
$\Delta$ Debt	0.00137	0.0026	0.0019
N	3305	3342	2566
Wald chi square	345.59	317.87	362.82
Log likelihood	-556.82	-612.90	-457.26
p-value	0.058	0.613	0.387

Notes:

-Probit regressions are run on “trimmed” samples (see Appendix).

-All regressions include control variables for demographic and labor market groups.

-The “Others” racial group is omitted from the 1984 regression for the asset poor, since no household moved out of poverty between 1984 and 1989 in that particular group.

-The p-value is associated with the hypotheses  $H_0 : \beta_1 = \beta_2$ , where  $\beta_1$  and  $\beta_2$  are the coefficients on  $\Delta Asset$  and  $\Delta Debt$ , respectively, in each regression.

**Table 22: Probit Regressions Explaining the Transition out of Poverty for the Asset-Poor and the Transition into Poverty for the Asset Non-Poor for the Periods 1984-89, 1989-94 and 1994-99.  $\beta$ -Coefficients and Standard Errors are Reported**

	1984 - 1989				1989 - 1994				1994 - 1999			
	Poor		Non-poor		Poor		Non-poor		Poor		Non-poor	
	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.
Ended marriage	-0.382 **	0.192	0.495 ***	0.154	-0.343	0.211	0.266 *	0.161	-0.042	0.205	0.776 ***	0.167
Got married	0.226 **	0.115	-0.140	0.174	0.292 **	0.132	-0.158	0.169	0.692 ***	0.187	0.288	0.188
Lost job	-0.260 **	0.119	0.256 *	0.146	-0.126	0.100	0.358 ***	0.128	-0.475 ***	0.174	0.690 ***	0.174
Found job	0.161	0.134	0.529 **	0.219	-0.286	0.175	0.649 ***	0.249	-0.510 **	0.228	0.768 ***	0.221
Got retired	0.167	0.255	-0.308	0.199	-0.029	0.283	0.117	0.159	-0.064	0.414	-0.259	0.258
Became disabled	-0.548	0.505	-0.125	0.610	-0.606 **	0.311	0.026	0.374	0.551	0.363	0.583	0.443
Lost home	-0.224	0.307	1.154 ***	0.109	0.243	0.267	1.307 ***	0.106	-0.181	0.253	1.346 ***	0.138
Bought home	1.515 ***	0.093	-0.526 ***	0.195	1.462 ***	0.092	-0.404 **	0.168	1.043 ***	0.106	-0.364 *	0.192
Inheritance	0.659 ***	0.215	-0.750 **	0.353	0.799 ***	0.207	-0.446 **	0.213	-0.140	0.422	-1.145 *	0.639
Closed business	-0.006	0.415	0.410 ***	0.145	-0.026	0.357	-0.077	0.158	-0.179	0.318	0.253	0.162
Started business	1.139 ***	0.181	-1.052 ***	0.330	0.820 ***	0.181	-0.735 ***	0.232	0.999 ***	0.257	-0.538 *	0.294
New child	0.049	0.098	0.029	0.128	0.072	0.097	0.231 *	0.121	0.126	0.131	0.182	0.140
Child left home	0.168	0.124	-0.025	0.135	-0.050	0.129	0.038	0.126	-0.002	0.134	-0.051	0.136
N	1802		3371		1706		3410		1077		2618	
Log likelihood	-846.3		-631.7		-828.0		-785.59		-575.17		-523.1	
Chi-square	526.67		323.92		450.82		338.03		234.5		312.42	

Source: Authors' calculations using the PSID, surveys from years 1984 to 1999. Notes: Longitudinal untrimmed samples of poor and non-poor households are used. Samples are restricted to households for which the head remains the same during the analyzed 5-year period.

\*\*\*: significant at 1 percent level, \*\*: significant at 5 percent level, \*: significant at 10 percent level.

## APPENDIX

### Data Source and the Definition of Wealth

The data that we use in this paper come from the Panel Study of Income Dynamics (PSID)<sup>28</sup>. This dataset contains demographic and other information on about 6,000 households and 15,000 individuals interviewed periodically since 1968. Weights are included to make the sample representative of the U.S. population. Every year the survey attempts to trace all individuals from the households surveyed in the previous year, regardless of whether they continue to live together or in the same dwelling. Because the original focus of the study was on poverty dynamics, the initial sample in 1968 consisted of two independent subsamples: an equal probability sample of U.S. households and a supplemental sample of households with incomes at or below 150 percent of the official poverty line. As the sample size grew larger every year due to the inclusion of off-springs of families and the profile of the U.S. population changed due to immigration, sample design was changed in 1997. There was a roughly one third reduction in the number of PSID Core families<sup>29</sup> and an addition of a nationally representative sample of immigrant households who moved to the country after 1968. Weights were adjusted to compensate for these changes.

Information about income and demographics are reported at a yearly frequency, whereas wealth information is reported at five-year intervals starting from 1984. The following components of household wealth are available in the dataset:

- (1) Main Home: The net value of home, which is house value minus the remaining mortgage principal.
- (2) Other Real Estate: The net value of any real estate other than main home, such as a second home, land, rental real estate, or money owed to you on a land contract.
- (3) Farm and Business: The net value of farm or business assets.
- (4) Stocks: Value of shares of stock of publicly held corporations, mutual funds or investment trusts, including stocks in IRAs (IRAs asked separately in 1999).

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<sup>28</sup> For more information on this dataset that has been used extensively, see Brown, Duncan and Stafford (1996).

<sup>29</sup> The term “PSID Core” refers to both the longitudinal panel of US families that was first sampled and interviewed at the initiation of the PSID (1968) and their off-springs who have moved out to establish their own households since then.

(5) Checking and Saving Accounts: Value of checking or saving accounts, money market funds or investment trusts, savings bonds, Treasury bills, including IRAs (IRAs asked separately in 1999).

(6) Other Savings: Any other savings or assets, such as bond funds, cash value in a life insurance policy, a valuable collection for investment purposes, or rights in a trust or estate.

(7) Other Debts: Any other debt besides mortgage; such as credit card debt, student loans, medical or legal bills, loans from relatives.

The four measures of wealth are defined as follows:

“Net worth” (or marketable wealth) is the sum of the items from (1) to (6) minus (7).

“Net worth minus home equity” is the sum of the items from (2) to (6) minus (7).

“Liquid wealth” is the sum of (4), (5) and (6).

Poverty thresholds are adjusted for inflation using the CPI-U series (all urban consumers, city average, all items, yearly average) published by the U.S. Department of Labor, Bureau of Labor Statistics.

### **Notes on Deleted Observations**

Since 1994 and 1999 files are still in “preliminary release” format, they suffer from missing information on some variables, which are essential to our analysis:

- 1) Housing related variables: For a considerable number of cases, either the house value or the remaining mortgage principal is missing. There are 285 cases (out of 10,769) in the 1994 family file and 290 cases (out of 6,997) in the 1999 family file, which are excluded from the analysis for this reason.
- 2) Education of the head: Since this is considered a background variable, it is asked every year only if the head has changed from the previous year. If the head is the same, then the information is “brought forward” from the previous year. 1994 and 1999 files have not gone through this bringing forward process yet. We have carried forward the missing information using the guidelines in the PSID website.

- 3) Weights: Since 1999 family weights are not available yet, we use 1997 weights. We have had to delete a number of observations in 1994 and 1999 merged family, wealth and individual files, due to missing household weight. There are as many as 414 (out of 6913) such observations in 1994 and 603 (out of 5016) in 1999.
- 4) The PSID website reports a few minor errors in the 1994 family file: It contains two virtually identical records for family 16329 and no record for family 16529. Therefore, we excluded these families from the sample.
- 5) Seven observations in 1984 wealth file are deleted due to very large values of "other savings" (\$9 million).

### **Sample Selection**

- 1) Cross-sectional samples (households):

Sample sizes: 1984: 6,910

1989: 7,112

1994: 6,497

1999: 4,413

All samples use PSID family weights for the corresponding year, except for 1994 and 1999 (see note 3 above).

- 2) Cross-sectional samples (individuals): These are exactly the same as the samples for households, except that they have been expanded to include all individuals in all of the households that have already been selected for the household samples.

Sample sizes: 1984: 19,804

1989: 19,856

1994: 17,950

1999: 12,916

- 3) Longitudinal samples (1984-89, 1989-94, 1994-99):

These samples are restricted to households for which the head remains the same, although the wife may change, following the approaches of Hurst, Luoh and Stafford (1998) and Gittleman and Wolff (2001). The motivation for this restriction is that the PSID treats the male as the head

of the household (if one is present). If a male respondent changes his marital status, the wealth of his family is tracked both before and after the change. However, the wealth of a woman facing similar changes is not tracked. This approach is also helpful for handling such cases as a child leaving his parents to establish his own household. Without this restriction, the longitudinal sample could match the new household with the parents' household and it would be misleading to include the wealth difference between two such households to an estimate of the wealth accumulation pattern in the population.

Another problem is the existence of a number of observations that suffer from huge changes in wealth between two survey years. To avoid the undue influence of these outliers, we trim the sample by deleting the lowest and the highest percentiles of the distribution of changes in net worth.

Longitudinal "untrimmed" sample sizes:

1984 to 1989: 5,173

1989 to 1994: 5,115

1994 to 1999: 3,694

### **Definition of Total Household Income**

Total household income includes earnings, unemployment compensation, workers' compensation, social security income, supplemental security income, public assistance, veterans' payments, survivor benefits, disability benefits, pension or retirement income, interest, dividends, rents, royalties, periodic payment from estates and trusts, educational assistance, alimony, child support, financial assistance from outside of the household and all other income households receive regularly that are not included elsewhere.

This definition does not include capital gains or losses from the sale of property, withdrawals of bank deposits, money borrowed, tax refunds, gifts and lump-sum inheritances and insurance payments.

For more information, see the CPS website;

<http://www.census.gov/population/www/cps/cpsdef.html>



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