Working Papers

HOW CAN THE POOR SAVE? THEORY AND EVIDENCE ON SAVING IN LOW-INCOME HOUSEHOLDS

Sondra Beverly

Working Paper No. 97-3
1997

A subsequent version of this paper has been published as:
Beverly, S. G., & Sherraden, M. (1999). Institutional determinants of saving: Implications for low-income households and public policy. *Journal of Socio-Economics, 28*(4), 457-473.

Center for Social Development

George Warren Brown School of Social Work

HOW CAN THE POOR SAVE?

THEORY AND EVIDENCE ON SAVING IN LOW-INCOME HOUSEHOLDS

Sondra Beverly

Center for Social Development
Washington University
Campus Box 1196
One Brookings Drive
St. Louis, MO 63130
tel: (314) 935-7433
fax: (314)935-8661
e-mail: csd@wuacn.wustl.edu

July 1997

This paper was supported by a grant from the Joyce Foundation.

Author's Note:

An earlier version of this paper was presented at the Society for the Advancement of Socio-Economics Ninth International Conference on Socio-Economics, Montreal, July 1997. Michael Sherraden, Director of the Center for Social Development, initiated the project and provided valuable feedback throughout. Stephen Fazzari, Laurence Kotlikoff, and John Robertson provided comments on an early draft. Conversations with Ronald Mincy and Robert Plotnick were also helpful.

ABSTRACT

There is an emerging policy and academic discussion, supported by a growing body of empirical evidence, regarding the potentially positive effects of asset accumulation in low-income households. However, at least two questions precede this discussion: Can the poor save? And, if so, how can programs and policies promote saving by the poor? This paper begins to address these questions through an interdisciplinary review of theory and empirical evidence on saving. The first section summarizes existing theories of saving and asset accumulation. In the second section, a general model of saving is presented. This model emphasizes contextual influences as well as individual characteristics. Subsequent sections consider variables related to ability to save and willingness to save, with an emphasis on poor and near-poor individuals. The final section offers a discussion of research and policy implications, including a list of testable propositions.

TABLE OF CONTENTS

HOW CAN THE POOR SAVE?
THEORY AND EVIDENCE ON SAVING IN LOW-INCOME HOUSEHOLDS

During the past several years, asset accumulation has emerged as a new anti-poverty strategy. The 1996 "welfare reform" law gives states the option to use block grant funds for matched savings accounts for the poor and excludes these savings from asset limits in all means-tested programs. The emphasis on asset-holding has developed largely from an asset-based theory of welfare proposed by Sherraden (1991). In addition to their role in future consumption, Sherraden suggests that assets may improve household well-being in a number of other ways. He posits, for example, that assets may improve household stability, create an orientation toward the future, stimulate development of other assets, increase civic participation, and enhance the well-being of offspring. In fact, empirical research has identified a number of positive "asset effects," and there is reason to believe that these effects are most pronounced in low income households (see Page-Adams and Sherraden, 1996, for a review).[1] This focus on asset accumulation is particularly timely, given the trend in the U.S. toward increased concentration of wealth (Wolff, 1995, Chapter 3).

Despite much enthusiasm for the new state and local asset development programs, some remain skeptical about the likelihood that poor individuals will save. It is commonly assumed, for example, that the poor are not motivated to save (e.g., they lack foresight, precaution, and/or the desire to leave a bequest); that they do not have the discipline to save, even if they desire to accumulate assets; or that deferred consumption is impossible, given their limited incomes. Empirical evidence generally indicates that low-income households have lower-than-average

[1] Although the notion that households are "better off" with assets may seem obvious, social welfare is generally defined as income for consumption, particularly for the poor (Sherraden, 1990). As a result, U.S. social welfare policy for the poor emphasizes almost exclusively the transfer of goods, services, and cash for immediate

saving rates (see, e.g., Bhalla, 1980; Bunting, 1997; Diamond & Hausman, 1984; Mayer, 1966),[2] but since much of the evidence is based on bivariate correlations, we know relatively little about the true predictors of saving in low-income households. Moreover, existing theories of saving largely focus on middle- and upper-classes.

With these issues in mind, this paper takes initial steps toward developing a theory of saving in low-income households. The first section briefly summarizes existing theories of saving and asset accumulation, and the second section develops a general model of saving. The next two sections consider specific variables that may help to explain saving in low-income households, with the third focusing specifically on the ability to save and the fourth on "willingness" to save. The final section provides a detailed discussion of research and policy implications, including testable propositions.

EXISTING THEORIES OF SAVING AND ASSET ACCUMULATION

This section briefly summarizes the key assumptions and propositions of existing theories of saving and asset accumulation. These "theories," which are actually at various stages of theoretical development, may be roughly classified into four categories: 1) neoclassical economic; 2) psychological and sociological; 3) behavioral; and 4) institutional.

Neoclassical Economic Theories

Neoclassical economic theories of saving are characterized by several common assumptions. First, individuals are viewed as rational beings who seek to maximize pleasure and minimize pain, and individual utility is assumed to be a function of consumption. Second, to

---

consumption needs. At the same time, many middle- and upper-income households benefit from a variety of policies that encourage asset accumulation, most notably favorable tax treatment for home ownership and retirement savings.

[2] Although Bernheim and Garrett (1996, Table 6) found that the relationship between earnings and saving rates was weak, several studies suggest that saving rates are positively associated with education (Bernheim & Garrett, 1996;

most mainstream economists, there is little difference between income and assets. Both represent economic resources that may be used to finance consumption. At the same time, neoclassical economists acknowledge that individuals must make choices between present and future consumption. These choices are generally believed to be the product of stable, autonomous individual "preferences" and the individual's opportunity set. An individual's saving behavior is expected to reflect her preferences for present versus deferred consumption and her income and wealth.

The two most well-known neoclassical theories of saving are the life cycle hypothesis (Ando & Modigliani, 1963; Modigliani & Ando, 1957; Modigliani & Brumberg, 1954), and the permanent income hypothesis (Friedman, 1957). Both of these theories assume that individuals and households are concerned about *long-term* consumption opportunities and therefore explain saving and consumption in terms of expected future income. Proponents of these models view saving as a way to smooth out consumption in the face of income fluctuations. Since consumption is determined by anticipated lifetime resources (rather than current resources), saving over short periods of time (e.g., a year) is expected to reflect departures of current income from average life resources. In other words, according to these theories, when current income falls below average expected lifetime income, saving decreases, and individuals and households may even borrow to finance consumption. When current income exceeds average expected life resources, individuals and households save.

As its name suggests, the life cycle hypothesis (LCH) posits that consumption and saving will reflect an individual's age or stage in the life cycle. Since retirement, for most people, is likely to be the most substantial and enduring "income fluctuation," this model emphasizes

---

Bernheim & Scholz, 1993; Hubbard, Skinner & Zeldes, 1995). Since education may be a better indicator of

saving for retirement as a primary motivation for deferred consumption. (More complex LCH models also consider the desire to leave a bequest and the desire to prepare for emergencies as possible saving motives.) Young households are expected to have negative saving since they typically have relatively low earnings and incur debt for education, the purchase of homes, and other expenses. In the middle period of the life cycle, saving is likely to be positive because individuals pay their debts and begin to save for retirement. Upon retirement, dissaving is expected to occur again. Thus, differences in consumption and saving among households are believed to be partly the product of age differences, and the pattern of saving and dissaving creates an inverted U-shaped pattern ("hump saving," according to Harrod, 1948) across age categories and/or over time (Ando & Modigliani, 1963; Modigliani & Ando, 1957; Modigliani & Brumberg, 1954).

Like the life cycle hypothesis, the permanent income hypothesis (PIH) assumes that long-term income is the primary determinant of consumption. The PIH, however, assumes that life is indefinitely long and therefore focuses on permanent and transitory income rather than life resources and current income. In this model, permanent income refers to the present value of lifetime income, and transitory income refers to the difference between measured income and permanent income. Friedman (1957) claims that household consumption will respond to changes in permanent but not transitory income.[3] Observed differences in household saving and consumption are believed to reflect, in part, differences in the relative shares of transitory and permanent income.

---

permanent income, these studies may also support the assumed relationship between income and saving.

[3] In other words, when an individual experiences an increase in income that she perceives as temporary, she is likely to consume relatively little of this money. If she expects the increase to be permanent, she is more likely to raise her consumption standards. In its strongest form, the PIH posits that the marginal propensity to consume (MPC) out of

Psychological and Sociological Theories

Psychological and sociological theories of saving consider additional determinants of household saving. These theories are grounded in the assumption that consumers' tastes and aspirations are not fixed, but instead are affected by economic or social stimuli and conditions. Psychological theories in particular are frequently grounded in a stimulus-organism-response framework whereby change in the environment or information received is viewed as a stimulus which influences the individual (organism) and the response (Katona, 1975, p. 44).[4]

Economic psychologists examine how the effects of external stimuli on economic behavior are conditioned by intervening variables such as motives, aspirations, and expectations (Katona, 1975; Olander & Seipel, 1970; Strumpel, 1972; 1975; Van Raaij, 1989). Katona (1951; 1975) has posited that saving is a function of two sets of factors, ability to save and willingness to save. The emphasis on ability to save acknowledges that some individuals, because of limited economic resources or special consumption needs, find it more difficult to defer consumption than others. At the same time, those individuals who can postpone consumption still must choose to do so, a decision that requires some degree of willpower. In particular, Katona claims that consumer expectations and sentiment determine households' willingness to save.[5] Other psychological and sociological propositions consider the effects of families (Cohen, 1994), peers (Duesenberry, 1949), and past savings experiences (Furnham, 1985; Katona, 1975) on consumption patterns, savings-related beliefs, and aspirations for saving.

---

transitory income is zero. Other forms of the PIH suggest that the MPC out of transitory income will be low but greater than zero.

[4] It is worthwhile to note that, from this perspective, many economic theories may be viewed as stimulus-response theories (rather than stimulus-organism-response theories) because they do not consider any endogenous subjective factors (Olander & Seipel, 1970, p. 44).

[5] Consumer sentiment is believed to be a function of the evaluation and expectations people have of the economic circumstances of the nation and their own households. In other words, if people's perceptions of household finances,

Behavioral Theories

In addition to economic, psychological, and sociological theories, there are a few behavioral theories of saving. Although these theories are partly rooted in economics, they do not assume that saving and consumption preferences are fixed, nor do they assume that individual economic behavior is determined simply by preferences and economic resources. Instead, individuals are expected to respond to--and even create their own--behavioral incentives and constraints.

The primary behavioral theory is the behavioral life-cycle hypothesis (Shefrin & Thaler, 1988) which is grounded in an "economic theory of self-control" (Thaler & Shefrin, 1981). Thaler and Shefrin suggest that an individual can be viewed as an organization which includes both a planner and a doer: "The planner is concerned with lifetime utility, while the doer exists only for one period and is completely selfish, or myopic" (1981, p. 394). In order for the doer to manifest some degree of self-control, his preferences must be modified, his incentives altered, or his set of choices constrained. Quite frequently, according to Thaler and Shefrin, individuals adopt rules which restrict the doer's opportunities to spend. These rules may be externally imposed, although individuals voluntarily place themselves under these restrictions (e.g., a Christmas saving account), or self-imposed (e.g., "rules-of-thumb," such as avoiding borrowing or restrictions on borrowing except for specific purchases). With these rules in mind, household saving is seen as "the result of the successful and sophisticated imposition of welfare-improving, self-imposed constraints on spending" (Maital & Maital, 1994, p. 7).

---

unemployment and inflation levels, interest rates, and so forth are pessimistic, households are more likely to postpone consumption and save for future security (Katona, 1975).

Institutional Theories

Institutional theories of saving are grounded in the notion that individual and household saving is shaped by the institutional processes through which saving occurs. They are part of a larger body of institutional theory emphasizing that societal institutions shape, and give meaning to, individual behavior (see, e.g., Gordon, 1980; Neale, 1987). Sherraden (1991) has proposed a theory of welfare based on assets which emphasizes the role of institutions in asset accumulation.[6] According to Sherraden, "asset accumulations are primarily the result of institutionalized mechanisms involving explicit connections, rules, incentives, and subsidies" (p. 116). He emphasizes the subsidies provided through housing- and retirement-related tax benefits, including deductions for home mortgage interest and property taxes, deferment and exclusion of capital gains on sales of principal residences, exclusions for employment-sponsored pension contributions and earnings, deferments for Individual Retirement Accounts and Keogh Plans, and employer contributions to employee pension plans.[7] Because these mechanisms for asset accumulation are subsidized or receive preferential tax treatment, Sherraden claims that it is rational for individuals who have access to these institutions to accumulate assets:

> ...institutionalized arrangements provide tremendous access and incentives to accumulate assets. People participate in retirement pension systems because it is easy and attractive to do so. This is not a matter of making superior choices. Instead, a priori choices are made by social policy, and individuals walk into the pattern that has been established. (p. 127)

Existing Theories and Saving in Low-Income Households

In their current stages of development, none of the existing theories provides a suitable explanation for saving and asset accumulation in low-income households. The mainstream

[6] Institutions, according to Sherraden, are "formal and informal socioeconomic relationships, rules, and incentives, including the organization of capitalist enterprises and voluntary associations, and all the laws, procedures, and agents of the state that affect organizations and households" (1991. p. 124).

economic theories described above are inadequate for many reasons. Although the PIH and the LCH have been very influential in the field of economics, the simplest versions of the theories do not appear to reflect reality. As explanations of saving in the general population, these theories have been criticized on both theoretical and empirical grounds. Additional weaknesses are apparent when these theories are applied to saving in low-income households.

Most fundamentally, both the LCH and the PIH assume that individuals have (or act as if they have) almost-perfect vision regarding future income flows, prices, household consumption, and life span and that they manifest rationality and self-control as they prepare for retirement. However, as Bernheim and Scholz (1993) suggest,

> ...the life cycle decision is extraordinarily complex, in that it requires an individual to contemplate labor earnings, investment strategies, macroeconomic trends, and a vast assortment of risks, all over a very long time frame. It would be surprising if the average individual, in isolation, with no practice and little or no training, would act as a perfectly rational, farsighted utility maximizer. (p. 87)

Since low-income individuals are likely to have limited financial sophistication, they are particularly unlikely to make optimal long-term decisions regarding saving and consumption.[8]

There are other reasons that individuals may not adhere to their optimal lifetime consumption profiles. The ability to smooth lifetime consumption requires that households have incomes during their later working years that exceed their consumption needs (enabling them to pay off debts and save for retirement) and that they have savings which can act as a cushion--or have access to credit--when current income is low. In reality, imperfect credit markets and uncertainties regarding future income may prevent households from borrowing against future income, so that they are unable to finance optimal consumption (Modigliani, 1986; Smyth,

[7] According to a survey by the U.S. General Accounting Office (1988), 75% of 401(k) plans provided some sort of matching or unconditional employer contribution.

1993). Individuals with irregular earnings or with low lifetime earnings are particularly likely to face binding credit constraints. Moreover, many low-income individuals may never have earnings that substantially exceed their consumption needs.

In addition to these theoretical weaknesses, empirical evidence regarding the LCH and the PIH is ambiguous, at best. The fact that many cross-sectional studies of saving reveal an inverted U-shaped saving pattern across age categories is often cited as evidence for the LCH. The results of several time series tests are also consistent with the LCH and the PIH. In these instances, however, there may be more accurate *alternative* explanations. As Smyth (1993) and Green (1984) point out, observed patterns of "hump-saving" are not necessarily consistent with the precise pattern predicted by the LCH and do not rule out competing hypotheses. In other words, the failure of empirical tests to refute the LCH or the PIH does not prove that these models offer the best explanation of saving.

There are other, more specific, challenges to the LCH and PIH. Empirical studies suggest that household consumption may be more sensitive to changes in transitory or current income than either of these models would predict. Not only are yearly consumption patterns too highly correlated with income, but over the life-cycle, young and old individuals appear to consume less than these models predict while the middle-aged consume more (Thaler, 1990). Furthermore, contrary to LCH and PIH predictions, it appears that predictable changes in income result in both consumption and saving changes rather than changes in saving alone (Wilcox, 1991).[9]

Empirical evidence also challenges the fungibility assumption, the belief that various forms of wealth (both present and future) are very easily substitutable for one another. This

[8] In fact, empirical studies suggest that the majority of Americans lack the financial sophistication and information to make even basic economic calculations (Bernheim, 1994).

assumption implies that changes in one form of saving will be offset by changes in other forms and that the marginal propensity to consume out of all types of wealth should be equal. In a review of several related studies, however, Shefrin and Thaler (1988) note that no researcher has found a complete (or even nearly complete) offset in savings when mandatory pension contributions increased, and some have found *positive* effects of pension saving on other saving. The existence and magnitude of offsetting effects from public policies designed to increase private saving is also the subject of much debate.[10] And, contrary to the fungibility assumption, it appears that the marginal propensity to consume out of pension wealth and home equity are quite low (Thaler, 1990).

Finally, empirical studies indicate that the asset accumulation of low-income households is much less consistent with LCH predictions than that of wealthier households (Bernheim & Scholz, 1993; Diamond & Hausman, 1984; Hubbard, Skinner & Zeldes, 1995). In fact, Bernheim and Scholz (1993) claim that "patterns of asset accumulation among those without college education [and presumably with lower permanent incomes] bear little or no resemblance to the patterns that emerge from standard economic theories" (p. 74). Despite evidence that wealth accumulation among the poor is not simply a scaled-down version of that of the rich, mainstream economists have given very little attention to low-income saving. In particular, they have generally ignored the obstacles to saving faced by low-income households and instead have emphasized the role of individual preferences.[11]

---

[9] The LCH and PIH imply that *predicted* changes in income will result in changes in saving rather than consumption, because individuals will have already adjusted their consumption to these anticipated changes.

[10] See, e.g., Engen, Gale & Scholz, 1994; Feenberg & Skinner, 1989; Gravelle, 1991; Hubbard, 1984; Hubbard & Skinner, 1996; Poterba, Venti & Wise, 1993; 1994; 1995; Venti & Wise, 1986; 1987; 1990; 1991; 1992; Wise, 1987; 1995.

[11] Despite the weaknesses described here, it is important to note that the life cycle model continues to be the starting point for most neoclassical studies of saving. As life cycle models become more sophisticated (i.e., with fewer simplifying assumptions or more realistic assumptions), they may better explain saving and wealth accumulation,

By considering variables in addition to economic factors, and by examining individual and household decision-making processes, psychological and sociological propositions may complement economic theories of saving. Again, however, few of these propositions explicitly attempt to explain the saving or asset accumulation of low-income households. Even more importantly, empirical support for these propositions is fairly limited. Many propositions have not been tested. Studies that do examine psychological and sociological variables often suggest that they play a minor role in saving decisions, relative to economic variables (e.g., Furnham, 1985; Lunt & Livingstone, 1991; Pritchard, Myers & Cassidy, 1989; Van Raaij and Gianotten, 1990).

Behavioral theories of saving have also devoted little attention to low-income saving, and there have been few direct tests of behavioral propositions. Nonetheless, some of these propositions, if confirmed empirically, might be integrated into an institutional theory of saving. Like institutional propositions, behavioral propositions imply that the characteristics of saving mechanisms have important effects on saving behavior. For example, the idea that precommitment constraints reduce the "psychic costs" (Thaler & Shefrin, 1981, p. 399) of saving is quite similar to the institutional notion of facilitation.

The only theory described here which explicitly attempts to explain patterns of low-income saving is the institutional theory of saving articulated by Sherraden (1991). Sherraden (pp. 128-131) posits that the low saving rates and limited asset accumulation of low-income individuals might by partly explained by their relatively limited access to institutional saving opportunities and incentives. Empirical evidence suggests that institutionalized asset

---

even among low-income households. For example, the modification to the LCH proposed by Hubbard et al. (1995) appears to help explain why the saving of many low-income households does not conform to standard LCH predictions.

accumulation is more substantial than discretionary saving (Bernheim & Shoven, 1988; Bosworth, Burtless & Sabelhaus, 1991; Kotlikoff, Spivak & Summers, 1982; Shefrin & Thaler, 1988; Thaler, 1990), but scholars have not yet developed and tested a bona fide institutional theory of saving.

A GENERAL MODEL OF SAVING

This section develops a general model of saving by specifying important relationships. Rather than focusing on particular variables, this model outlines relationships between broad *categories* of variables. As a starting point, it is important to distinguish saving from asset accumulation. Saving, as defined here, refers to the act of consuming less than one's income. Although saving may be a residual phenomenon (Katona, 1975, p. 230-33), the primary emphasis here is *deliberate* decisions to defer consumption. The primary indicator of saving in this paper is saving rate, the percent of income that is not consumed. Asset accumulation refers to a stock of wealth. Variables in this category include net worth, net financial assets, and so forth. Although issues related to low-income asset accumulation are worthy of additional investigation, this paper focuses almost exclusively on saving.[12]

A simple model of saving is presented in Figure 1. Here, demographic variables (e.g., income, wealth, age, and education) and psychological variables (e.g., preferences, motives for saving, expectations) predict saving. Given the emphasis on individual characteristics, this model is referred to as the individual model of saving. Although many would acknowledge that this model is oversimplified, it is argued here that when individuals assume that poor people

[12] The difference between saving and asset accumulation is quite important, but many scholars fail to make an explicit distinction, largely because they use ambiguous terminology. In particular, many use the word "saving" to refer to both concepts. In this paper, "saving" refers to flows of money (i.e., income in excess of consumption), while "assets," "wealth," and "savings" are used interchangeably to refer to stocks of economic resources.

cannot or will not save, they have--implicitly or explicitly--adopted an individual model of behavior and outcomes. Note in particular that this model is largely consistent with conventional neoclassical theories of saving.

Figure 2 portrays a more complex model of saving. As the title implies, this model emphasizes the effects of contextual variables by adding sociological and institutional variables. In addition to the effects of demographic and psychological variables, this model suggests that sociological variables (e.g., neighborhood quality, reference group norms) affect saving; that institutional variables (e.g., financial education, rates of return) affect saving; and that sociological and demographic variables predict institutional variables. It is argued here that the contextual model offers a more complete understanding of saving. This model builds on all of the existing theories of saving. It does not ignore the role of individual characteristics but highlights the contextual influences identified by sociological, behavioral, and institutional theories. The rest of this paper considers the contextual model in more detail, with an emphasis on low-income individuals.

ABILITY TO SAVE

As mentioned previously, Katona (1951; 1975) posits that both ability to save and willingness to save are important determinants of saving. From this perspective, low-income individuals may have lower saving rates because they are less able to defer consumption and/or because they are less willing to defer consumption. This section considers issues related to the ability to save.

Obstacles to Saving

Saving is often defined as disposable income minus consumption. This simple equation indicates that both consumption and saving must be financed from one's economic resources and

that individual saving rates will (inversely) reflect consumption decisions. To some extent, consumption patterns are a function of individual choices. However, there is some minimum level of consumption which is necessary for survival. Individuals and households with incomes below this minimum cannot afford to save, because survival needs cannot be "deferred" (Birdsall, Pinckney & Sabot, 1996; see also Bhalla, 1980; Bunting, 1997; Wang, 1995; Zellner, 1960).[13] In other words, no matter how strong their motives for saving, some individuals cannot save. Even at levels above this bare minimum, those with limited economic resources have limited abilities to save. Therefore, the inability to reduce consumption, or to reduce consumption very much, may partly explain why low-income households have lower saving rates.[14]

An exploratory study of 20 low-income households living in extreme poverty neighborhoods (Finn, Zorita & Coulton, 1992; 1993) identified several important obstacles to saving and asset accumulation. Most fundamentally, these families found it extremely difficult to defer consumption because many of their basic needs were unmet (see also Silverman, 1997a). Those who were able to accumulate some financial savings frequently found that recurring crises (e.g., unemployment, illness, unexpected car expenses, network obligations, and so forth) repeatedly forced them to deplete their savings. With these obstacles in mind, Finn et al. (1993) suggest that "managing without," rather than delayed gratification, characterizes the lives of the extremely poor. Although the attitudes and behaviors of the poor and non-poor may be quite

[13] This minimum threshold clearly varies from person to person and with geographic location. For example, some individuals must consume more food, health care, shelter, and clothing.

[14] This notion is consistent with existing theories of saving. For example, the life cycle hypothesis predicts that patterns of saving and dissaving will be associated with age or stage in the life cycle--because these stages are associated with different levels of economic resources and different consumption needs. In fact, since youth is associated with low transitory income, the LCH implies that many low-income individuals may have low saving rates because they are at early stages in their careers, are raising children, and so forth. However, this proposition provides little insight into the saving behavior of those with low permanent incomes.

similar, the rewards for these attitudes and behaviors differ dramatically: "For the better-off classes in our society self-denial is often the first step in a process that ends up in increased savings. Postponing gratification funnels resources into higher level options" (Finn et al., 1993, pp. 15-16). For the extremely poor, however, managing without is oriented toward short-term, survival needs and involves long-term deprivation, rather than long-term goals.[15]

Those who live in high poverty neighborhoods face additional obstacles to saving. Finn et al. (1993) found that, for low-income individuals residing in neighborhoods with poverty rates greater than 30 percent, saving in the form of home ownership was extremely difficult: Home maintenance and taxes were costly, house fires and burglaries were common, and housing values frequently declined (see also Scanlon, 1996). Similar obstacles faced those who tried to accumulate other material goods, such as typewriters, sewing machines, clothes dryers, and vehicles:

> Besides the fact that the poor cannot afford to accumulate material assets, experience has also told them that the items they can afford to buy are not reliable, and they are likely to be stolen, burned, repossessed, broken down, or otherwise unavailable in the future. Maintaining and possessing these items seems to add more vulnerabilities, i.e., taxes, attorney's fees, banking charges, and licenses, than benefits. (Finn et al., 1992, p. 22)

In other words, even when individuals manage to qualify for a mortgage, obtain some material goods, or accumulate some financial savings, the extent to which they can build on--or even maintain--these assets is limited.

[15] Additional studies (e.g., Edin, 1991; Edin & Lein, 1997; Rank, 1994, Chapter 4) document how difficult it is for poor individuals to finance basic expenses, and income remains an important predictor of wealth even when variables such as race, education, age, occupation, and work experience are controlled (Oliver & Shapiro, 1995, Table 6.1). As Finn et al. (1993) suggest, more research is needed to determine "where on the income distribution managing without can become delayed gratification; i.e., where essentials of life are not neglected, and where the expectation of material reward or payback can be termed realistic within a reasonable period of time" (p. 19).

Saving Capacities

The significance of the above obstacles to saving should not be underestimated. At the same time--despite substantial obstacles--many low-income individuals in the U.S. do save money. For example, 119 federally chartered community development credit unions, which serve predominantly poor neighborhoods, had a mean savings per member of $1,166 in 1995. This figure was 85 percent of the mean savings per member at all of the more than 3,800 comparably sized credit unions in the country (Silverman, 1996). Although these figures are not ideal indicators of saving capacity,[16] they do suggest that some low-income individuals can and do save money. Anecdotal evidence also indicates that low-income individuals save to purchase homes and cars, send their children to college, and start their own businesses, to name just a few initiatives.[17]

Even when poor families are not actively saving, empirical studies suggest that they frequently manifest the behaviors and attitudes that are expected to foster asset accumulation. For example, many low-income individuals strive to reduce their expenses by using coupons, buying in bulk, and conserving energy. They budget, keep track of available public and charitable benefits, and occasionally postpone cashing checks--until a month before Christmas, for example--as a means of restricting their spending. Despite the obstacles, many low-income families--even those in extreme poverty neighborhoods--remain committed to and take pride in home ownership. In more rewarding contexts, this type of motivation, self-control, management skill, and planning behavior would likely result in saving and asset accumulation (Finn et al., 1993).

[16] These are mean figures (median figures were not provided) for individuals who had some formal savings. Moreover, not all of these members could be considered low-income, though many did have quite limited incomes.

Although the contexts are quite different, empirical studies in developing countries provide additional support for the assertion that low-income individuals can and do save money. For example, research in Indonesia suggests that, even when formal saving institutions are unavailable, low-income rural households save in the form of hoarded cash, gold, animals, agricultural products, and so forth (Robinson, 1994). Additional research in Indonesia and Bolivia shows that when rural households have access to appropriately-designed deposit accounts,[18] they are willing to save in formal institutions and accumulate substantial savings (Robinson, 1994; see also Adams, 1978).

In sum, low-income households face formidable obstacles to saving and asset accumulation. To a large extent, therefore, income-related differences in saving may reflect differences in the *ability* to save. At the same time, many low-income individuals demonstrate self-control, motivation, and management and planning skills, and low-income individuals in a variety of countries have accumulated substantial savings. Instead of assuming that low-income individuals are unable to save, we should identify variables which help to explain saving and asset accumulation and identify ways to facilitate low-income saving. The obstacles to saving discussed in this section suggest that asset development strategies should be supplemented by programs and policies which meet basic needs[19] and--for those in extreme poverty neighborhoods--neighborhood stabilization or community development strategies. These

[17] It is also important to note that not all poor families live in high poverty neighborhoods. In 1990, 28% of the poverty population in the one hundred largest central cities lived in census tracts with poverty rates of at least 40%. Sixty-eight percent lived in census tracts with poverty rates of at least 20% (Kasarda, 1993).
[18] Liquidity appears to be particularly important (Robinson, 1994).
[19] "In order for managing without to become the kind of longer-term planning and delayed gratification necessary for assets to accumulate in a real sense, basic needs must be met. If they are not, the small savings account will always be expended on an uninsured medication, a utility deposit, or a brief, but satisfying self-reward" (Finn et al., 1993, p. 17).

initiatives would make some degree of deferred consumption possible and would make savings (especially material assets) more secure (Finn et al., 1993; Scanlon, 1996).

SAVING IN LOW-INCOME HOUSEHOLDS: KEY VARIABLES

The previous section demonstrates that having limited economic resources makes it difficult--but not necessarily impossible--for low-income families to defer consumption. However, since the most widely available studies of income and saving report bivariate statistics only, it is important to consider additional variables which might help to explain observed patterns. Of interest here are variables which are correlated with income but which are also likely to have *direct* effects on saving rates. (One might argue that these variables affect "willingness" to save.) The following subsections identify demographic, psychological, sociological, behavioral, and institutional variables that may help to explain alleged income-related differences in saving rates.

Demographic Variables

Demographic variables which may impact saving include education, stage in the life cycle, employment status, wealth, and race.

Education

Since education is strongly associated with income (Acs & Danziger, 1993; Becker, 1992; Murphy & Welch, 1989), alleged income-related differences in saving may be explained in part by differences in education, especially for those with low permanent income. Several studies (e.g., Bernheim & Garrett, 1996; Diamond & Hausman, 1984; Solmon, 1975) indicate that saving rates increase with education, even after considering a variety of control variables. Solmon also found that motives for saving varied with education: Less-educated individuals were more likely to report providing for emergencies as their primary savings goal, while those with

more education cited the desire to provide for children's education and to help them set up households. Since educated individuals appear to have longer time horizons, Solmon suggests that education may alter individual preferences. On the other hand, he acknowledges that direction of causality may be reversed (i.e., individual preferences may affect both saving behavior and the amount of education obtained.) Although it is likely that education affects willingness to save, more research is needed to confirm this hypothesis and to identify the mechanisms through which this process occurs.

Stage in the Life Cycle

As discussed previously, the life cycle hypothesis asserts that asset accumulation is highly correlated with age or stage in the life cycle (Ando & Modigliani, 1963; Modigliani & Ando, 1957; Modigliani & Brumberg, 1954). It is also possible that age or stage in the life cycle affects one's willingness to save, by altering preferences and/or motives for saving. Early economists (e.g., Fisher, 1930; Jevons, 1911) asserted that willingness to defer consumption was negatively associated with youth. Whether or not "thriftiness" or "impatience" is involved, it is likely that the need to save for retirement becomes more salient as individuals age (see, e.g., Avery, Elliehausen & Gustafson, 1986). However, other motives for saving are likely to be just as salient, if not more so, during the early adult years. More empirical research is needed to determine if stage in the life cycle is significantly associated with willingness to save and if so, whether this relationship helps to explain saving in low-income households.

Employment Status

Employment status is likely to have important indirect effects on saving rates. Full-time, year-round employees are more likely to have access to institutionalized saving mechanisms (e.g., employer-sponsored pension plans); financial information and education; saving subsidies

(e.g., employer contributions to pension plans); and payroll deduction. To the extent that institutional variables affect saving (see discussion below), employment status may help explain saving in low-income households.

Wealth

The LCH and PIH imply that saving is inversely related to wealth: When a household experiences an increase in wealth, it is expected to consume both the added interest income and some portion of the increase in principal (Wilcox, 1991). However, wealth may be positively related to saving, at least for some individuals. First, rather than experiencing diminishing marginal returns from increases in wealth, low-wealth, low-income individuals who begin to save may become *increasingly* motivated to save additional money.[20] Second, those with greater wealth generally have access to higher rates of return (consider certificates of deposit, for example). If attractive rates of return encourage saving (see discussion below), then those with greater wealth have stronger incentives to defer consumption. Additional research is needed to determine the relationship between wealth and saving, particularly at low levels of wealth.

Race

Empirical evidence indicates that race is strongly related to asset accumulation (see, e.g., Eller & Fraser, 1995, Table F; Oliver & Shapiro, 1995, Tables 6.1 and 6.2). It is not clear, however, that race has an independent effect on saving rates. Although the bivariate relationship between race (i.e., being non-white) and saving is likely to be negative, this relationship may be largely explained by income or by other variables discussed in this paper. For example, relatively low saving rates of particular non-white groups might be attributed to lower average educational attainment, lower aspirations and expectations, and/or different reference group

[20] In fact, Katona (1975) articulates this very hypothesis (discussed below under psychological variables).

norms. It is quite likely that many minorities have limited access to institutionalized saving mechanisms and saving incentives, at least partly due to job quality and neighborhood quality issues. Again, more multivariate research is needed to determine whether race has an independent effect on saving.

Psychological Variables

Psychological variables which may affect an individual's willingness to save include financial knowledge and understanding, motives for saving, rate of time preference, and aspirations and expectations for success.

Financial Knowledge and Understanding

The extent to which an individual understands the process and benefits of asset accumulation is likely to have a positive effect on willingness to save. Most fundamentally, those who understand the mechanics and likely outcomes of a saving strategy are more likely to take advantage of a favorable saving opportunity. Conversely, individuals with a limited understanding of a 401(k) plan, to take one example, may not realize the financial benefits of participation or may simply shy away from something unfamiliar.

Although empirical evidence suggests that *most* Americans have relatively limited financial knowledge and understanding (see, e.g., Bernheim, 1995; Ng, 1992), it is likely that financial sophistication varies by socio-economic status. For example, both Solmon (1975) and Kaufmann (1984) found that financial knowledge varied with education, and Bernheim and Scholz (1992) found that the financial behavior of college-educated individuals reflected more sophisticated planning. To the extent that education and income are correlated, this relative lack of financial information and understanding may partly explain why low-income households have lower saving rates.

Motives for Saving

While it is common to associate interest in motives with psychologists, economists have long been interested in motives for saving. For example, Adam Smith (1776/1993) speculated that "...the principle which prompts us to save, is the desire of bettering our condition, a desire which, though generally calm and dispassionate, comes with us from the womb, and never leaves us till we go into the grave" (p. 203). John Maynard Keynes (1936/1958, pp. 107-8) identified several motives for saving, both economic and psychological.[21]

More recently, neoclassical economists have emphasized four motives for saving, including the desire: (1) to maintain consumption in the face of income fluctuations, particularly during retirement; (2) to prepare for income shocks and other emergencies (precautionary saving); (3) to transfer wealth to future generations (bequest motive); and (4) to purchase "big ticket" items such as consumer durables, education, or a vacation (target saving). The first three are expected to influence long-term saving, and the fourth to affect short- to medium-term saving and dissaving patterns (Sturm, 1983).[22] Empirical studies suggest that Americans generally cite retirement, emergencies, and education as the primary motives for saving (Avery et al., 1986; Bernheim, 1994; see also Modigliani, 1988; Sturm, 1983). However, it is quite possible that the salience of particular motives varies by socioeconomic status (see, e.g., Solmon, 1975; Avery et al., 1986). These differences may help to explain alleged income-related differences in saving rates.

[21] These motives include: (1) precaution--to build a reserve against unforeseen events; (2) foresight--to bridge an anticipated gap between future income and needs; (3) calculation--to enjoy interest earnings and value appreciation; (4) improvement--to enjoy gradual improvements in a standard of living; (5) independence--to enjoy a sense of autonomy and agency; (6) enterprise--to carry out a business enterprise; (7) pride--to bequeath a fortune; and (8) avarice--to satisfy personal miserliness.

[22] At the same time, as Owens (1993) suggests, "...these motives are not mutually exclusive, and saving decisions will generally be influenced by more than one of them" (p. 106).

Several existing theories of saving postulate that saving is motivated by the desire to smooth or maintain consumption levels. For example, the permanent income hypothesis suggests that changes in income which are perceived as transitory will have little effect on consumption patterns. Versions of the relative income hypothesis (e.g., Brown, 1952; Duesenberry, 1949; Modigliani, 1949) posit that households base their consumption decisions on previous income or consumption standards and that households seeking to maintain habitual behavior will not reduce consumption when income decreases.[23] If these propositions are true, individuals with low transitory incomes may have lower savings rates than other households because they are striving to maintain a particular level of consumption. Since low transitory income is associated with youth, the life cycle hypothesis also implies that the desire to smooth consumption will result in below-average savings rates for many low-income households.

While these phenomena may help to explain saving among individuals with low transitory income, they provide little insight into the behavior of individuals with low permanent income. Two other propositions address the saving of individuals with low permanent income but with contradictory predictions. On one hand, since the expected length of retirement should be positively associated with retirement saving, low-income individuals--because they have lower life expectancies--may perceive less of a need to save for retirement. On the other hand, to the extent that low-income individuals have less certain future income (or expect consistently low future income), they may be more motivated to save for precautionary reasons (see, e.g., Deaton, 1991; Sturm, 1983).

Empirical evidence from the 1983 Survey of Consumer Finances indicates that low-income families were less likely to mention retirement as an important reason for saving.

[23] These ideas have been articulated more recently in the "habit persistence" literature (e.g., Constantinides, 1990;

However, low-income families were no more likely than others to cite a precautionary motive (Avery et al., 1986). These figures may be biased by the lack of control variables, particularly age. Clearly, more empirical research is needed to determine if differences in motives for saving help to explain observed income-related differences in saving.

Rate of Time Preference

The notion of preference refers to the fact that individuals rank order "goods." In other words, they prefer--with varying intensities--some goods over others. Although particular preferences vary from person to person, neoclassical economists assume that individual preferences are given (i.e., exogenous) and stable. Economists also assume that, within a given set of opportunities and constraints, these preferences determine individual behavior.

Several types of preferences are likely to affect saving behavior. For example, some individuals have a strong preference for expensive items or for leisure time, some strongly dislike being in debt, and some are more risk-averse than others. In this context, however, the preference which has received the most attention is rate of time preference. Rate of time preference refers to the ratio of the utility of a current dollar and the utility of a dollar delayed one year.[24] It is a measure of an individual's willingness to defer consumption. Neoclassical economists assume that fully rational individuals in perfect capital markets will have marginal rates of time preference that equal market rates of interest.

At the same time, the unpleasantness or "disutility" associated with postponed consumption is assumed to vary across individuals (Olander & Seipel, 1970), and many have noted that the rates of time preference of poor households are higher than those of wealthy

---

Powell, 1993; Sundaresan, 1989).

households. In particular, Lawrance (1991) has used data from the Panel Study of Income Dynamics to argue that poor households tend to have relatively high rates of time preference and marginal propensities to consume and therefore that the poor are less "patient" than the rich. Mainstream economists often emphasize rates of time preference as a key explanation for differences in saving behavior between poor and wealthy households.

There are many reasons to believe that the conventional economic analysis of time preference rates does not capture the complexity of low-income households' behavior and experiences. According to Dynan (1993), socioeconomic differences in the rate of time preference noted by Lawrance (1991) might instead reflect group-specific shocks to wealth.[25] Lawrance also acknowledges that part of the difference in estimated rates of time preference may reflect the fact that rich and poor households face different lending rates (i.e., they have access to different economic returns on money saved). In fact, when Lawrance modifies her model so that households with above-median incomes save at the Treasury bill rate and below-median households save at the passbook rate, the difference between the time preferences of rich and poor households is not significant. On the other hand, Lawrance assumes that households do not face binding liquidity constraints. To the extent that low-income households are liquidity constrained, this assumption may bias downward estimated rates of time preference.[26]

---

[24] Or, in non-economic terms, it refers to "the percentage premium or bonus required to make a person indifferent between an immediate 'reward' (income, TV sets, chocolate bars) and a deferred, larger reward" (Maital & Maital, 1977, p. 181).

[25] Lawrance's (1991) analysis is based on rates of consumption growth. She assumes that higher consumption growth reflects patience, because households have demonstrated a willingness to defer consumption from early to later in life. Dynan (1993) argues, however, that a socioeconomic group that experienced a net positive shock to wealth would have above-average consumption growth. In fact, controlling for changes in the relative wages of different socioeconomic groups eliminates the difference in consumption growth rates associated with educational attainment.

[26] Since liquidity constraints *force* households to defer consumption, they appear to be more "patient."

If income-related differences in rates of time preference remain, one might argue that the existence of an inverse relationship between income and time preference does not necessarily imply that the poor are less “patient" than the rich. Maital and Maital (1977) suggest that higher rates of time preference may reflect mistrust of promised future rewards. Perhaps more importantly, apparent differences in time preference may simply reflect differences in economic resources. To the extent that economic resources are inadequate or almost inadequate for basic household needs, low-income households are likely to find postponing consumption much more difficult than wealthier households. At very low consumption levels the marginal cost of exercising willpower is very high (Birdsall et al., 1996; Deaton, 1991; Shefrin & Thaler, 1988).[27] In fact, since poor households often choose to go without one particular need (winter coats, for example) in order to fulfill another need (perhaps heat for the home), one could argue that limited economic resources force low-income households to be *more* patient than affluent households.

These counter-arguments suggest that more research is needed to clarify the role of time preference and other preferences. Certainly preferences are likely to affect individual saving to some extent. For example, an individual who strongly prefers current consumption over deferred consumption will be less inclined to save. Time preference may not, however, explain as much variance in saving as economists imply.

Aspirations and Expectations of Success

In addition to individual preferences and motives for saving, aspirations and expectations of success are likely to affect saving. Those who do not expect their saving attempts to be “successful” are unlikely to try to save. In a study of saving in Britain, Furnham (1985) found

[27] There is also a fair amount of empirical evidence suggesting that most people have marginal rates of time preference that exceed rates of interest (see, e.g., Hausman, 1979; Thaler, 1990). In other words, *most* people have

that beliefs about the pointlessness of saving were negatively associated with income, even though lower-income individuals recognized the benefits of saving. He interprets this finding in light of learned helplessness:

> ...Although people may believe that saving is by-and-large beneficial, because they cannot or do not save they find themselves in a hopeless position. Thus, saving may be seen as pointless for them (because it is too difficult or the sums that may be saved are too little) but they believe that it is beneficial for others who can save. (p. 369)

This phenomenon may help to explain lower saving rates among low-income individuals. Since the possibility of accumulating even a fairly small amount of savings probably seems remote to many low-income individuals, some poor individuals may not even attempt to save. In fact, Furnham (1985) suggests that "these feelings of helplessness may...serve to maintain low levels of saving even when ability to save increases" (p. 369).

In part, individual saving-related aspirations and expectations will be determined by past experiences, including past asset accumulation experiences. According to aspirations theory (Lewin, Dembo, Festinger & Sears, 1944), an individual's aspirations are raised (lowered) according to her success (failure) in achieving them. Applying this proposition to economic behavior, Katona (1975) suggests that an individual who makes progress toward a savings goal is more likely to raise that goal. Conversely, those whose attempts to save money are unsuccessful are likely to lower their saving aspirations. To the extent that individuals with low permanent incomes have had limited success with saving in the past, this proposition suggests that they may not even attempt to save money. At the very least, they are likely to set lower savings goals.

---

fairly strong preferences for current rather than future consumption and are frequently tempted to increase current consumption by borrowing.

These propositions are consistent with Shen's (1991) claim that effort choice is a product of both economic and psychological variables:[28]

> Effort choice is clearly an issue that involves past, present, and future. It is determined by the configuration of current needs and future aspirations, shaped by a person's initial endowments and past experience. Only by incorporating intertemporal mutual feedbacks of both economic and psychological variables can we hope to understand the dynamics of effort choice, and--ultimately--explain the economic profile of a person's life. (p. 277)

Sociological Variables

Sociological variables that may affect an individual's saving include socialization and social learning, the norms of his reference group, and the socio-economic characteristics of the neighborhood in which he lives.

Socialization and Social Learning

A small body of literature considers the role of economic socialization in the development of saving-related values, attitudes, and behaviors. Cohen (1994) argues that consumer behavior begins in the family: "Money management skills, as well as consumer attitudes and values, emerge under the direct or indirect tutelage of parenting adults and older siblings" (p. 244). In particular, Cohen suggests that individual saving and spending habits are modeled after family habits. There is some empirical support for this notion. Bernheim and Garrett (1996, Table 6) found that reports of parental saving were significantly related to saving rates and indicators of wealth, even after accounting for a large number of control variables. Pritchard et al. (1989) found a strong positive correlation between the saving patterns of adolescents and parents, and Lunt and Livingstone (1992, p. 121) found that 88 percent of their sample of British men and women attributed their own attitudes toward money to their parents.

[28] Although Shen (1991) is writing about work effort, many of his ideas may be applied to saving effort as well.

Social learning theory (Rotter, 1954) has also been used to explain the ability to defer gratification, a characteristic which is closely related to rate of time preference (Lea, Tarpy & Webley, 1987). This theory suggests that the ability to delay gratification may be learned and therefore implies that the explanation for time preference lies in environmental variables. Although family attitudes and behaviors are likely to play an important role, some empirical evidence suggests that time preference rates of children and adolescents can be modified by modeling (e.g., children may witness others postponing gratification) or by direct reinforcement.[29]

These propositions and findings suggest that part of the income-saving relationship may be explained by differences in economic socialization and social learning. It is quite likely that low-income individuals are exposed to less modeling of saving: To the extent that low-income individuals are surrounded by similar others (see, e.g., Feld, 1981; 1982; Fischer, 1982; Marsden, 1990), they are likely to have family members, neighbors, and peers who also find saving quite difficult. Poor individuals are also likely to receive less direct reinforcement for their own saving. For example, individuals with limited assets have access to lower interest rates and fewer saving options. Furthermore, the asset restrictions associated with many means-tested programs almost certainly imply that participants in these programs have been subject to negative rather than positive reinforcement.[30]

[29]See Maital and Maital (1977, pp. 190-191) for a review. However, Maital and Maital also claim that the propensity to delay gratification is quite stable after adolescence.

[30] Several welfare programs have eligibility restrictions that limit program participation to individuals with minimal assets (usually $1500, excluding home equity). For program participants, these rules place an implicit tax rate of 100% on wealth above asset limits (Hubbard et al., 1995).

Reference Group Norms

One version of the relative income hypothesis (Duesenberry, 1949) calls attention to the influence of an individual's reference group (e.g., neighbors, coworkers, members of his ethnic group) on his saving. Duesenberry posits that an individual seeks to obtain a standard of living which conforms to the standard of living of his reference group. Thus, consumption habits are at least partly determined by social and cultural needs. When income declines, saving rates are also expected to decline so that individuals can maintain their desired standards of living. When income rises, saving is expected to increase.[31]

This proposition implies that low-income households are less likely than wealthier households to save money. First, consider a reference group comprised of other low-income households. To the extent that members of this reference group face many obstacles to saving, saving is unlikely to be a group norm. Therefore, those whose saving is influenced by this reference group are less likely to save money, even when saving is possible. Second, a low-income individual who has a reference group with a higher standard of living is likely to allocate the majority of her disposable income to consumption (rather than saving) in an attempt to conform to the reference group's living standard. Since wealth and consumption are highly visible and highly valued in the United States, the latter phenomenon may substantially limit saving in low-income households. At the same time, changes over time in perceived "necessities" and increases in the socially-defined minimum consumption level may result in low saving rates or even dissaving among lower-income groups (Bunting, 1997; see also Easterlin, 1974).

[31] There is preliminary empirical support for this proposition: Kosicki (1987) found that income *rank* was an important determinant of saving rates, after controlling for permanent income.

Neighborhood Characteristics

A previous section considered the effects of neighborhood quality on ability to save. Those who live in high-poverty inner city neighborhoods may also be less willing to save--particularly in the forms of home ownership and durable goods--if they fear that their assets will be burglarized, vandalized, damaged by fire, and so forth. Thus, saving may be partly predicted by neighborhood "quality." In addition to this relationship, there are likely to be important relationships between the socio-economic characteristics of a neighborhood and a variety of institutional variables. Residents of inner city neighborhoods are likely to have limited access to convenient saving institutions and limited access to home ownership (because banks are less likely to finance mortgages and insurance companies less likely to insure homes). To the extent that these institutional variables affect saving, these neighborhood characteristics may help to explain lower saving rates in low-income households.

Behavioral Variables

In addition to demographic, psychological, and sociological variables, behavioral variables such as consumption patterns and strategies of financial management may affect an individual's willingness to save.

Consumption Patterns

Given the inverse relationship between consumption and saving (when income is held constant), it is important to consider the effects of consumption patterns on saving. However, consumption patterns may be largely explained by other variables proposed here. A previous section argues that willingness to save is "irrelevant" if one's income does not exceed a certain minimum threshold. It is in this context that consumption most strongly affects the saving of low-income individuals. Above this minimum, however, consumption patterns reflect some

degree of individual choice. For example, individual preferences and the strength of motives for saving will shape consumption decisions. Other relevant variables are likely to include education, stage in the life cycle, aspirations and expectations, socialization and social learning, the desire to conform to reference group norms, and access to institutionalized saving opportunities that facilitate and promote saving (see discussion below).

Strategies of Financial Management

A few scholars have proposed that individuals who utilize particular strategies of financial management will have higher saving rates. For example, because non-savers were more likely to report using "flexible" strategies of financial management, Lunt and Livingstone (1991) suggest that people save by adopting a fixed saving plan (i.e., setting aside a certain amount each month). According to Shefrin and Thaler (1988) and Maital and Maital (1994; see also Maital, 1986), individuals often utilize a variety of self-imposed "precommitment constraints" to shape their saving behavior. These techniques make it difficult to choose current pleasure at the expense of future pleasure or involve borrowing to finance current consumption (because the commitment to pay off a loan restricts future spending) (Strotz, 1956). For example, individuals arrange for overwithholding of their income taxes, purchase life insurance, or use payroll deductions to save for retirement. In particular, Maital and Maital view mortgage-financed home purchases as a key precommitment strategy.[32]

[32] This practice facilitates saving because mortgage payments are a contractual obligation and because the part of each payment that goes toward principal increases the buyer's home equity. In fact, Maital and Maital (1994) suggest that the desire for this precommitment mechanism is as strong a motivation for mortgage-financed home purchases as the incentive created by the tax-deductibility of interest payments. See also Katona's (1975, pp. 230-233) discussion of contractual saving.

Since these constraints are largely contractual in nature, they force individuals to be "willing" to save. Individuals who choose to utilize precommitment constraints are therefore more likely to save regularly. Since these techniques reduce individual discretion regarding the amount to be saved, participants are also likely to save more than those who rely solely on "will power."[33]

For a variety of reasons, low-income individuals may be somewhat less likely to utilize precommitment constraints. First, these decisions require some degree of financial knowledge and understanding. While purchasing a home clearly requires a substantial amount of financial sophistication, even the relatively simple act of increasing one's income tax withholding requires some financial knowledge. Second, these commitments require a minimum level of economic resources (e.g., the ability to postpone some current consumption and, in some cases, a down payment and the apparent financial means to make regular loan payments). Third, purchases financed with loans generally require a decent credit record. Low-income households, particularly those with low permanent incomes, may have difficulty meeting some or all of these criteria. Consequently, income-related differences in the use of precommitment constraints may help to explain lower savings rates in low-income households.

Institutional Variables

The final class of explanatory variables is institutional in nature. As described earlier, an institutional perspective on saving emphasizes that characteristics of saving opportunities influence saving and asset accumulation. For our purposes, it is helpful to consider four key institutional variables: (1) access; (2) financial information and education; (3) incentives; and (4)

[33] In a comparison of saving behavior in West Germany and the United States in the 1950s, 1960s, and early 1970s, Strumpel (1975) concluded that, in Germany, "the variety of promotion programs led to a high degree of

facilitation. Institutional theories of saving predict that individuals who have access to institutional saving mechanisms; who receive appropriate financial education; who are offered attractive incentives; and whose saving is actively facilitated (e.g., through payroll deduction) will save a greater percentage of their incomes. A fifth institutional variable, access to credit, may also affect the saving of low-income households.

Access to Institutionalized Saving Mechanisms

Those who have access to institutional mechanisms of saving are likely to have higher saving rates than those who lack such access. For example, the fact that a job offers a pension plan may prompt an individual to begin saving for retirement, because saving becomes convenient, because she believes her savings will be secure, or perhaps simply because she perceives the opportunity as new and interesting.[34] However, many low-income households lack access to the mechanisms which currently facilitate saving among middle- and upper-income households (Sherraden, 1991, pp. 128-131). For example, members of low-income households are less likely to be in employment situations that offer retirement pension plans.[35] As Sherraden (1991) concludes, "certain screening processes--especially parentage, type of employment, and level of income--determine whether or not individuals have an opportunity to benefit from institutionalized asset accumulation" (p. 116). These patterns suggest that differences in access may partly explain observed income-related differences in saving.

---

habitualization and contractualization of saving behavior and thus tended to relieve the motivation to save from the continuous competition with instant consumption" (p. 213).

[34] Alter, Goldin & Rotella (1994) argue that the establishment of savings banks in the early 1800s increased aggregate saving "by making it easier and safer for individuals to save" (p. 736). Cagan (1965) and Carroll and Summers (1987) suggest that pension plans and sheltered saving plans create a "recognition effect." In other words, the very availability of institutionalized saving opportunities, by calling attention to the need for and benefits of saving, may promote saving.

[35] For example, in 1991, only 18.8% of families with income between $10,001 and 20,000 were eligible for 401(k) plans, compared to 52.6% of families with income between $50,001 and 75,000 (Engen et al., 1994, Table 2).

Financial Information and Education

An earlier section posits that financial knowledge is likely to be positively related to willingness to save. If this proposition is true, then financial information and programs of financial education should increase saving rates. A growing body of empirical evidence supports this proposition. For example, Bayer, Bernheim, and Scholz (1996) found that frequent retirement education seminars were positively associated with higher 401(k) participation rates and contribution rates. Similarly, Bernheim and Garrett (1996) found that the availability of retirement education strongly increased participation in 401(k) programs, contributions to 401(k)s, and overall rates of saving. The fact that low-income individuals have less access to financial education (see, e.g., Bernheim & Garrett, 1996) may help to explain differences in saving.

Incentives

An institutional perspective of saving assumes that individuals manifest a fair amount of rationality and predicts that individuals will save more if attractive incentives for saving are offered. However, whether or not individuals do increase their saving rates in response to saving incentives has been the subject of much debate. There are two key issues. First, for net savers, an increase in the after-tax rate of return may have two contradictory effects. Individuals may choose to save more because the price of current consumption increases relative to the price of future consumption (the substitution effect). On the other hand, with higher rates of return, individuals can save less and still enjoy the same amount of future consumption (the income

effect). Existing empirical studies have not yet established if the substitution effect outweighs the income effect (see, e.g., Boskin, 1978; Evans, 1983; Kauffmann, 1993; Summers, 1981).[36]

The second issue involves the fact that changes in the rate of return on savings may simply result in the "reshuffling" of assets, with no net new saving. This issue has stimulated much debate, particularly with regard to tax-deferred saving plans for retirement (e.g., IRAs and 401(k) plans).[37] To the extent that public policy seeks to increase aggregate private saving rates, this issue is of fundamental importance. However, it may be less relevant to our interest in low-income saving: Reshuffling is less likely for low-income households, since they are less likely to have savings outside of these structures.[38]

Although the debate concerning tax-deferred retirement plans has not yet been resolved, it is interesting to examine recent research regarding other saving incentives and disincentives. Feldstein (1992) found that college scholarship rules which reduce financial aid as parents' income and assets increase provided a strong disincentive for some families to save for college and even for their own retirement. Recent research also suggests that asset restrictions associated with means-tested programs limit the saving of low-income households, even those which are not actual but *potential* program recipients.[39] In a survey of community development credit union members, Silverman (1997a) found that 49 percent of public assistance recipients agreed with the

[36] In economic terms, the interest elasticity of saving is still uncertain. Empirical estimates generally fall between zero and 0.4 (Engen et al., 1994, p. 141), with positive estimates reflecting net saving. There is a related discussion regarding the effects of taxes and inflation on saving (see, e.g., Boskin, 1978; Bovenberg, 1989; Kauffmann, 1993; Kotlikoff, 1984; Owens, 1993).

[37] See, e.g., Engen, Gale & Scholz, 1994; Feenberg & Skinner, 1989; Gravelle, 1991; Hubbard, 1984; Hubbard & Skinner, 1996; Poterba, Venti & Wise, 1993; 1994; 1995; Venti & Wise, 1986; 1987; 1990; 1991; 1992; Wise, 1987; 1995.

[38] Empirical data indicate that most IRA contributors have relatively little wealth (Summers & Carroll, 1987), and empirical analysis simulating the effects of private pension plans suggests that pensions do not offset personal saving among lower-income (less-educated) workers (Bernheim and Scholz, 1993).

statement "I would save more, but the government would cut my benefits if I did." Using the National Longitudinal Survey of Women to examine state-level variations in Aid to Families with Dependent Children (AFDC, recently replaced by Temporary Assistance for Needy Families), Powers (1995) found that a one dollar difference in the AFDC asset limit was associated with a 30-cent difference in the assets of potential AFDC recipients. Econometric modeling by Hubbard et al. (1995) also indicates that asset-based means tests can restrict the saving of potential program participants. [40]

As discussed above, Sherraden (1991) emphasizes that low-income individuals have less access to institutions which subsidize saving, such as tax deductions for mortgage interest payments and tax-deferred and/or employer-matched pension programs. At the same time, low-income households receiving means-tested welfare benefits often face disincentives to saving in the form of asset restrictions. If additional empirical evidence confirms that saving rates are positively related to saving incentives and negatively related to disincentives, then different patterns of saving incentives and disincentives may help to explain income-related differences in saving.

Facilitation

Finally, an institutional theory of saving would predict that individuals whose saving is actively facilitated will have higher saving rates. A primary method of facilitation is payroll deduction. For example, when pension plan contributions are deducted from an individual's paycheck, temptations to spend that money are eliminated, and the participant no longer has to make, on a monthly or biweekly basis, a conscious decision to postpone consumption. Her

[39] If an individual anticipates that an earnings downturn or large medical expenses might necessitate participation in one of these programs (and require her to dissave in order to be eligible), she may voluntarily restrict her asset accumulation (Hubbard et al., 1995).

"willingness" to save is, in effect, guaranteed.[41] Since low-income individuals are less likely to work for companies that provide institutional saving mechanisms, they are less likely to enjoy this type of facilitation. Therefore, differences in access to active facilitation may help explain differences in saving.

The institutional variables and propositions outlined thus far challenge the assumption that low-income individuals cannot save, will not save, or, at the very least, will not save in formal saving institutions. In this way, they are consistent with the "new paradigm" of microfinance in developing countries articulated by Robinson (1995). This new paradigm assumes that low-income individuals can save, that they already demonstrate financial discipline, and that there is a demand for formal financial services, if these services are appropriately designed. In fact, Robinson attributes the lack of institutional saving among low-income households to the predominance of the "old" paradigm:

> It is still widely assumed that the poor savings record of many rural financial institutions demonstrates that the tendency to save in rural areas is low. What it usually demonstrates, however, is a lack of appropriate institutions and instruments. This misconception, in turn, leads to severe underemphasis of the importance of building rural financial institutions. (1992, p. 94)

Although these "new" assumptions must be confirmed in other settings, it is quite likely that low-income households in developed countries will also respond favorably to the provision of appropriate institutional saving opportunities.[42]

---

[40] Findings from a fourth study (Silverman, 1997b) were inconclusive.

[41] In a study of community development credit union members, 48% of respondents said that direct payroll deposit (into savings) would make it easier for them to save (Silverman, 1997a).

[42] In fact, empirical studies in the U.S. indicate that 401(k) participation rates among families that are eligible for these plans are quite similar for a variety of income levels. For example, in 1991, 67.4% of eligible families with incomes between $10,001 and $20,000 participated in 401(k) plans, compared to 70.5% of eligible families with incomes between $50,001 and $75,000 (Engen et al., 1994, Table 2; see also Poterba & Wise, 1996). More recent research in Indonesia also suggests that the banking needs of lower-middle income households in urban neighborhoods are similar to those of rural households (Robinson, 1994).

Access to Credit

In addition to the institutional characteristics just described, access to credit--or the converse, liquidity constraints--may also affect the saving and asset accumulation of low-income households, although the net effects are somewhat ambiguous. Liquidity constraints refer to the inability to freely substitute one form of wealth for another, most commonly from an inability to borrow against future labor income (Wilcox, 1991; Zeldes, 1989). Since liquidity constraints prevent some individuals and households from financing optimal consumption when income declines, they may be unable to smooth out their consumption as the PIH and LCH models predict.

Individuals with low permanent incomes--because they are more likely to have sporadic employment income and to lack other forms of collateral--are particularly likely to be denied credit. Somewhat paradoxically, those who face liquidity constraints may be *more* motivated to accumulate precautionary saving, since they will be unable to borrow in the event of a crisis (see, e.g., Deaton, 1991; Sturm, 1983). On the other hand, to the extent that saving to purchase a home would be a strong motive for saving in the absence of liquidity constraints, the inability to obtain a mortgage may reduce saving.

Thus, willingness to save is likely to be shaped by a number of demographic, psychological, sociological, behavioral, and institutional variables. With a few exceptions (e.g., economic background, age, and race), these variables reflect a complex mix of individual choices and opportunities or constraints. For example, an individual's education and income are a function of her choices (e.g., willingness to invest in human capital and number of hours worked) and her opportunity set (e.g., intellectual ability, health status, family background, quality of

available education, financial aid opportunities, and labor supply and demand issues). Likewise, the use of precommitment constraints may reflect individual preferences (e.g., risk aversion and willingness to defer short-term income) as well as opportunities and constraints related to information, access, incentives, and facilitation.

Given the emphasis here on saving in low-income households, it is important to note that opportunities and constraints vary substantially by income--and by other variables such as education and occupation that are strongly correlated with income. For example, public policies promote saving and asset accumulation for many middle- and upper-income families through housing- and retirement-related tax benefits. On the other hand, public policies actually *discourage* saving and asset accumulation for many low-income households, through asset restrictions in means-tested social welfare programs. Characteristics of one's job are also critical. Employers of many middle- and upper-income workers facilitate saving and asset accumulation by providing subsidized saving mechanisms and payroll deduction arrangements. Relatively few low-income workers have access to these opportunities and incentives. These patterns suggest that apparent income-related differences in saving and asset accumulation may be largely related to differences in opportunities and constraints rather than individual motives and preferences.

SUMMARY AND IMPLICATIONS

This review of theory and evidence demonstrates that researchers need to devote more attention to saving in low-income households. In all disciplines, empirical evidence related to saving in low-income households is extremely limited, particularly because there are relatively

few multivariate studies. In short, we know very little about how and why low-income individuals save.

This paper has taken beginning steps to develop a theory of low-income saving. First, a general model of saving was proposed (Figure 2). This model suggests that demographic, psychological, sociological, and institutional variables affect saving and that demographic and sociological variables predict institutional variables. The contextual model stands in contrast to the individual model (Figure 1), in which saving is simply the product of demographic and psychological variables. Although the individual model is clearly oversimplified, it is argued here that those who assume that poor people cannot or will not save have--implicitly or explicitly--adopted an individual model.

This paper also examined issues related to the ability to save. Clearly, low-income households face formidable obstacles to saving--most fundamentally, the fact that income rarely covers basic expenses. To a large extent, therefore, income-related differences in saving rates may reflect differences in the *ability* to save. At the same time, low-income individuals in a variety of countries have accumulated substantial savings, and even when they are not actively saving, many low-income individuals demonstrate attitudes and behaviors (e.g., self-control, motivation to save, and management and planning skills) that in more favorable contexts would likely result in saving and asset accumulation. Instead of assuming that low-income individuals are unable to save, researchers should identify other variables which help to explain saving and asset accumulation. The obstacles to saving discussed in this paper suggest that asset development strategies should be supplemented by programs and policies which meet basic needs and--for those in extreme poverty neighborhoods--community development strategies.

The remainder of this paper identified additional variables that are likely to predict saving in low-income households. Consistent with the contextual model of saving, it is argued that opportunities and constraints (whether real or perceived) shape behavior at least as much as individual characteristics such as motives and preferences. In particular, in addition to the constraints associated with very limited incomes, it is argued that low saving rates may be largely explained by lack of access to institutional mechanisms that facilitate and reward saving.

A number of testable propositions regarding saving in low-income households are provided in Table 1. Empirical tests of these propositions would have important research implications. First, since we have very little empirical evidence related to low-income saving, the focus on low-income households is long overdue. Second, since the predominant theories of saving (i.e., the life cycle hypothesis and the permanent income hypothesis) implicitly focus on the middle- and upper-classes, the findings would enable us to make a more comprehensive evaluation of these theories. Finally, this research could serve as a direct test of particular institutional propositions.

Empirical tests of these propositions would also have important policy implications. Recent discussions of social welfare have emphasized the importance of assets to individual and household well-being, and empirical studies are beginning to confirm that asset holding has positive effects on economic security, personal well-being, the well-being of children, and other outcomes. In the last several years, a number of state and local programs have begun to include asset accumulation as part of their anti-poverty initiatives. Empirical tests of the suggested propositions would help policy-makers and program directors make informed decisions about social welfare and anti-poverty strategies.

Despite the potential for research and policy implications, it is important to emphasize that this is an early stage of theory-building. Empirical evidence will likely alter some of the propositions. Unanticipated relationships may prove to be important. (For example, particular psychological variables, e.g., expectations of failure or the desire to obtain consumption levels comparable to those of the non-poor, might prove to be more powerful than institutional incentives to save.) We have much to learn about saving and asset accumulation in low-income households. Identifying key variables and developing testable propositions are first steps toward the development of a theory of low-income saving. Empirical tests of these propositions will further the specification of such a theory and provide important information to those interested in the well-being and development of impoverished households and communities.

REFERENCES

Acs, G., & Danziger, S. (1993). Educational attainment, industrial structure, and male earnings through the 1980s. *Journal of Human Resources, 28*, 618-648.

Adams, D. W. (1978). Mobilizing household savings through rural financial markets. *Economic Development and Cultural Change, 26*(3), 547-560.

Alter, G., Goldin, C., & Rotella, E. (1994). The savings of ordinary Americans: The Philadelphia Saving Fund Society in the mid-nineteenth century. *Journal of Economic History, 54*(4), 735-767.

Ando, A., & Modigliani, F. (1963). The "life cycle" hypothesis of saving: Aggregate implications and tests. *American Economic Review, 53*, 55-84.

Avery, R. B., Elliehausen, G. E., & Gustafson, T. A. (1986). Pensions and Social Security in household portfolios: Evidence from the 1983 Survey of Consumer Finances. In F. G. Adams & S. M. Wachter (Eds.), *Savings and capital formation: The policy options* (pp. 127-160). Lexington, MA: Lexington Books.

Bayer, P. J., Bernheim, B. D., & Scholz, J. K. (1996). *The effects of financial education in the workplace: Evidence from a survey of employers* (Working Paper No. 5655). Cambridge, MA: National Bureau of Economic Research.

Becker, G. S. (1992). Human capital and the economy. *Proceedings of the American Philosophical Society, 136*(1), 85-92.

Bernheim, B. D. (1994). Personal saving, information, and economic literacy: New directions for public policy. In *Tax Policy for Economic Growth in the 1990s* (pp. 53-78). Washington, DC: American Council for Capital Formation.

Bernheim, B. D. (1995). Do households appreciate their financial vulnerabilities? An analysis of actions, perceptions, and public policy. *Tax policy and economic growth* (pp. 1-30). Washington, DC: American Council for Capital Formation.

Bernheim, B. D., & Garrett, D. M. (1996). *The determinants and consequences of financial education in the workplace: Education from a survey of households* (Working Paper No. 5667). Cambridge, MA: National Bureau of Economic Research.

Bernheim, B. D., & Scholz, J. K. (1993). Private saving and public policy. *Tax Policy and the Economy, 7*, 73-110.

Bernheim, B. D., & Shoven, J. B. (1988). Pension funding and saving. In Z. Bodie, J. B. Shoven & D. A. Wise (Eds.), *Pensions in the U.S. economy* (pp. 85-11). Chicago: University of Chicago Press.

Bhalla, S. S. (1980). The measurement of permanent income and its application to savings behavior. *Journal of Political Economy, 88*(4), 722-44.

Birdsall, N., Pinckney, T. C., & Sabot, R. H. (1996, May). *Why low inequality spurs growth: Savings and investment by the poor*. Unpublished manuscript.

Boskin, M. J. (1978). Taxation, saving, and the rate of interest. *Journal of Political Economy, 86*(2), S3-S27.

Bosworth, B., Burtless, G., & Sabelhaus, J. (1991). The decline in saving: Evidence from household surveys. *Brookings Papers on Economic Activity, 1,* 183-241.

Bovenberg, A. L. (1989). Tax policy and national saving in the United States: A survey. *National Tax Journal, 42*(2), 123-38.

Brown, T. M. (1952). Habit persistence and lags in consumer behavior. *Econometrica, 20,* 355-71.

Bunting, David. (1997, July). *Distribution and the iron law of consumption*. Paper presented at the Society for the Advancement of Socio-Economics 9th International Conference on Socio-Economics, Montreal, Canada.

Cagan, P. (1965). *The effect of pension plans on aggregate savings: Evidence from a sample survey* (National Bureau of Economic Research Occasional Paper No. 95). New York: National Bureau of Economic Research.

Carroll, C., & Summers, L. H. (1987). Why have private savings rates in the United States and Canada diverged? *Journal of Monetary Economics, 20,* 249-79.

Cohen, S. (1994). Consumer socialization: Children's saving and spending. *Childhood Education, 70*(4), 244-246.

Constantinides, G. M. (1990). Habit formation: A resolution of the equity premium puzzle. *Journal of Political Economy, 98,* 519-543.

Deaton, A. (1991). Saving and liquidity constraints. *Econometrica, 59*(5), 1221-1248.

Diamond, P. A., & Hausman, J. A. (1984). Individual retirement and savings behavior. *Journal of Public Economics, 23,* 81-114.

Duesenberry, J. S. (1949). *Income, saving and the theory of consumer behavior*. Cambridge, MA: Harvard University Press.

Dynan, K. E. (1993, July). *The rate of time preference and shocks to wealth: Evidence from panel data* (Working Paper No. 134). Washington, DC: Board of Governors, Federal Reserve System, Economic Activity Section.

Easterlin, R. A. (1974). Does economic growth improve the human lot? In P. A. David & M. W. Reder (Eds.), *Nations and households in economic growth: Essays in honor of Moses Abramovitz* (pp. 89-125). New York: Academic Press.

Edin, K. (1991). Surviving the welfare system: How AFDC recipients make ends meet in Chicago. *Social Problems, 38*(4), 462-474.

Edin, K., & Lein, L. (1997). *Making ends meet: How single mothers survive welfare and low-wage work.* New York: Russell Sage Foundation.

Eller, T. J., & Fraser, W. (1995). *Asset ownership of households: 1993* (U.S. Bureau of the Census Current Population Reports, P70-47). Washington, DC: U.S. Government Printing Office.

Engen, E. M., Gale, W. G., & Scholz, J. K. (1994). Do saving incentives work? *Brookings Papers on Economic Activity, 1*, 85-151.

Evans, O. J. (1983). Tax policy, the interest elasticity of saving, and capital accumulation: Numerical analysis of theoretical models. *American Economic Review, 73*(3), 398-410.

Feenberg, D., & Skinner, J. (1989). Sources of IRA saving. *Tax Policy and the Economy, 3*, 25-46.

Feld, S. L. (1981). The focused organization of social ties. *American Journal of Sociology, 86*, 1015-35.

Feld, S. L. (1982). Social structural determinants of similarity among associates. *American Sociological Review, 47*, 797-801.

Feldstein, M. (1992). *College scholarship rules and private saving* (Working Paper No. 4032). Cambridge, MA: National Bureau of Economic Research.

Finn, C., Zorita, P. M.-B., & Coulton, C. (1993). *Assets and financial management among poor households in extreme poverty neighborhoods.* Unpublished manuscript, Center for Urban Poverty and Social Change, Mandel School of Applied Social Sciences, Case Western Reserve University, Cleveland, OH.

Finn, C., Zorita, P. M.-B., & Coulton, C. (1992). *Assets and asset behavior among poor households in extreme poverty neighborhoods: Will assets provide avenues out of poverty?* Unpublished manuscript, Center for Urban Poverty and Social Change, Mandel School of Applied Social Sciences, Case Western Reserve University, Cleveland, OH.

Fischer, C. S. (1982). *To dwell among friends: Personal networks in the town and city*. Chicago: University of Chicago Press.

Fisher, I. (1930). *The theory of interest*. London: Macmillan.

Friedman, M. (1957). *A theory of the consumption function* (National Bureau of Economic Research General Series No. 63). Princeton, NJ: Princeton University Press.

Furnham, A. (1985). Why do people save? Attitudes to, and habits of, saving money in Britain. *Journal of Applied Social Psychology, 15*(4), 354-373.

Gordon, W. (1980). *Institutional economics: The changing system*. Austin, TX: University of Austin Press.

Gravelle, J. G. (1991). Do Individual Retirement Accounts increase savings? *Journal of Economic Perspectives, 5*(2), 133-48.

Green, F. (1984). A critique of the neo-Fisherian consumption function. *Review of Radical Political Economics, 16*(2/3), 95-114.

Harrod, R. (1948). *Towards a dynamic economics: Some recent developments of economic theory and their application to policy*. London: Macmillan.

Hausman, J. (1979). Individual discount rates and the purchase and utilization of energy-using durables. *Bell Journal of Economics, 10,* 33-54.

Hubbard, R. G. (1984). Do IRAs and Keoghs increase savings? *National Tax Journal, 37,* 43-54.

Hubbard, R. G., & Skinner, J. S. (1996). *Assessing the effectiveness of saving incentives* (Working Paper No. 5686). Cambridge, MA: National Bureau of Economic Research.

Hubbard, R. G., Skinner, J., & Zeldes, S. P. (1995). Precautionary saving and social insurance. *Journal of Political Economy, 103*(2), 360-399.

Jevons, W. S. (1911). *The theory of political economy* (4th ed.). London: Macmillan.

Kasarda, J. D. (1993). Cities as places where people live and work: Urban change and neighborhood distress. In H. G. Cisneros (Ed.), *Interwoven destinies: Cities and the nation* (pp. 81-124). New York: W. W. Norton & Company.

Katona, G. (1951). *Psychological analysis of economic behavior*. New York: McGraw-Hill.

Katona, G. (1975). *Psychological economics*. New York: Elsevier.

Kauffmann, B. (1993). Microeconomic aspects of saving. In A. Heertje (Ed.), *World savings: An international survey* (pp. 31-63). Cambridge, MA: Blackwell.

Kaufmann, D. L. (1984). *Attitudes, knowledge and behavior related to savings: A study of Southern Illinois rural women*. Unpublished Master's thesis, Eastern Illinois University.

Keynes, J. M. (1958). *The general theory of employment, interest and money*. New York: Harcourt, Brace and Company. (Original work published 1936)

Kosicki, G. A test of the relative income hypothesis. *Southern Economic Journal, 54*(2), 422-34.

Kotlikoff, L. J. (1984). Taxation and savings: A neoclassical perspective. *Journal of Economic Literature, 22*, 1576-1629.

Kotlikoff, L. J., Spivak, A., & Summers, L. H. (1982). The adequacy of savings. *American Economic Review, 72*(5), 1056-69.

Lawrance, E. C. (1991). Poverty and the rate of time preference: Evidence from panel data. *Journal of Political Economy, 99*(1), 54-77.

Lea, S. E. G., Tarpy, R. M., & Webley, P. (1987). *The individual in the economy: A textbook of economic psychology*. New York: Cambridge University Press.

Lewin, K., Dembo, T., Festinger, L., & Sears, P. S. (1944). Level of aspiration. In J. M. Hunt (Ed.), *Personality and the behavior disorders* (Vol. 1, pp. 333-378). New York: Ronald Press Company.

Lunt, P. K., & Livingstone, S. M. (1991). Psychological, social and economic determinants of saving: Comparing recurrent and total savings. *Journal of Economic Psychology, 12*, 621-41.

Lunt, P. K., & Livingstone, S. M. (1992). *Mass consumption and personal identity: Everyday economic experience*. Philadelphia, PA: Open University Press.

Maital, S. (1986). Prometheus rebound: On welfare-improving constraints. *Eastern Economic Journal, 12*(3), 337-344.

Maital, S., & Maital, S. (1977). Time preference, delay of gratification and the intergenerational transmission of economic inequality: A behavioral theory of income distribution. In O. C.

Ashenfelter & W. E. Oates (Eds.), *Essays in labor market analysis in memory of Yochanan Peter Comay* (pp. 179-199). New York: Wiley.

Maital, S., & Maital, S. L. (1994). Is the future what it used to be? A behavioral theory of the decline of saving in the West. *Journal of Socio-Economics, 23*(1/2), 1-32.

Marsden, P. V. (1990). Network diversity, substructures, and opportunities for contact. In C. Calhoun, M. Meyer, & W. R. Scott (Eds.), *Structures of power and constraint: Papers in honor of Peter M. Blau* (pp. 397-410). New York: Cambridge University Press.

Mayer, T. (1966). The propensity to consume permanent income. *American Economic Review, 56*(5), 1158-77.

Modigliani, F. (1949). Fluctuations in the saving-income ratio: A problem in economic forecasting. In National Bureau of Economic Research, *Studies in income and wealth* (No. 11, pp. 369-441). New York: National Bureau of Economic Research.

Modigliani, F. (1986). Life cycle, individual thrift, and the wealth of nations. *American Economic Review, 76*(3), 297-313.

Modigliani, F. (1988). The role of intergenerational transfers and life cycle saving in the accumulation of wealth *Journal of Economic Perspectives, 2*(2), 15-40.

Modigliani, F., & Ando, A. K. (1957). Tests of the life cycle hypothesis of savings. *Bulletin of the Oxford Institute of Statistics, 19,* 99-124.

Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. In K. K. Kurihara (Ed.), *Post-Keynesian economics* (pp. 388-436). New Brunswick, NJ: Rutgers University Press.

Murphy, K., & Welch, F. (1989). Wage premiums for college graduates: Recent growth and possible explanations. *Educational Researcher, 18*(4), 17-26.

Neale, W. C. (1987). Institutions. *Journal of Economic Issues, 21*(3), 1177-1206.

Ng, Y. K. (1992). Do individuals optimize in intertemporal consumption/savings decisions? A liberal method to encourage savings. *Journal of Economic Behavior and Organization, 17,* 101-114.

Olander, F., & Seipel, C.-M. (1970). *Psychological approaches to the study of saving.* Urbana, IL: University of IL.

Oliver, M. L., & Shapiro, T. M. (1995). *Black wealth/white wealth: A new perspective on racial inequality.* New York: Routledge.

Owens, J. (1993). Taxation and savings. In A. Heertje (Ed.), *World savings: An international survey* (pp. 100-138). Cambridge, MA: Blackwell.

Page-Adams, D., & Sherraden, M. (1996). *What we know about effects of asset holding: Implications for research on asset-based anti-poverty initiatives* (Working Paper No. 96-1). St. Louis, MO: Washington University, Center for Social Development.

Poterba, J. M., Venti, S. F., & Wise, D. A. (1993). Do 401(k) contributions crowd out other personal saving? *Journal of Public Economics, 58*(1), 1-32.

Poterba, J. M., Venti, S. F., & Wise, D. A. (1994). 401(k) plans and tax-deferred saving. In D. Wise (Ed.), *Studies in the economics of aging* (pp. 105-142). Chicago: University of Chicago Press.

Poterba, J. M., Venti, S. F., & Wise, D. A. (1995). *The effects of special saving programs on saving and wealth* (Working Paper No. 5287). Cambridge, MA: National Bureau of Economic Research.

Poterba, J. M., & Wise, D. A. (1996). *Individual financial decisions in retirement saving plans and the provision of resources for retirement* (Working Paper No. 5762). Cambridge, MA: National Bureau of Economic Research.

Powell, J. (1993). Habit dynamics and wealth accumulation fluctuations. *Journal of Economic Psychology, 14,* 267-283.

Powers, E. T. (1995). *Does means-testing welfare discourage saving? Evidence from the National Longitudinal Survey of Women* (Working Paper No. 9519). Cleveland, OH: Federal Reserve Bank of Cleveland.

Pritchard, M. E., Myers, B. K., & Cassidy, D. (1989). Factors associated with adolescent saving and spending patterns. *Adolescence, 24*(95), 711-723.

Rank, M. R. (1994). *Living on the edge: The realities of welfare in America.* New York: Columbia University Press.

Robinson, M. S. (1992). *Rural financial intermediation: Lessons from Indonesia Part One* (Development Discussion Paper No. 434). Cambridge, MA: Harvard Institute for International Development.

Robinson, M. S. (1994). Savings mobilization and microenterprise finance: The Indonesian experience. In M. Otero & E. Rhyne (Eds.), *The new world of microenterprise finance: Building healthy financial institutions for the poor* (pp. 27-54). West Hartford, CT: Kumarian Press.

Robinson, M. S. (1995). *The paradigm shift in microfinance: A perspective from HIID* (Development Discussion Paper No. 510). Cambridge, MA: Harvard Institute for International Development.

Rotter, J. B. (1954). *Social learning and clinical psychology*. New York: Prentice Hall.

Scanlon, E. (1996). *Homeownership and its impacts: Implications for housing policy for low-income families* (Working Paper No. 96-2). St. Louis, MO: Washington University, George Warren Brown School of Social Work, Center for Social Development.

Shefrin, H. M., & Thaler, R. H. (1988). The behavioral life-cycle hypothesis. *Economic Inquiry, 26,* 609-643.

Shen, T. Y. (1991). Towards a general theory of x-efficiency. *Journal of Socio-Economics, 20*(4), 277-95.

Sherraden, M. (1990). Stakeholding: Notes on a theory of welfare based on assets. *Social Service Review, 64*(4), 580-601.

Sherraden, M. (1991). *Assets and the poor: A new American welfare policy*. Armonk, NY: M. E. Sharpe, Inc.

Silverman, D. (1996). *Savings patterns in low-income communities: Preliminary feasibility study for an Individual Development Accounts demonstration program in community development credit unions*. New York: National Federation of Community Development Credit Unions.

Silverman, D. S. (1997a). *Creating account ability: The design and implementation of Individual Development Accounts in low-income credit unions* . Unpublished master's thesis, Harvard University, John F. Kennedy School of Government.

Silverman, D. S. (1997b). Saving costs: The effect of asset limits on the savings behavior of low-income women. In D. S. Silverman, *Creating account ability: The design and implementation of Individual Development Accounts in low-income credit unions* (Appendix E). Unpublished master's thesis, Harvard University, John F. Kennedy School of Government.

Smith, A. (1993). *An inquiry into the nature and causes of the wealth of nations.* New York: Oxford University Press. (Original work published 1776)

Smyth, D. J. (1993). Toward a theory of saving. In J. H. Gapinski (Ed.), *The economics of saving* (pp. 47-92). Boston: Klewer Academic Publishers.

Solmon, L. C. (1975). The relation between schooling and savings behavior: An example of the indirect effects of education. In F. T. Juster (Ed.), *Education, income and human behavior* (pp. 253-293). New York: McGraw-Hill.

Strotz, R. H. (1956). Myopia and inconsistency in dynamic utility maximization. *Review of Economic Studies, 23*(3), 165-180.

Strumpel, B. (1972). Economic behavior and economic welfare: Models and interdisciplinary approaches. In B. Strumpel, J. N. Morgan, & E. Zahn (Eds.), *Human behavior in economic affairs: Essays in honor of George Katona with concluding comments by George Katona* (pp. 83-107). San Francisco: Jossey-Bass, Inc., Publishers.

Strumpel, B. (1975). Saving behavior in Western Germany and the United States. *American Economic Review, 65*(2), 210-216.

Sturm, P. H. (1983). Determinants of saving: Theory and evidence. *OECD Economic Studies, 1,* 147-196.

Summers, L. H. (1981). Capital taxation and accumulation in a life cycle growth model. *American Economic Review, 71*(4), 533-44.

Summers, L., & Carroll, C. (1987). Why is U.S. national saving so low? *Brookings Papers on Economic Activity, 2,* 607-42.

Sundaresan, S. M. (1989). Intertemporally dependent preferences and the volatility of consumption and wealth. *Review of Financial Studies, 2,* 73-89.

Thaler, R. (1990). Saving, fungibility and mental accounts. *Journal of Economic Perspectives, 4*(1), 193-205.

Thaler, R. H., & Shefrin, H. M. (1981). An economic theory of self-control. *Journal of Political Economy, 89*(2), 392-401.

United States General Accounting Office. (1988). *401(k) plans: Incidence, provisions and benefits*. Washington, DC: Author.

Van Raaij, W. F. (1989). Economic news, expectations and macro-economic behavior. *Journal of Economic Psychology, 10,* 473-493.

Van Raaij, W. F., & Gianotten, H. J. (1990). Consumer confidence, expenditure, saving, and credit. *Journal of Economic Psychology, 11*(2), 269-90.

Venti, S. F., & Wise, D. A. (1986). Tax-deferred accounts, constrained choice and estimation of individual saving. *Review of Economic Studies, 53,* 579-601.

Venti, S. F., & Wise, D. A. (1987). IRAs and saving. In M. S. Feldstein (Ed.), *The effects of taxation on capital accumulation* (pp. 7-51). Chicago: University of Chicago Press.

Venti, S. F., & Wise, D. A. (1990). Have IRAs increased U.S. saving? Evidence from consumer expenditure surveys. *Quarterly Journal of Economics, 105*(3), 661-98.

Venti, S. F., & Wise, D. A. (1991). The saving effect of tax-deferred retirement accounts: Evidence from SIPP. In B. D. Bernheim & J. Shoven (Eds.), *National saving and economic performance* (pp. 103-131). Chicago: University of Chicago Press.

Venti, S. F., & Wise, D. A. (1992). Government policy and personal retirement saving. *Tax Policy and the Economy, 6*, 1-41.

Wang, Y. (1995). Permanent income and wealth accumulation: A cross-sectional study of Chinese urban and rural households. *Economic Development and Cultural Change, 43*(3), 523-50.

Wilcox, D. W. (1991). Household spending and saving: Measurement, trends, and analysis. *Federal Reserve Bulletin, 77*(1), 1-17.

Wise, D. A. (1987). Individual retirement accounts and saving. In M. Feldstein (Ed.), *Taxes and capital formation* (pp. 3-15). Chicago: University of Chicago Press.

Wise, D. A. (1995, Fall). Do retirement saving programs increase saving? *NBER Reporter*, 13-17.

Wolff, E. N. (1995). *Top heavy: A study of the increasing inequality of wealth in America*. New York: Twentieth Century Fund Press.

Zeldes, S. P. (1989). Consumption and liquidity constraints: An empirical investigation. *Journal of Political Economy, 97*(2), 305-346.

Zellner, A. (1960). Tests of some basic propositions in the theory of consumption. *American Economic Review, 50*(Supplement), 565-73.

TABLE 1. PROPOSITIONS REGARDING SAVING IN LOW-INCOME HOUSEHOLDS

(Numbers refer to the numbered paths in Figure 2.)

1. Demographic variables affect institutional variables.
   a) Income is positively associated with access to secure saving institutions.
   b) Income is positively associated with access to saving mechanisms that are subsidized via tax deferments.
   c) Income is positively associated with access to financial education.
   d) Wealth is positively associated with rates of return on saving.
   e) Full-time employment is positively associated with access to saving mechanisms that are subsidized via tax deferments.
   f) Full-time employment is positively associated with access to financial education.
   g) Full-time employment is positively associated with access to saving subsidies in the form of employer contributions to pension plans.
   h) Full-time employment is positively associated with access to payroll deduction.
2. Sociological variables affect institutional variables.
   a) Neighborhood quality is positively associated with access to convenient saving mechanisms.
3. Demographic variables affect saving.
   a) Income is positively associated with saving.
   b) Age is positively associated with saving.
   c) Education is positively associated with saving.
   d) Race is associated with saving.
4. Institutional variables affect saving.
   a) Access to secure saving mechanisms is positively associated with saving.
   b) Access to convenient saving mechanisms is positively associated with saving.
   c) Financial education is positively associated with saving.
   d) Attractive rates of return are positively associated with saving.

e) Saving-related subsidies (i.e., employer matching contributions, tax benefits) are positively associated with saving.

f) Facilitation (e.g., payroll deduction) is positively associated with saving.

g) Asset-restrictions for means-tested transfer programs are negatively associated with saving.

5. Sociological variables affect saving.

   a) Neighborhood quality is positively associated with saving.

   b) Growing up with adults who save money is positively associated with saving.

   c) Reference group saving is positively associated with saving.

   d) Income that is low relative to one's reference group is negatively associated with saving.

6. Psychological variables affect saving.

   a) Financial knowledge is positively associated with saving

   b) Strong motives for saving are positively associated with saving.

   c) Expectations regarding the "success" of saving are positively associated with saving.

   d) Rate of time preference is negatively associated with saving.

FIGURE 1. INDIVIDUAL MODEL OF SAVING

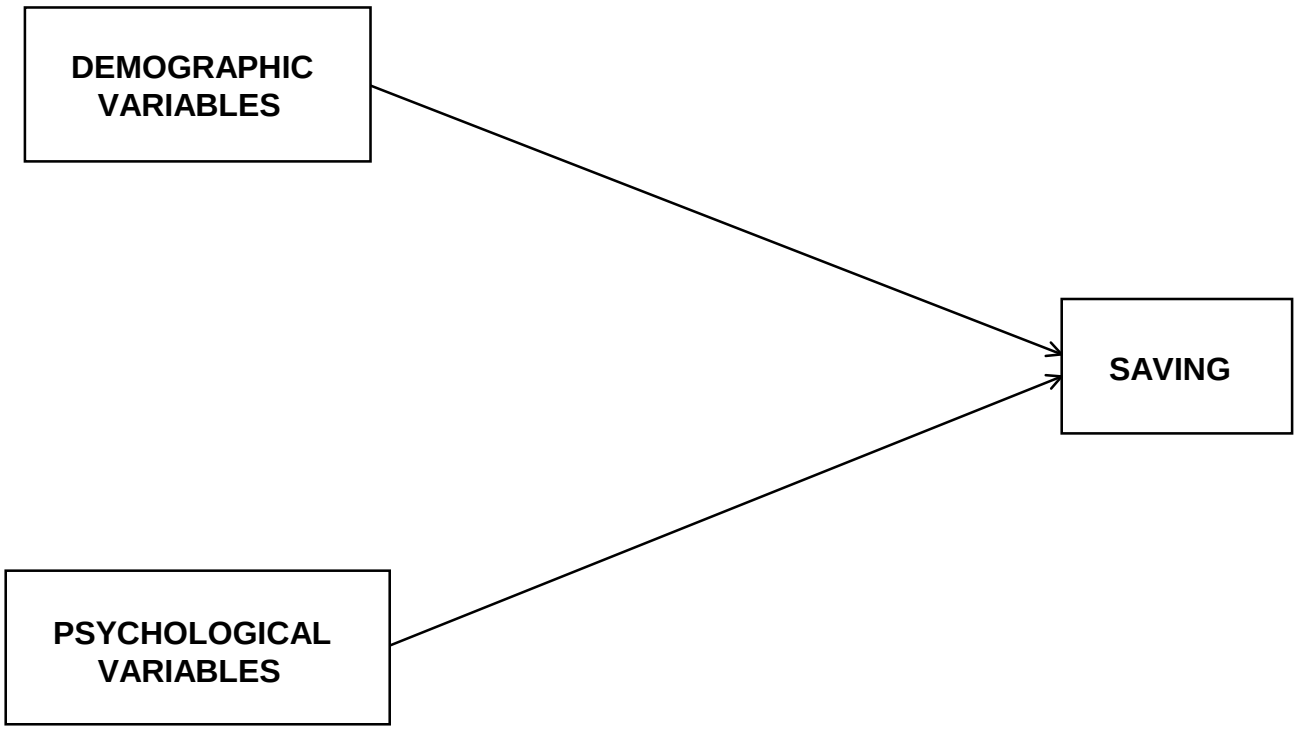

FIGURE 2. CONTEXTUAL MODEL OF SAVING